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1895.

NEW SOUTH WALES.

VOTES

AND

PROCEEDINGS

OF THE

LEGISLATIVE ASSEMBLY

DURING THE SESSION

OF

1895,

WITH THE VARIOUS DOCUMENTS CONNECTED THEREWITH.

IN FOUR VOLUMES.

VOL. IV.

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1895.

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LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

VOTES AND PROCEEDINGS.

SESSION 1895.

(IN FOUR VOLUMES)

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1895.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

WESTERN SUBURBS SEWERAGE (NORTHERN MAIN SEWER).

(PARTICULARS RESPECTING THE CONTRACT OF MESSRS. CARTER, GUMMOW, AND COMPANY, FOR CONTRACT No. 77.)

*Ordered by the Legislative Assembly to be printed, 9 October, 1895.*

[Laid upon the Table in accordance with promise given in answer to Question No. 11, Votes No. 24, 9 October, 1895.]

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No. 1.

C. H. Ohlfesen-Bagge, Esq., to Commissioner and Engineer-in-Chief for Roads, Bridges, and Sewerage.

21 September, 1894.

WESTERN OUTFALL SEWER—4TH DIVISION—ABOUT 40 CHAINS IN LENGTH.

THREE designs are herewith submitted for the consideration of the Engineer-in-Chief, each design with an open aqueduct carried upon arches and piers. The aqueduct, or main carrier, is capable of discharging 11,000 cubic feet of sewage per minute, which is equal to two 6-foot diameter outfall sewers, running  $\frac{3}{4}$  full, with a gradient of 1 in 2,000.

The sewerage aqueducts have hitherto been constructed here in such a manner, method, and of such materials, that any competent tradesman, in his special line, obtainable in the Colony, could do the work.

Now, however, as it is a matter of the greatest importance to reduce the cost of the works, there seems to be no other way of accomplishing this object, but to adopt for this Colony a more or less experimental system of construction for these aqueducts,—of increasing the spans of arches, introducing arches with joints, of constructing the whole in concrete, and of constructing the whole of the work of concrete and mortar and iron.

In the old Home countries these novel systems of construction have caused in the commencement failures, owing to the works being carried out by more or less inexperienced and untrained engineers and artisans; hence the various State Governments would not entertain and construct works on these novel methods until special companies established themselves, who made it their special business to carry out such works with artisans who had had time to gain the necessary experience, and who had been practically and specially trained in the construction of such work.

It was only to such companies that works, which are termed purely and simply specialities, were entrusted, after they had given adequate security for the faithful, careful, and competent execution of same.

1st Scheme.

To be constructed on the system of Road-Engineer Koch, of Ulm, as reported by the Association of German Cement Manufacturers, in their publication of 1892.

The concrete aqueduct rests on 50-foot span arches, concrete piers, and pile foundations. The piers are to be built on sixteen 18-inch diameter hardwood round piles, assumed to be 30 feet in length; each pile will have to carry 25 tons.

The

The pile-heads to be cut off level at a depth of 7 feet below datum, and from 9 inches below heads of piles, for a depth of 3 feet. They are to be filled in between with rubble packing, to make a footing for the concrete foundation course; the latter to be built of sandstone concrete.

The pier itself to be built of bluestone concrete, rounded on top as shown, and the rounded surface to be covered  $\frac{1}{2}$ -inch thick with asphalt (bitumen and cork), while the faces of the skewback are to be covered with Val de Travers' asphalt,  $\frac{3}{8}$ -inch thick.

In former sewerage aqueducts, which were built on piers and brick arches, it was specified, in order to reduce the cost of the centering, that not less than six arches should be constructed at a time, which necessitated an abutment-pier at the end of each series of six arches. These abutment-piers are, for economical reasons, not to be introduced in any of these schemes. It will, therefore, be necessary to at once provide in the construction for more centerings, perhaps fifteen at a time, which would be sufficient for about one-third of the length of the aqueduct, as all arches built of concrete require at the very least four weeks' time to harden before the centres can be removed.

A concrete arch of 50 feet span settles the moment the centres are removed, the more rigid and the more watertight the centres are made, the less settlement of the arch takes place, which will vary from 5 inch to 1 inch accordingly, and the longer the centres are left under the arch, the less settlement takes place, provided always that the centres are made thoroughly watertight.

The removal of the centres has to be done with utmost care. The 50-foot span arches, having each a radius of 47 feet, and a rise of 7.2 feet, are 12 inches thick at the crown, and 18 inches at the springing, with a  $\frac{1}{2}$ -inch thick transverse butt-joint at the crown, filled in with Val de Travers' asphalt, and the total horizontal thrust at this joint is 235 tons, with a safety factor of 8.7 at the area of cross-section in centre of arch. The arches are calculated upon Scheffler's theory, as described in Ira O. Baker, C.E., treatise on masonry construction, pages 474 to 479, of 1891. This arch is given liberty to contract and expand, and move up and down without cracking; the tendency of concrete is the same as wrought-iron as regards expansion and contraction. The rise and fall of the arch should not exceed 1 inch at a difference of 60 degrees in the temperature.

The arches are to be built of bluestone concrete, and jointed, require very rigid centerings, and very careful, uniform, manipulation, handling, and filling in of the concrete.

After the arches are completed, the concrete between the haunches (spandrels) to be built in, the outer faces 18 inches thick of bluestone concrete, and the inner filling of gravel concrete in the proportion of 1 cement, 3 sand, and 6 gravel.

There is to be a vertical butt-joint over centre of pier of  $\frac{1}{2}$ -inch, filled in with  $\frac{1}{2}$ -inch mastic plate, the joint extends right across and from top of pier to 9 inches below invert of aqueduct, it is to allow the arch to expand and contract without causing cracks in the concrete.

The main carrier (aqueduct, 8 ft. 8 $\frac{1}{2}$  in. x 5 ft. 3 in.) is to be built of bluestone concrete, its side walls on the reservoir dam principle, and to prevent its cracking, in consequence of expansion and contraction taking place, the concrete is strengthened and held together longitudinally at the base of each side wall by four  $\frac{3}{4}$ -inch diameter iron bond-rods, and in the upper part of each side wall by six  $\frac{1}{2}$ -inch diameter iron bond-rods, spaced as shown, and walled in with the concrete as the work progresses. The cement adheres to the iron rods with a force of about 675 lb. to the square inch surface of iron rod.

Over the centre of each pier the concrete of aqueduct has a transverse vertical butt-joint,  $\frac{3}{8}$ -inch wide, filled in with mastic plate, and the joint is made watertight by a 5-in. x 10-in. channel built down in the side walls and underneath invert of carrier, filled in with mastic.

PROBABLE Estimate of the Cost of 58 feet length of Aqueduct, from centre line of Pier to centre line of Pier.

No. of Item	Description of Work.	Unit.	Quantity.	Rate.	Amount.
				£ s. d.	£ s. d.
1	Sixteen 18-inch diameter 30-ft. piles .....	lineal foot	480	0 3 6	84 0 0
2	Rubble packing, 3 feet deep, at top of piles .....	cubic yard	19	0 5 0	4 15 0
3	$\frac{3}{4}$ -inch round wrought-iron bond-rods .....	cwt.	16	0 15 0	6 0 0
4	Asphalt joints, $\frac{1}{2}$ -inch and $\frac{3}{8}$ -inch thick .....	square foot	168	0 0 3	2 2 0
5	Mastic-plate joint .....	"	120	0 0 3	1 10 0
6	Mastic-channel joint .....	hump sum	.....	.....	1 14 6
7	Excavation .....	cubic yard	58	0 2 0	5 16 0
8	Sandstone concrete .....	"	22.84	1 8 0	31 19 6
9	Gravel concrete .....	"	51.62	1 1 0	54 4 0
10	Bluestone concrete .....	"	155.45	2 2 0	326 9 0
11	Rendering .....	square yard	366	0 2 0	36 12 0
	Total for a length of 58 feet .....	.....	.....	.....	555 2 0

At per lineal foot, £9 11s. 5d.; or, at per lineal yard, £28 14s. 3d.

#### 2nd scheme.

The 2nd scheme proposed is to be built on the same principle, the rise and spans of arches, &c., as the 1st scheme, with the exception of the main carrier, which, although of the same internal dimensions, is to be built with much thinner side-walls, which reduces the outside width of aqueduct from 14 feet to 10 ft. 8 in., and thus materially diminishes the general quantities.

The side-walls of the aqueduct, being so much thinner, are to be strengthened, each wall, by vertical  $\frac{3}{4}$ -inch diameter wrought-iron bond-rods, spaced 2 ft. 7 $\frac{1}{2}$  in. from centre to centre, and nine longitudinal  $\frac{3}{4}$ -inch diameter wrought-iron bond-rods, spaced and built in as shown. Along the outside faces of copings a 4-in. x 2-in. x  $\frac{1}{2}$ -in. channel-iron to be built in, and transverse, 2 $\frac{1}{2}$  in. x 2 $\frac{1}{2}$  in. x  $\frac{3}{4}$  in. iron braces are to be placed, spaced 7 ft. 10 in. from centre to centre, and bolted on to the channel-iron of each side-wall.

The transverse butt-joints in concrete work of aqueduct are similar to those of the 1st scheme, with the exception of the 5-in. x 10-in. channel-joint round the aqueduct, which is to be left out in this instance, and a  $\frac{1}{2}$ -in. straight transverse joint is provided instead over centre line of pier, filled in with mastic plate.

The

The 50-foot span arch, with rise of 7.2 feet, is 12 inches thick in centre and 21 inches at the springing, and has a transverse butt-joint in the centre of  $\frac{1}{4}$  inch, filled in with asphalt (Val de Travers). The total horizontal thrust at centre is 144 tons, with a safety factor of 10 at the area of cross-section in centre of arch.

The piers to be built on twelve 18-inch diameter piles, filled in between at top, 3 feet deep, with rubble-stone packing to make sound footing for concrete pier. Each pile has to carry 22 tons, as against 25 tons of the 1st scheme.

The foundation courses under each pier to be built of sandstone concrete, the pier, arches, aqueduct, and outer faces of spandrels to be built of bluestone concrete, while the filling in between the haunches of arches to be done with gravel concrete.

PROBABLE Estimates of the Cost of 58 feet length of Aqueduct, from centre line of Pier to centre line of Pier.

No of Item.	Description of Work.	Unit.	Quantity.	Rate.	Amount.
1	Twelve 18-inch diameter 30-foot long piles .....	lineal foot	360	£ s. d. 0 3 6	£ s. d. 63 0 0
2	Rubble-stone packing at top of piles, 3 feet deep .....	cubic yard	10.5	0 5 0	2 12 6
3	Wrought-iron 4 in. x 2 in. x $\frac{1}{8}$ in. channel-iron, 116 feet .....	ewt.	7.954	1 2 0	8 15 0
4	eight 2 $\frac{1}{2}$ in. x 2 $\frac{1}{2}$ in. x $\frac{3}{4}$ in. x 11 ft. $\Gamma$ irons, with thirty-two $\frac{1}{2}$ -in. screw-bolts—24 lb. in all.	"	5.125	1 2 0	5 12 9
5	Eighteen longitudinal $\frac{3}{4}$ -in. x 60-ft. diameter bond-rods—1,594.7 lb., forty-four vertical bond-rods $\frac{3}{4}$ -in diameter x 66 ft.—3,003 lb.	"	16.92	0 15 0	12 13 10
6	Mastic and asphalt in joints .....	lump sum	.....	.....	2 8 0
7	Excavation .....	cubic yard	39	0 2 0	3 18 0
8	Sandstone concrete .....	"	7.07	1 8 0	9 18 0
9	Bluestone concrete .....	"	101.25	2 2 0	212 12 6
10	Gravel concrete .....	"	40	1 1 0	42 0 0
11	Rendering .....	square yard	336	0 2 0	33 12 0
Total for a length of 58 feet .....				.....	397 2 7

At per lineal foot, £6 16s. 11.3d. ; or per lineal yard, £20 10s. 10d.

In support of the system applied for the construction of the two schemes just described, I can refer, amongst similar structures, to the one built by Mr. Road-Engineer Koch, of Ulm, as reported in the publication of the Association of German Portland Cement Manufactures in 1892, and to one road bridge built by Von Liebrand, as reported in the Proceedings of the Association of German Engineers of 28th July, 1894 (page 908).

Mr Koch's concrete bridge was built near Erbach, on the Danube, in Württemberg, with a jointed arch of 104.98-foot span, rise of arch 13 feet, thickness at the crown 1 ft. 7 $\frac{1}{2}$  in., and at the springing 2 ft. 4 in., and a width of roadway between parapets of 19 ft. 6 in. The arch was built in transverse slips 31.49 inches in width, with radiating end faces held by boards, well rammed. On removal of centering (after two months) the arch settled at the crown about 1.9685 inch, and after the road material had been placed in position the total settlement at the crown amounted to 4.7244 inches. This bridge was built by the Association of German Portland Cement Manufacturers.

Mr. Von Leibbrand's concrete bridge was built over the Danube in one arch of 162.5-foot span, with a rise of 16.25 feet, 3.25 feet thick in centre, and 3.6 feet thick at the springing. The arch rests on one side upon hard limestone rock, and on the other side on a pile foundation. The bridge is also a road bridge, 25 feet wide between parapets; it has been built near Münderkingen, in Württemberg, and has stood, at the time when it was reported, from 16th November, 1893, till 28th July, 1894.

These bridges carry roadways, whereas those of the two schemes herein described will have to carry an aqueduct, with such precautionary arrangements, however, which should be sufficient to prevent the concrete from cracking.

Drawings accompanying Schemes Nos. 1 and 2.

Schemes Nos. 1 and 2 are accompanied each by one sheet of drawing, showing the proposed general design, and one sheet of drawing showing diagram of forces on the arch and at the abutment pier at Muddy Creek. The blue lines in arches and abutments show the line of pressure as the result of Scheffler's theory, and the red lines in the other diagrams show the resultants in size and direction.

The diagram at side wall of aqueduct of the first scheme shows the resultant in position, size, and direction of water pressure and weight of water at a point 4.5 inches below top of wall when aqueduct is supposed to be running full up to level of top of coping.

3rd Scheme.

Proposed to be constructed on the Monier system, with concrete piers on pile foundations, 75-foot span arches of 80 feet radius, rise of arch 9.3 feet; spandrels of dwarf-piers and small arches carrying the aqueduct.

The piers to be built on 12 18-inch diameter piles, assumed to be 30 feet in length, each pile to carry 22.25 tons. Pile heads to be cut off level at a depth of 7 feet below datum. From 1 ft. 6 in. below heads of piles, and for a depth of 3 feet, the piles to be filled in between with rubblestone packing to ensure a solid foundation for the concrete foundation courses, to be built of bluestone concrete.

The piers to be built of bluestone concrete, excepting recesses for reception of footing of arch, which, when the latter is being built, will be filled in with cement mortar the same as arch.

The 75-foot span arch to be constructed on perfectly rigid and watertight box centering, of which no less than 10 should be provided at a time.

The arches to be 10 inches thick at the crown and 14 inches thick at the springing; total width, 9 ft. 5 in., to be constructed of cement mortar in the proportion of 1 to 3, strengthened by a wrought-iron network for the whole length and width, placed  $\frac{1}{2}$  inch above intrados of arch, and a similar network placed  $\frac{1}{4}$  inch below extrados of arch, extending from each springing for a length of about 29 feet up the arch. The building of each arch to be commenced at both ends simultaneously and continued towards the crown without intermission until completion.

The

The lower and upper wrought-iron network to consist of  $\frac{3}{4}$ -inch diameter longitudinal rods, spaced  $2\frac{1}{2}$  inches from centre to centre, and the cross-bars to be  $\frac{1}{2}$ -inch diameter rods, spaced 3 inches from centre to centre.

The total horizontal thrust at crown of arch is 180 tons, equal to 356 lb. per square inch of sectional area of same, whereas a square inch ought to stand 2,000 lb. (factor of safety, 5.618).

The spandrels, between extrados of main arches and underside of aqueduct, to be constructed of dwarf-piers and small arches as shown. The dwarf-piers to be built of bluestone concrete, but the plinths of said piers to be built of cement mortar of the same quality as to be used in the main arches, and simultaneously with the arches. Dwarf-piers to be 12 inches thick, excepting the 2-foot piers between main arches; all piers to be built of concrete up to springing of small arches, and above that level they are to be completed with cement mortar, built in simultaneously with the small arches. The upper part of central pier to be rounded off at top as shown, and covered 1 inch thick with asphalt (bitumen and cork).

The vertical 1-inch joint to be filled in with mastic plate, and the 3-inch by 4-inch channel joint to be filled in with mastic.

The piers in the first instance to be built up to level of springing throughout a length of 660 feet at a time, and, on completion of the piers of the second length of 660 feet, the small arches of a series of 60 at the time to be constructed over the piers over the first length of 660 feet, and so on, to ensure the whole structure being evenly and uniformly weighted as it progresses.

The piers are spaced 7 ft. 3 in. apart, and closed in at top with arches built of cement mortar (1 to 3) and wrought-iron. The small arches with a radius of 6 ft.  $7\frac{1}{2}$  in. and 13 inches rise, to be built on rigid watertight box centerings; they are to be 3 inches thick at the crown and 5 inches thick at the springing, 9 ft. 5 in. in width, and strengthened by a wrought-iron network of the same description as that for the 75-foot span arches, placed  $\frac{3}{4}$ -inch above intrados of arches.

The total horizontal thrust at crown of small arches is 13 tons, which gives 85 lb. per square inch of sectional area, equal to twenty-three times security.

The spandrels between extrados of small arches and underside of aqueduct and the narrow portion of spandrels near crown of main arch to be built in with fine bluestone (bluestone toppings) concrete.

The aqueduct to be 8 ft.  $1\frac{1}{2}$  in. wide at top and 5 ft. 3 in. deep, and, although a few inches less in width than the aqueducts of the 1st and 2nd schemes, its sides are less battered, and its bottom or invert being straighter, has the same cross-section area, and can therefore discharge the same quantity of sewage.

The side walls and invert to be constructed of cement mortar in the proportion 1 in 2, the side walls at the top to be  $4\frac{1}{2}$  inches thick, and at a depth of 3 ft. 9 in. from the top to be 6 inches thick; the level portion of invert to be also 6 inches thick. The walls and invert to be strengthened by wrought-iron network, one to be placed  $1\frac{1}{2}$  inch below inner face of aqueduct, and one to be placed vertical  $1\frac{1}{2}$  inch below outside faces of side walls of same.

These networks to be made of  $\frac{3}{4}$ -inch diameter longitudinal rods, with the exception of the six upper rods, in each side wall, which are to be  $\frac{1}{2}$ -inch diameter, all to be spaced  $2\frac{1}{4}$  inches from centre to centre, and the cross-bars to be  $\frac{3}{8}$ -inch diameter, spaced  $2\frac{1}{2}$  inches from centre to centre on the inside of aqueduct, while for the outside faces of same the longitudinal rods to be 3 inches and the vertical cross-bars 4 inches from centre to centre.

To prevent the aqueduct from cracking there is to be an inch butt-joint right across same over the centre of the main pier, to be filled in with mastic plate. The joint to be made water-tight by a 3-in. x 4-in. channel joint running vertically down the side walls and underneath invert of aqueduct, to be filled in with mastic.

The inner and outer surfaces of aqueduct, front elevation of main arches, dwarf-piers and small arches, and main piers all round, to be rendered  $\frac{5}{8}$ -inch thick with cement mortar (1 to 2).

The main piers of aqueduct are corbelled out on elevations of same, as shown, to be built up to the level of top of side walls, leaving an inch space between it and outer face of side wall, to be filled in with mastic plate.

#### Drawings accompanying the 3rd Scheme.

Scheme No. 3 is accompanied by one sheet of drawing, showing the proposed general design, and, by a second sheet of drawing showing diagrams of forces on the 75-foot span arches, loaded and not loaded, and on the 7-ft. 3-in. arches loaded only. The blue lines in the diagrams show the line of pressure as the result of Scheffler's theory, checked by the theory of elastic arches (by W. M. Cain, C.E.), and the red lines in the diagrams show the resultants in size and direction.

#### PROBABLE Estimates of the Cost of 83 feet length of Aqueduct from centre line of Pier to centre line of Pier.

Item.	Description of Works.	Unit.	Quantity.	Rate.	Amount.
1	Twelve 18-inch diameter piles, 30 feet long .....	lineal foot	360	£ s. d. 0 3 6	£ s. d. 63 0 0
2	Rubble stone packing at top of piles, 3 feet deep .....	cubic yard	10.5	0 5 0	2 12 6
3	Excavation at pier foundation .....	"	39	0 2 0	3 18 0
4	Bluestone concrete in main and spandrel pier.....	"	34.41	2 2 0	72 5 3
5	Fine bluestone concrete in spandrels .....	"	11.8	2 2 0	24 15 7
6	Cement mortar in aqueduct, 1 to 2, including wrought-iron network	"	26.5	4 10 0	119 5 0
7	Cement mortar in (1 to 3) main and spandrel arches, including wrought-iron network.	"	39.81	4 0 0	159 5 0
8	Cement rendering in aqueduct, piers, front faces of arches, spandrel fillings.	square yard	323	0 2 0	32 6 0
9	Asphalt in joints .....	square foot	14	0 0 3	0 3 6
10	Mastic in joints .....	cubic foot	2.88	0 12 0	1 14 6
11	Patent right fees due on account of work done on the Monier system in arches and aqueduct, at rate of 15 per cent., on items 6, 7, 8, 9, 10, amounting to £310 0s. 4d.	at 15 per cent.	.....	.....	46 10 0
For a length of 83 feet—Total .....					525 15 4

At per lineal foot, £6 6s. 8.3d.—or at per lineal yard, £19 0s. 1d.

*Calculations.*

All that we know so far of the mode of constructing works designed on the Monier system is described in pamphlets giving a number of works carried out by the patentees, accompanied by sketches and photos of said works, and furnishing the reason for which the work was carried out, and the sizes and dimensions on the sketch drawings, but giving no clue whatever as to any formula or principle that ought to be used in calculating the forces which should have to be contended with in the various structures enumerated in said pamphlets.

In order to meet this difficulty the radius of the 75-foot span arch of Scheme No. 3 had to be so selected that the centre line of forces (line of resistance) should always keep within the middle third of the arch ring.

The centre line of resistance was constructed by Scheffler's theory, and checked by the theory of elastic arches (W. M. Cain, C.E.), after which the thickness of the arch was determined in a manner so that at no part the compression exceeds 400 lb. per square inch, which, in this instance, fixed the minimum thickness of arch at 10 inches at the crown and at 14 inches at the springing, giving a safety factor of 5.618.

The wrought-iron network was mainly to be laid in as additional security, to strengthen the arch, on account of the low factor of safety, and the light structure of the arch.

Exactly the same system has been adhered to in the construction and calculation of the arches in the spandrels.

With respect to the aqueduct in connection with the 3rd scheme, on the Monier system, it must be borne in mind that the office also had to adopt its own method for ascertaining the strength and dimensions for the invert and sidewalls of same, which resulted in fixing the width of top of sidewall at  $4\frac{1}{2}$  inches, the outer faces of sidewalls to be vertical, and at a depth 3 ft. 9 in. from top of sidewall, the latter to 6 inches thick, the invert at end of side curve to be always 6 inches thick.

*Summary.*

Name of Scheme.	Span of Arch.	Rise of Arch.	Factor of Safety.	Cost per lineal foot.	Cost per lineal yard.	Length of Work.	Total Cost.
	feet	feet		£ s. d.	£ s. d.	feet	£ s. d.
1st scheme .....	50	7.2	8.7	9 11 5	28 14 3	58	550 2 0
2nd „ .....	50	7.2	10 0	6 16 11.3	20 10 10	58	397 2 7
3rd „ .....	75	9.3	5.618	6 6 8.3	19 0 1	83	525 15 4

Cost per lineal foot.    Cost per lineal yard.

Mr. Ahern's present outfall sewer, Contract No. 101, if calculated for two sewers  
of 6 feet diameter, would cost ... .. £10 16 1    £32 8 3

C. H. OHLFSEN-BAGGE.

No. 2.

Mr. C. H. Ohlsen-Bagge to The Commissioner and Engineer-in-Chief for Roads,  
Bridges, and Sewerage.

Sydney, 14 March, 1894.

The tenders for the construction of the northern main sewer, Annandale and Leichhardt sections, Contract No. 77, have now been checked, the lowest being that of Messrs. Carter, Gummow, & Co., at 28½ per cent. below schedule rates, amounting to £15,757 1s. 9d.

The following are the other tenderers:—

Messrs. J. M'Sweeney ... ..	At 25½ per cent. below schedule rates.
J. F. Carson ... ..	20 10 0
Gilliver and Curtis ... ..	18 7 6
Holloway Bros. ... ..	18 4 6
J. Stewart & Co.... ..	18 7 6
Howie Bros. ... ..	17 1 6
Hugh Owen ... ..	15
Phillips, Rhodes, and Broughton	13
R. and S. Butcher ... ..	11
E. Taylor ... ..	10 1 6
Maddison and Ewing ... ..	8 1 6
T. Williams ... ..	6 1 6
T. E. Spencer ... ..	5
Carter, Gummow, & Co. ... ..	Lump sum of £15,500.

With respect to Messrs. Carter, Gummow, & Co.'s second tender for a lump sum of £15,500, I find that it is accompanied by a special design on the "Monier" system.

The plans for the White's Creek and Johnstone's Creek aqueducts as designed in this office, for which tenders were invited, were prepared with a view to securing the most substantial and enduring structure at the most reasonable cost. At the time that this design was made, I had as full particulars regarding the "Monier" principle as it was possible to obtain in the colonies. I would also like to point out that in Europe this class of work is made a specialty, being patented, and is wholly in the hands of private companies, who are required to give a substantial guarantee for the stability of their work. I think it would not be advisable to construct at the outset a work of such importance on the "Monier" principle.

The total for the office design amounts to ... ..	£15,757
„ contractor's Monier design ... ..	15,500
Difference ... ..	£257

C. H. OHLFSEN-BAGGE.

## No. 3.

## List of Tenders received for Contract No. 77.

Wednesday, 13 March, 1895.

Number of tenders received ... ..	Fifteen.
Estimated amount... ..	£22,037 17s. 8d.
Amount of lowest tender ... ..	28½ per cent. below schedule rates.
Name of lowest tenderer ... ..	Carter, Gummow, & Co.
Vote ... ..	£830,000. 53 Vic. No. 33.

	Amount.	Deposit.	Nature.
1. Carter, Gummow, & Co. ... ..	28½ per cent. B.S.	£160	Cheque.
2. J. M'Sweeney ... ..	25½ "	166	"
3. J. F. Carson ... ..	20½ "	177	"
4. Gilliver and Curtis ... ..	18½ "	180	"
5. Holloway Bros. ... ..	18½ "	180	"
6. J. Stewart & Co. ... ..	18½ "	220	"
7. Howie Bros. ... ..	17½ "	182	"
8. Hugh Owen ... ..	15 "	190	"
9. Phillips, Rhodes, & Broughton ... ..	13 "	190	"
10. R. J. S. Butcher ... ..	11 "	200	"
11. E. Taylor ... ..	10½ "	192	"
12. Maddison and Ewing ... ..	8½ "	220	"
13. T. Williams ... ..	6½ "	205	"
14. T. E. Spencer ... ..	5 "	200	"
15. Carter, Gummow, & Co. ... ..	For lump sum of £15,500	160	"

ROBERT HICKSON,

Vice-President of Tender Board.

## No. 4.

## Report by Board of Reference.

Board of Reference.—Tenders for Contract No. 77, Main Northern Sewer, Annandale and Leichhardt Sections.

THE tenders for this work were submitted to the Board to-day. In doing so, Mr. Hickson pointed out that fifteen tenders had been received, the lowest being that of Carter, Gummow, & Co., at 28½ per cent. below schedule rates—amounting approximately to £15,757 1s. 9d. The same firm also submitted a lump sum tender for carrying out the work according to a plan sent in by them, for the sum of £15,500. The plan submitted is for constructing the work on the "Monier" arch principle. This system has been extensively used during recent years on the Continent of Europe, with successful results, and Mr. Hickson sees no reason why, under certain restrictions, the opportunity should not be taken to introduce the system in the public works of this Colony. The advantages claimed by the patentees are that works can be carried out at a much cheaper rate wherever this method of construction is used. Mr. Hickson said he had no doubt that the design submitted was thoroughly suitable, and likely to be effective, and as the main principles as regards size and inclination of sewer were as provided for in the departmental design, he was prepared to recommend it; but if it was decided to accept the tender, a short specification of the work should be included in the bond, and provision also made for the maintenance of the work by the contractors for a certain period after completion.

Mr. Hickson further said, that as Mr. Darley would be the responsible officer for carrying out this work, he had gone into the matter very thoroughly with that gentleman, and Mr. Darley was quite prepared to endorse his views.

The Board, in view of the fact that Messrs. Darley and Hickson are satisfied that the principal is a sound one, and that the adoption of the plan will result in considerable economy, are prepared to endorse the recommendation of these gentlemen, and now submit the matter for the Minister's consideration.

J. BARLING,

Chairman.

C. W. DARLEY,

Engineer-in-Chief, Harbours and Rivers.

ROBERT HICKSON,

Commissioner for Roads.

H. DEANE,

Engineer-in-Chief, Railway Construction.

W. L. VERNON,

Government Architect.

J. W. HOLLIMAN, Secretary,  
20 March, 1895.

Submitted.—J.B., 27/3/95. Before approving of this proposal I should like an estimate of the actual value of the work to be carried out by the contractors under the substituted scheme.—J.H.Y., 27/3/95. Mr. Hickson.—J.B., 28/3/95.

To comply fully with the Minister's minute would mean the taking out of quantities in the plan submitted by Messrs. Carter and Gummow. This would take at least a week to do. I think, however, I can answer sufficiently for the Minister to come to a decision. When plans were being prepared for the extension of the sewers on to the sewage farm, estimates were made for the work on the Monier system, as well as on the Department's designs. The result was that the estimate of both works was practically the same. Applying that comparison to this case, it would mean that the Departmental estimate for the work under consideration would be £22,000.—ROBERT HICKSON, 28/3/95. Under Secretary.

Submitted.—J. BARLING, 28/3/95. This is quite sufficient for me, and I now approve of the recommendation of the Board being carried out.—J.H.Y., 29/3/95. Accept.—D.C.McL. (pro. U.S.), 29/3/95.

## No. 5.

Messrs. Carter, Gummow, &amp; Co., to The Secretary for Public Works.

Sir,

North Sydney, 4 April, 1895.

We have the honor to draw your attention to the conditions upon which the acceptance of our tender depends for Contract No. 77, Balmain Sewerage Works, and to our conversation with you of even date in connection with security required for its due performance.

We respectfully submit that our personal sureties for the amount necessary, should be taken for its completion and maintenance, and as a sufficient guarantee for the proper carrying out of the work.

We are a firm of sound financial standing, well and favourable known to your Department as contractors for many large and important contracts extending over a period of eight or nine years under the Departments of Harbours and Rivers, and Roads, Bridges, and Sewerage, which facts we trust will satisfy you as to our *bona fides* in this matter.

We have, &c.,  
CARTER, GUMMOW, & CO.

## No. 6.

The Commissioner and Engineer-in-Chief for Roads, Bridges, and Sewerage to The Under Secretary for Public Works.

Sydney, 5 April, 1895.

The accompanying letter of 4th April, 1895, from Messrs. Carter, Gummow, & Co., is a protest against the stringent supplementary specification prepared by Mr. Norrie, at my suggestion, with regard to the alteration in the design of Contract No. 77.

The last paragraph of this specification states: "And the contractors shall enter into a bond to Her Majesty the Queen in the penal sum of £12,000, with two sufficient sureties in the penal sum of £6,000 each, to secure the removal of so much of the said works as shall have been constructed on the Monier system, &c., &c."

The amount of £12,000 is the sum it would cost the Department, at Departmental rates, to renew that portion of this sewer which is built on the Monier system.

It is right, however, to say, that the tendered rates for this portion of the work would only come to £9,000, but prices being abnormally low, I think it is only right to put in a sum at which the Department really values the work.

Messrs. Carter and Gummow ask that their own "personal sureties for the amount named," i.e. £12,000 (an amount which they do not dispute), "should be taken for its completion and maintenance, and as a sufficient guarantee for the proper carrying out of the work."

They go on to say that they are "a firm of sound financial standing, well and favourably known to the Department as contractors." This is quite true. They are a firm in which I have every confidence. They have done a great deal of work under me, and I can testify that their aim always has been to turn out the very best class of work possible. At the same time, misfortunes happen the very soundest firms of contractors, and the Department must look a little way into the future. Their own bond for £12,000 would be really of no use if they were unfortunate enough in the meantime to become bankrupt.

I think, therefore, it is right that the sureties should be insisted upon. They give the names of two men, Mr. George Forrest and Mr. James Gillen. From inquiries made, I believe these men to be financially sound, and I think, if their names were accepted as the sureties in the penal sum of £6,000 each, the Department would be secured as far as it is reasonably possible to be.

This work will be carried out under Mr. Darley, and I recommend that the whole of the papers be sent him to give his opinion thereon.

ROBERT HICKSON.

Mr. Darley for report.—J.B., 5/4/95.

I concur with Mr. Hickson. I think in accepting a new patent of this kind, and adopting it in a large and costly contract, that the Department cannot be too careful in securing its position by leaving all the risk in the hands of the contractors and patentees. I, therefore, recommend that the personal names be required for further security. The names mentioned may, I think, be accepted.—C.D., Engineer-in-Chief, Metropolitan Sewerage Construction, 8/4/95.

For Minister's approval as to course suggested in regard to sureties.—J. BARLING, Under Secretary, 9/4/95. Approved.—J.H.Y., 10/4/95. Mr. Norrie.—J.N.O. P., 10/4/95. Messrs. Carter, Gummow, & Co., Auditor-General, Mr. Norrie, 11/4/95.

## No. 7.

Bond executed by Messrs. Carter, Gummow, and Company, with Annexures.

Agreement made this 16th day of May, in the year of our Lord 1895, between John Carter, Frank Moorhouse Gummow, and David Graham Snodgrass, of North Sydney, in the Colony of New South Wales, contractors, carrying on business together under the name, style, or form of "Carter, Gummow, & Co." (and hereinafter styled or referred to as "the contractors"), of the one part, and Her Most Gracious Majesty Queen Victoria of the other part.

WHEREAS the Minister for Public Works of the said Colony (hereinafter called the said Minister) recently called for tenders by notice published in the *Government Gazette* (of which notice a copy is herewith annexed and marked "A"), for construction of the northern main sewer, Leichhardt and Annandale sections, Contract No. 77, Sydney Sewerage, as shown in the drawings relating thereto in the office of the Engineer-in-Chief for Metropolitan Sewerage Construction, and marked "No. 1" to "No. 10," both inclusive and according to the specification, schedule to specification, general conditions, and special condition, which are herewith annexed and marked respectively "B," "C," "D," and "E." And whereas the contractors made the tender herewith annexed, marked "F," to provide the material and perform the various works

works required in and about the full and proper construction, erection, and completion of the said sewerage works agreeably to the said drawings, specification, schedule to specification, general conditions, and special condition, as modified by the supplementary specification, also hereunto annexed and marked "G," and the contractors' drawing, marked "No. 11," now in the office of the said Engineer-in-Chief for Metropolitan Sewerage Construction, and at or for the price or sum set out in the said tender. And whereas the said tender was accepted by the said Minister, and such acceptance (a copy of which is annexed hereto, and marked "H"), was duly notified to the contractors on the 11th day of April now last past, and the contractors have assented thereto, as per their letter annexed hereto, marked "I." And whereas the contractors have deposited the sum of £775 in the Bank of New Zealand, at Sydney, in the said Colony, in the name of the Under Secretary for Public Works, at interest upon fixed deposit, No. A22,187, dated the 29th day of April now last past for twelve months, and have handed the receipt for the same to the said Minister to be held by him as such Minister or the Minister for Public Works for the time being of the said Colony, on behalf of Her Majesty, as security for the due performance of this contract, and all other matters and things herein contained, and which, on the part of the contractors, are to be done and performed. And whereas the said contractors have, with two approved sureties, entered into bonds to Her said Majesty conditioned to secure the due performance of the removal of so much of the said works at their own cost as shall have been constructed on the "Monier System" if the Engineer shall be dissatisfied with the same at any time during either of the periods of maintenance set out in the said general conditions and supplementary specification respectively, and for the re-erection and construction of the said works, and for the free and uninterrupted flow of sewage during the progress of such rebuilding at their own expense in accordance in all things with the said specification, schedule to specification, general conditions, special condition, and plans therein respectively referred to, and within thirty-nine weeks from the date of being called upon to do so. Now this agreement witnesseth that, in consideration of the premises, the contractors do hereby, for themselves, heirs, executors, and administrators, covenant with and to Her said Majesty the Queen, Her heirs, and successors: That they, the contractors, shall and will perform the various works required in and about the full and proper construction, erection, and completion of the said sewerage works in accordance in all things with the said specification, schedule to specification, general conditions, special condition, supplementary specification, and drawings, and at and after the price, and within the time in the said tender mentioned. And that they will well and truly remove so much of the said works at their own cost as shall have been constructed on the "Monier System" if the Engineer shall be dissatisfied with the same at any time during either of the respective periods of maintenance set out in the said general conditions and supplementary specification, and re-erect and construct the said works, and provide for the full and uninterrupted flow of sewage during progress of such rebuilding at their own expense, in accordance in all things with the said specification, schedule to specification, general conditions, and special condition, and the plans therein respectively referred to, within thirty-nine weeks from the date of being called upon to do so. And it is hereby agreed and declared between and by the said parties hereto that the said copy, notice, specification, schedule to specification, general conditions, special condition, supplementary specification, tender, copy, letter of acceptance of tender, and letter of assent thereto, marked as aforesaid, all being hereunto annexed as aforesaid, shall be read as incorporated in and forming part and parcel of these presents in like manner, and if the same had been herein written and set forth at length, and that the said several annexures, the said drawings, and these presents shall together be taken to be the contract between the said parties in respect of the said sewerage works amplified in manner following—that is to say, that the said general conditions shall at all times be read and construed as if the stipulation contained in the said letter of acceptance of tender as to the discharge of men (not domiciled in this Colony for six months previously to their employment on the said works) employed on the said works when called upon to do so, and the penalty for non-compliance therewith had been expressly set out in the said general conditions.

In witness whereof the said parties to these presents have hereunto set their hands and seals the day and year first before written.

Signed, sealed and delivered, by the said John Carter, in the presence of,—	} HAROLD F. NORRIE.	JOHN CARTER.
Signed, sealed and delivered, by the said Frank Moorhouse Gummow, by his attorney, John Carter, acting under power of attorney, dated the 2nd day of January, 1894, in the presence of,—	} HAROLD F. NORRIE.	FRANK MOORHOUSE GUMMOW, By his Attorney,—JOHN CARTER.
Signed, sealed and delivered, by the said David Graham Snodgrass, in the presence of,—	} HAROLD F. NORRIE.	D. G. SNODGRASS.

This is the agreement referred to in our respective bonds to Her Majesty the Queen.  
Dated this 16th day of May, A.D., 1895. GEORGE FORREST, }  
JAMES GILLEN, } Sureties.

Witness—HAROLD F. NORRIE.

KNOW all men by these presents,—That we, John Carter, Frank Moorhouse Gummow, and David Graham Snodgrass, of North Sydney, in the Colony of New South Wales, contractors, carrying on business together under the name, style, or firm of "Carter, Gummow, & Co." (and hereinafter referred to as the said contractors), are jointly and severally held, and firmly bound unto Her Most Gracious Majesty Queen Victoria, in the penal sum of £12,000 sterling, to be paid in Sydney, in the said Colony, to Her said Majesty, her heirs, or successors, for which payment, well and truly to be made, we bind ourselves, and each of us, our and each and every of our heirs, executors, and administrators jointly and severally firmly by these presents.

Sealed with our seals dated the 16th day of May, in the year of our Lord, 1895.

WHEREAS, by agreement bearing even date herewith, and expressed to be made between the said contractors of the one part, and Her said Majesty of the other part, the said contractors covenanted to perform the various works required in and about the full and proper construction, erection, and completion of the northern

northern main sewer, Leichhardt and Annandale sections, Contract No. 77, Sydney Sewerage, according to the copy notice, specification, schedule to specification, general conditions, special condition, supplementary specification, tender, copy letter of acceptance of tender, and letter of assent thereto, thereunto annexed, and marked "A," "B," "C," "D," "E," "F," "G," "H," and "I" respectively, and certain drawings relating thereto, now in the office of the Engineer-in-Chief for Metropolitan Sewerage Construction, and marked No. 1 to No. 11, both inclusive.

And whereas the said contractors have severally offered to become and be bound to her said Majesty, her heirs, and successors, for the due removal of so much of the said works, at their own cost, as shall have been constructed on the "Monier System," if the Engineer shall be dissatisfied with the same, at any time during either of the periods of maintenance set out in the said general conditions and supplementary specification respectively, and for the re-erection and construction of the said works, and for the free and uninterrupted flow of sewage during the progress of such rebuilding, at their own expense, in accordance in all things with the said specification, schedule to specification, general conditions, special condition, and plans therein respectively referred to, and within thirty-nine weeks from the date of being called upon to do so. Now, the condition of the above-written bond and obligation is such that if the said contractors do, and shall well and truly remove so much of the said works at their own cost, as shall have been constructed on the "Monier System," if the Engineer shall be dissatisfied with the same at any time during the respective periods of maintenance set out in the said general conditions and supplementary specification, and re-erection and construct the said works, and provide for the free and uninterrupted flow of sewage during the progress of such rebuilding at their own expense, in accordance in all things with the said specification, schedule to specification, general conditions and special condition, and the plans therein respectively referred to, within thirty-nine weeks from the date of being called upon to do so. Then this obligation will be void and of none effect, otherwise to remain in full force and virtue.

Signed, sealed, and delivered by the abovenamed John } JOHN CARTER.  
Carter, in the presence of,—

HAROLD F. NORRIE.

Signed, sealed, and delivered by the abovenamed Frank } FRANK MOORHOUSE GUMMOW.  
Moorhouse Gummow, by his duly constituted }  
attorney, John Carter, acting under power of } By his Attorney,—JOHN CARTER.  
attorney, dated the 2nd January, 1894, in the pre- }  
sence of,— HAROLD F. NORRIE.

Signed, sealed, and delivered by the abovenamed David } D. G. SNODGRASS.  
Graham Snodgrass, in the presence of,— }  
HAROLD F. NORRIE.

#### STATUTORY DECLARATION.

I, John Carter, of Sydney, in the Colony of New South Wales, contractor, do hereby solemnly declare and affirm that—

1. I am the duly constituted attorney of Frank Moorhouse Gummow, at present residing at Adelaide, in the province of South Australia, under and by virtue of a Deed Poll or Power of Attorney, under the hand and seal of the said Frank Moorhouse Gummow, dated the 2nd day of January, 1894.
2. From letters and telegrams recently received from the said Frank Moorhouse Gummow, I have every reason to believe, and I verily do believe, that the said Frank Moorhouse Gummow is still alive.
3. At the time of the execution by me as such Attorney as aforesaid of a bond to and agreement with Her Most Gracious Majesty Queen Victoria, and bearing date the 16th day of May, 1895, in connection with Contract No. 77, Sydney Sewerage Works, I had not nor have I since received notice of the revocation by death or otherwise, of the abovementioned Deed Poll or Power of Attorney.

And I make this solemn declaration as to the matters aforesaid according to the law in this behalf, and subject to the punishment by law provided for any wilfully false statement in any such declaration.

Taken and declared at Sydney, this 16th } JOHN CARTER.  
day of May, 1895, before,— }  
HAROLD F. NORRIE, J.P.

Know all Men by these Presents,—That I, George Forrest, of Marrickville, in the Colony of New South Wales, householder, am held and firmly bound unto Her Most Gracious Majesty, Queen Victoria, in the penal sum of £6,000 sterling, to be paid in Sydney, in the said Colony, to Her said Majesty, her heirs or successors, for which payment well and truly to be made, I bind myself, my and each and every of my heirs, executors, and administrators firmly by these presents.

Scaled with my seal, dated the 16th day of May, in the year of our Lord, 1895.

WHEREAS by Agreement, bearing even date herewith, and expressed to be made between John Carter, Frank Moorhouse Gummow, and David Graham Snodgrass, carrying on business together as contractors, under the name, style, or form of "Carter, Gummow, and Company," and therein and hereinafter called the contractors, of the one part, and Her said Majesty of the other part, the said contractors covenanted to perform the various works required in and about the full and proper construction, erection, and completion of the northern main sewer, Leichhardt and Annandale sections, Contract No. 77, Sydney Sewerage, according to the copy notice, specification, schedule to specification, general conditions, special condition, supplementary specification, tender, copy letter of acceptance of tender, and letter of assent thereto, thereunto annexed, and marked "A," "B," "C," "D," "E," "F," "G," "H," and "I," respectively, and certain drawings relating thereto, now in the office of the Engineer-in-Chief for Metropolitan Sewerage Construction, and marked "No. 1" to "No. 11," both inclusive. And

And whereas the contractors have entered into a bond to Her said Majesty, dated the 16th day of May, 1895, conditioned to remove at their own cost so much of the said works as shall have been constructed on the "Monier System" if the engineer shall be dissatisfied with the same at any time during either of the periods of maintenance set out in the said General Conditions and Supplementary Specification respectively, and for the re-erection and construction of the said works, and to provide for the free and uninterrupted flow of sewage during the progress of such re-building, at their own expense, in accordance in all things with the said specification, schedule to specification, general conditions, special condition, and plans therein respectively referred to, and within thirty-nine weeks from the date of being called upon to do so. And whereas I, the said George Forrest, have offered to become bound to Her said Majesty, her heirs and successors, for the due performance and fulfilment of the said contract, according to the said agreement, and the several annexures thereto, so far as the removal of a portion of the said works constructed on the "Monier System" is concerned, if the engineer shall be dissatisfied with the same at any time during either of the periods of maintenance referred to, and the re-erection of the said works, and for the free and uninterrupted flow of sewage during the progress of such rebuilding, at the contractor's expense, in the manner provided for in the original specification, schedule to specification, general conditions, and plans within the time lastly hereinbefore set out. Now the condition of the above-written bond and obligation is such that if the contractors do and shall well and truly remove so much of the said works as shall have been constructed on the "Monier System," if the engineer shall be dissatisfied with the same at any time during the respective periods of maintenance set out in the said general conditions and supplementary specification, and re-erect and construct the said works, and provide for the free and uninterrupted flow of sewage during the progress of such rebuilding at their own expense, in accordance in all things with the said specification, schedule to specification, general conditions, and special condition, and the plans therein respectively referred to within thirty-nine weeks from the date of being called upon to do so. Then this obligation will be void, and of none effect, otherwise to remain in full force and virtue.

Signed, sealed, and delivered by the abovesigned }  
George Forrest, in the presence of,— }

GEORGE FORREST.

HAROLD F. NORRIE.

#### STATUTORY DECLARATION.

I, GEORGE FORREST, of Marrickville, in the Colony of New South Wales, householder, do hereby solemnly declare and affirm that I am possessed of property to the value of £6,000 sterling and more, and that such property consists of—Freehold property, £5,700; cash in bank, £300 sterling. And I make this solemn declaration as to the matters aforesaid, according to the law in this behalf made and subject to the punishment by law provided for any wilfully false statement in any such declaration.

Taken and declared at Marrickville, this 1st day }  
of June, 1895, before me,— }

GEO. FORREST.

ROBERT ANDERSON, J.P.

Know all Men by these Presents,—That I, James Gillan, of Dulwich Hill, in the Colony of New South Wales, householder, am held and firmly bound unto Her Most Gracious Majesty Queen Victoria, in the penal sum of £6,000 sterling, to be paid in Sydney, in the said Colony, to Her said Majesty, her heirs or successors, for which payment well and truly to be made I bind myself, my and each and every of my heirs, executors, and administrators firmly by these presents.

Sealed with my seal, dated the 16th day of May, in the year of our Lord, 1895.

WHEREAS, by agreement bearing even date herewith, and expressed to be made between John Carter, Frank Moorhouse Gummow, and David Graham Snodgrass, carrying on business together as contractors, under the name, style, or form, of "Carter, Gummow, & Co.," and therein and hereinafter called the contractors of the one part, and Her said Majesty of the other part, the said contractors covenanted to perform the various works required in and about the full and proper construction, erection, and completion of the northern main sewer, Leichhardt and Annandale sections, contract No. 77, Sydney sewerage, according to the copy notice, specification, schedule to specification, general conditions, special condition, supplementary specification, tender, copy, letter of acceptance of tender, and letter of assent thereto, thereunto annexed and marked "A," "B," "C," "D," "E," "F," "G," "H," and "I" respectively, and certain drawings relating thereto, now in the office of the Engineer-in-Chief for Metropolitan Sewerage Construction, and marked "No. 1 to No. 11," both inclusive.

And whereas the contractors have entered into a bond to Her said Majesty, dated the 16th day of May, 1895, conditioned to remove at their own cost so much of the said works as shall have been constructed on the "Monier System" if the engineer shall be dissatisfied with the same at any time during either of the periods of maintenance set out in the said general conditions and supplementary specifications respectively, and for the re-erection and construction of the said works, and for the free and uninterrupted flow of sewage during the progress of such rebuilding, at their own expense, in accordance in all things with the said specification, schedule to specification, general conditions, special condition and plans therein respectively referred to, and within thirty-nine weeks from the date of being called upon to do so. And whereas I, the said James Gillan, have offered to become bound to Her said Majesty, her heirs, and successors for the due performance and fulfilment of the said contract, according to the said agreement and the several annexures thereto, so far as the removal of the portion of the said works constructed on the "Monier System" is concerned, if the Engineer shall be dissatisfied with the same, at any time during the periods of maintenance referred to and the re-erection of the said works, and for the free and uninterrupted flow of sewage during the progress of such rebuilding at the contractors expense, in the manner provided for in the original specification, schedule to specification, general conditions, and plans within the time lastly hereinbefore set out. Now the condition of the above-written bond and obligation is such that if the contractors do and shall well and truly remove so much of the said works as shall have been constructed on the "Monier System," if the Engineer shall be dissatisfied with the same, at any time during either of the

the

the respective periods of maintenance set out in the said general conditions and supplementary specification, and re-erect and construct the said works, and provide for the free and uninterrupted flow of sewage during the progress of such rebuilding at their own expense, in accordance in all things with the said specification, schedule to specification, general conditions, and special condition, and the plans therein respectively referred to within thirty-nine weeks from the date of being called upon to do so. Then this obligation will be void and of none effect, otherwise to remain in full force and virtue.

Signed, sealed, and delivered by the abovenamed }  
James Gillan, in the presence of,— } JAMES GILLAN.  
HAROLD F. NORRIE.

STATUTORY DECLARATION.

I, JAMES GILLAN, of Dulwich Hill, in the Colony of New South Wales, householder, do hereby solemnly declare and affirm that I am possessed of property to the value of £6,000 sterling and more, and that such property consists of—cash at Bankers, ; freehold and other property, . And I make this solemn declaration as to the matters aforesaid according to the law in this behalf made, and subject to the punishment by law provided for any wilfully false statement in any such declaration.

Taken and declared at Sydney, this 27th day } JAMES GILLAN.  
of May, 1895, before me,— }  
HAROLD F. NORRIE, J.P.

“A.”

Department of Public Works, Sydney, 8 March, 1895.

TENDERS FOR PUBLIC WORKS.

TENDERS will be received at this office for the public works specified in the Schedule hereunder up to 11 o'clock a.m., of the various dates set forth in the second column.

All envelopes containing tenders must be addressed to the President of the Tender Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Tenderers may be in attendance when tenders are opened, and the name of the lowest tenderer will be announced, if possible, before the duties of the Board have terminated.

The following conditions will have to be strictly complied with, otherwise the tenders will not be taken into consideration :—

1st.—Each tender must state the time within which it is proposed to complete the work, and in every instance the full christian and surname or names of persons tendering.

2nd.—Every tender must contain an undertaking on the part of the person tendering to make the cash deposit provided for in the general conditions, and to be answerable for the due performance of the contract, in the event of the tender being accepted; and undertaking, in that event, to execute and deliver to the Minister for Public Works a valid legal contract with Her Majesty the Queen, for securing such performance.

3rd.—No tender will be considered which shall have been received after 11 o'clock a.m. on the day upon which tenders are to be received, unless there are circumstances which, in the opinion of the Board, render it desirable that it should be received.

4th.—Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive ... ..	£5	0	0
For amounts exceeding £500 and not exceeding £1,000 ... ..	10	0	0

For all sums over £1,000, 1 per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the manager of the bank upon which it is drawn, or a bank draft.

5th.—Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

6th.—In the event of any tenderer failing to take up his tender, complete the contract agreement, and proceed with the contract, within the time specified, or withdrawing his tender within thirty days after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account of such contract shall be absolutely forfeited to the Crown, and shall be paid to the credit of the Consolidated Revenue of the Colony.

7th.—Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted, but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition from other work, at the pleasure of the President.

8th.—In the event of any contract being tendered for at a schedule of rates, the approximate quantities as given of each item must be worked out and a total sum shown.

All deposits, with the exception of that of the lowest tenderer, when practicable, will be returned to the persons entitled thereto immediately after the Board shall have adjourned; and the deposit made by the successful tenderer shall be returned to him on executing the contract agreement for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender will not be returnable until the service is satisfactorily completed.

It is to be understood that the Government does not bind itself to accept the lowest or any tender; and no tender will be accepted until the head of the Branch under whose directions the work is to be carried out has reported upon the whole of the tenders received.

J. H. YOUNG.

ROADS

## ROADS

Description of work or supplies to be tendered for.	Dates up to which Tenders will be received.	Where Plan, Specification, and form of Tender may be seen.	Remarks.
Erection of a Timber Beam Bridge over Pian Creek, near Wee Waa.	13 Mar., 1895	Roads Office, Sydney; Court-house, Narrabri; and Police Station, Wee Waa.	
Erection of a Timber Beam Bridge over Orara River, at Geergavon Crossing, on Old Armidale Road.	13 Mar., 1895	Roads Office, Sydney, and Court-houses, Grafton and Armidale.	
The Northern Main Sewer, Leichhardt and Annandale sections. Contract No. 77, Sydney Sewerage.	13 Mar., 1895	Office of the Commissioner and Engineer-in-Chief for Roads, Bridges, & Sewerage, Sydney.	

\* \* \* \* \*

This is the copy notice marked "A," referred to in our agreement with Her Majesty the Queen, dated the 16th day of May, A.D., 1895,—

JOHN CARTER.

FRANK MOOREHOUSE GUMMOW.

By his Attorney,—JOHN CARTER.

Witness—HAROLD F. NORRIE.

This is the copy notice marked "A," referred to in my annexed bond to Her Majesty the Queen, dated 16th day of May, A.D., 1895.

Witness—HAROLD F. NORRIE.

JAMES GILLAN.

This is the copy notice marked "A," referred to in my bond to Her Majesty the Queen, dated 16th day of May, A.D., 1895.

Witness—HAROLD F. NORRIE.

GEO. FORREST.

"B."

SPECIFICATION.

1. *Description of Contract.*

This contract comprises the provision by the contractor of all labour, machinery, tools, plant, and everything that may be necessary for the construction of the northern main sewer, Leichhardt and Annandale section, as described in detail in the specification, schedule to specification, special condition, and general conditions, and as shown on the following drawings:—

- No. 1. General plan showing sites of sewers, &c.
- No. 2. Longitudinal sections of main and branch sewers.
- No. 3. Cross sections of road deviations, &c.
- No. 4. General elevation of Johnstone's Creek aqueduct, road crossings, and details.
- No. 5. Details of Nelson-street crossing, general cross sections of sewer, &c.
- No. 6. General elevation of White's creek aqueduct, road crossings, &c.
- No. 7. Details of White's Creek aqueduct.
- No. 8. General details of White's Creek and Johnstone's Creek aqueducts.
- No. 9. Designs and details of shafts.
- No. 10. Details of Johnstone's Creek and White's Creek aqueducts.

2. *Materials.*

The materials are to be of the quality specified in clauses 7 to 39 of the schedule to specification.

The bricks to be used in these works to be of the quality and description specified in clauses 11 and 12 of the schedule to specification, excepting all red bricks to be used in piers, arches, haunches, spandrels, parapets, and in approaches to aqueducts, up to the level of underside of coping, which are to be as specified, but to be dry pressed bricks of approved manufacture, dimensions, form, and colour, as per sample to be seen at the Engineer's office. The dry pressed red bricks, when immersed in water twenty-four hours, not to increase in weight more than 7.85 per cent., and the average breaking strain of twelve bricks to be taken from each parcel not to be less than 5,553 lb. All brickwork is tinted red on plans and sections; the areas on elevations of aqueducts as arches, abutments, piers, spandrels, circular panels over piers, parapets, pilasters, corbels, &c., which are to be specially faced with red and white bricks, are tinted red and white accordingly. The white bricks round circular panels to be specially formed and radiated bricks. All white bricks to be double pressed plastic bricks, and as hereinbefore specified.

The sandstone to be used in these works to be of the quality specified in clause 15 of the schedule to specification, but the stone to be used in stop-blocks at ends of aqueducts, in copings, string courses, and skewbacks of the aqueducts herein described, to be Pyrmont bottom block sandstone, and as specified.

3. *Excavation.*

The excavation for all the works comprised in this contract to be executed in accordance with clauses 40 to 80, 83 to 87, and 107 of the schedule to specification.

The excavation for the foundations of piers, abutments, abutment-piers, and approaches to aqueducts, to be executed as specified in the schedule to specification, and to the various depths, widths, steps, &c., as shown on drawings, or to such lesser or greater depths and widths as may be directed, said excavations to be measured to the outside of timbering where such has been approved of.

All

All logs, existing pitching, masonry, brick, or concrete work, oval or circular drains, sewers, &c., met with in excavations shall, in the first instance, be put aside beyond actual site of works in separate spoil-banks, to be measured and paid for at schedule prices under items of excavation of open trenches, tunnels, shafts, &c.

This is the specification marked "B," referred to in our annexed agreement, with Her Majesty the Queen, dated the 16th day of May, A.D., 1895,—

JOHN CARTER.

FRANK MOOREHOUSE GUMMOW.

Witness—HAROLD F. NORRIE.

By his Attorney,—JOHN CARTER.

This is the specification marked "B," referred to in my annexed bond to Her Majesty the Queen, dated the 16th day of May, A.D., 1895.

Witness—H. F. NORRIE.

JAMES GILLAN.

This is the specification marked "B," referred to in my annexed bond to Her Majesty the Queen, dated 16th day of May, A.D., 1895.

Witness—H. F. NORRIE.

GEO. FORREST.

In connection with clause 63 of the schedule to specification it is to be understood that the Engineer may, according to the nature of the ground, allow a margin of lining round sewer not exceeding 3 inches, consisting of concrete below level of springing and of sand-packing above level of springing. The filling round brick or concrete shafts to be executed as specified in clause 90 of the schedule to specification.

In connection with clauses 72 and 73 of the schedule to specification it is to be distinctly understood that all sunps which the contractor may think necessary to sink on lines of sewers shall be sunk only on approved dimensions, and the cost of sinking, timbering, unwatering, removing the excavated materials, timbering, &c., and the filling in, to be defrayed entirely by the contractor.

Shafts are to be sunk as specified in clauses, 65, 66, 68 to 71 and 76 to the schedule to specification, and as shown on drawing; but if during the progress of the works the engineer may deem it necessary to omit any of the shafts shown, the contractor shall omit such shaft or shafts where ordered, and such omission shall not entitle him to any claim for loss, damage, or compensation; he shall be only entitled to be paid for the shafts ordered to be sunk at schedule rates.

The price of 1 cubic yard of excavation for all work comprised in this contract (excepting refilling and disposing of surplus materials) shall include the cost of all work herein specified and described in the various clauses of the schedule to specification herein enumerated.

#### 4. *Subducts.*

Subducts to be constructed on lines of tunnels and open trenches, where ordered, as specified in clauses 78 and 79 of the schedule to specification.

#### 5. *Filling.*

The filling in of all excavations, and in any situation comprised in this contract, including the filling in round shafts, concrete foundations of piers, abutment piers, approaches to aqueducts, retaining walls, and sand-packing over and round closing arch of sewers, &c., to be executed as shown, and as specified in clauses 85 to 97, and 101 to 107 of the schedule to specification.

The price of 1 cubic yard of filling in any situation comprised in this contract (except disposing of surplus materials) shall include the cost of all work herein specified and described in the various clauses of the schedule to specification herein enumerated.

#### 6. *Temporary and Permanent Shoring, Timbering, Piling, &c.*

The shoring and timbering, including all iron used in fixing same, required in the construction of these works to be provided, erected, placed in position, withdrawn, covered up, and measured up as specified in clauses 87, 125, and 126 of the schedule to specification.

If during the progress of the contract, in the opinion of the engineer, pile foundations under piers of aqueducts is considered necessary, it shall be executed as shown on drawing, and as specified in clauses 110 to 126 of schedule to specification.

The piles to be not less than 15 inches diameter at the small end, and 17.50 inches diameter at large end, and they are to be driven until a 20-cwt. ram falling 10 feet does not drive them more than  $\frac{1}{4}$  inch at the last stroke.

#### 7. *Ordnance Fences.*

Road embankments to be protected by sawn hardwood ordnance fences to the extent and as shown on drawings, and as specified in clauses 197, 210, and 211, of the schedule to specification. The fences required for this contract to be two-rail only, and all post to be 6 in. x 4 in. x 6 ft. long, the lower 2 feet to be walled into upper portion of concrete retaining walls. All woodwork, ironwork, &c., to be painted and tarred as specified in clauses 269, 270, and 273 of the schedule to specification.

#### 8. *Roadmaking.*

The different road deviations and roads under, over, and at sides of main sewer, within the resumed land or otherwise, along Crescent Lane, Nelson-street, Young-street, lanes on each side of same, along White's Creek and White-street, to be constructed on embankments, in excavations, and along surface of ground, to be formed, sloped, bored out, ballasted, metalled, &c., as shown on drawings, as may be directed and as specified in clauses 200 to 204 in the schedule to specification.

#### 9. *Tarred Metal Deck.*

All sand filling over sewer in aqueduct to be covered with tarred metal deck, as specified in clauses 205 to 208 of the schedule to specification. The metal to be used in decking for this contract to be of  $1\frac{1}{2}$ -inch gauge as specified in clause 140 of the schedule to specification. The tarred metal to be spread 3 inches thick over the sand-filling.

#### 10. *Sewers, Storm-water Channels, &c.*

The various works comprising this contract are to be executed in conformity with clauses 132 to 139 of the schedule to specification.

The Leichhardt and Annandale section of the Northern Main Sewer commences at 6 miles 51.2515 chains, to be built in open cutting of 4 ft. 6 in. x 3 ft. 6 in. internal dimensions, of concrete, extending for about 9 feet under Crescent Lane; it is then to cross the Johnston Creek Valley, built of concrete, brick,

brick, and stone, on piers, and ten flat brick arches of 12-foot span for the length of about 159.6 feet; on pile foundations, where ordered, and on piers and twelve elliptical brick arches of 48-foot span for a length of about 633.316 feet; on abutment piers and one flat arch of 57-foot span, over Nelson-street, for a length of about 76.333 feet and on rock foundation with one flat arch of 12-foot span, of concrete, brick, and stone facings, for a length of about 88 feet up to 6 miles 65.8478 chains. A water-escape drain consisting of 24-inch diameter stoneware pipe, about 130 feet in length, with gullies complete, and open rock cutting about 10 feet in length, from Nelson-street towards Johnstone's Creek, to be constructed as shown.

From 6 miles 65.8478 chains to 6 miles 67.30 chains the sewer to be built in open cutting of concrete; from 6 miles 67.30 chains to 6 miles 78.24 chains of brick and concrete in tunnel in rock, and from 6 miles 78.24 chains of 4 ft. 3 in. x 3 ft. 3 in. internal dimensions of brick and concrete in tunnel in rock up to 7 miles 5.1941 chains, and then of concrete only, in open cutting up to 7 miles 6.9091 chains.

The sewer then to cross the White Creek Valley, built of concrete, brick, and stone, on rock foundation and on piers, and seventeen flat brick arches of 12-foot span for a length of about 359.1 feet, on piers, and nine elliptical arches of 48-foot span for a length of about 474.09 feet, on abutment piers and one flat arch of 33-foot span over White-street for a length of about 58 feet, on which length the sewer to be provided with two storm-water escape weirs and 12 inch diameter stoneware vertical outlet pipes, discharging into a water-escape drain consisting of 24-inch diameter stoneware pipes about 200 feet in length, with gullies complete; and open cutting only about 10 feet in length, from White-street towards White's Creek, to be constructed as shown. The sewer then to be constructed on rock foundations and on piers and four flat brick arches of 12-foot span for a length of 241.79 feet up to 7 miles 23.0758 chains.

Then from 7 miles 23.0758 chains to 7 miles 23.9840 chains the sewer to be constructed of concrete only in open cutting, and from 7 miles 23.9840 chains to 7 miles 30.4840 chains the sewer to be constructed of brick and concrete in tunnel in rock, but the lining of this length of tunnel shall not be commenced until especially ordered.

A branch sewer in tunnel in rock of 3 ft. 3 in. x 2 ft. 2 in. internal dimensions, to be constructed along Johnstone-street, from Piper-street to Rose-street.

If, during the progress of the Contract, the Engineer may deem it necessary to omit or alter any of the sewers, shafts, junctions, drops, inlets, or other works shown or described in the clauses herein quoted, then the Contractor shall be bound to omit altogether, or alter, as may be ordered at the time, any sewers, shafts, junctions, drops, inlets, &c., as the case may be, and such omission or alteration shall not entitle him to any claim for loss, damage, or compensation. He shall be only entitled to be paid for the work actually ordered and carried out at the various schedule rates referring to such work.

#### 11. *Concrete work.*

The concrete to be used in foundations of all piers, and in all piers and abutment piers, for the 12-foot, 33-foot, 48-foot, and 57-foot span arches up to level of springing and top of plinths, in haunches and spandrels, between and over all arches between external brick-facings, up to level of underside of string course (6 inches below invert of sewer), in retaining walls along road deviations and roads, round storm-water discharge pipes, round stoneware pipe where directed, and where ordered in any situation in the construction of these works, to be sandstone concrete of the quality specified in clause 142 of the schedule to specification.

The concrete to be used in inner sewer lining (between brick facings) of aqueducts to be special bluestone concrete of the quality specified in clause 141 of the schedule to specification, except that in this instance the bluestone metal to be broken to a size to pass freely with its largest dimensions through a ring of  $\frac{3}{4}$  inch in diameter, to be screened and washed as specified in clause 140 of the schedule to specification.

The concrete to be used in lining sewers in tunnels, open cuttings, in ventilating shafts, drops, weir-chambers, inlets, flushing, gas-check, and other chambers, and where ordered in the construction of these works, to be bluestone concrete of the quality specified in clause 140 of the schedule to specification. The whole of the concrete work comprised in this contract to be commenced, executed, and completed (including the iron bond-rods in concrete lining of sewer on lines of aqueducts as described in clause 164 of the schedule to specification), as shown on drawings, and as specified in the schedule to specification in clauses 140 to 171.

#### 12. *Cement facing.*

All exposed, internal, and external concrete surfaces to be protected by cement facing prepared of cement and sand in the proportion of one cement to two of sand, except all internal concrete surfaces of sewer over aqueducts, which are to be protected by special cement facing prepared in the proportion of one cement to one of sand. The cement facing to be executed as specified in clauses 180 and 181 of the schedule to specification complete with all battered faces, recesses, chamfers, weatherings, &c., as shown, and as shall be directed.

#### 13. *Brickwork.*

The brickwork comprised in this contract to be executed and completed as shown on drawings, and as specified in clauses 172 to 179 of the schedule to specification, and clause 2, except that in this instance the 12-foot span arches in aqueducts are not to be built in  $4\frac{1}{2}$ -inch rings, but they are to be built in radiating through courses of rubbed and gauged or radiated bricks, as shown, and as shall be directed. The 48-foot span arches to be built as specified, and to be thickened out at the haunches, so as to abut against the sandstone concrete filling over piers between the arches, and between the external brick facings as shown.

#### 14. *Masonry.*

All freestone ashlar in skewbacks, stringcourses, copings, 6 ft. 8 in. x 2 ft. x 9 in. stop-blocks at ends of aqueducts, and steps, to be provided, dressed, set in cement and built in where shown on drawings and where directed, as specified in clauses 15, 182, and 183 of the schedule to specification, and in clause 2. The exposed faces of skewbacks to be finished with 2-inch parallel drafted margins along each exposed arris, stopped in at inner edges, and the surface of stones between to be picked down, the projecting parts to be level with true line of wall.

#### 15. *Squared bluestone pitching.*

Squared bluestone pitching to be provided and set round manhole covers, and where ordered, to be  $7\frac{1}{2}$  inches deep, and as specified in clause 186 of the schedule to specification.

16. *Squared freestone pitching and channelling.*

Squared freestone pitching to be set round gully gratings, and in road-channels as shown, and where ordered, as specified in clause 187 of the schedule to specification.

17. *Freestone curbing and gully covers.*

Freestone curbing to be set along edges of footpaths, at gully-gratings, &c., to be of the exact dimensions, dressed and sunk as shown, and as specified in clause 188 of the schedule to specification. Gully-covers, 3 ft. 3 in. x 3 ft. x 9 in., to be provided and set, dressed to the exact dimensions, where shown, as specified in clause 183 of the schedule to specification.

18. *Pipe-laying and jointing.*

The providing, laying, and jointing of glazed stoneware pipes to be executed as specified in clauses 13, 14, 137, 170, 189 to 194 of the schedule to specification.

19. *Scupper pipes, slate covers, &c.*

The 4-inch diameter glazed stoneware scupper-pipes along footpaths over sewer on lines of aqueducts to have cistern heads built of concrete, covered on top with 16 in. x 9 in. x 1 in. slate covers set in cement as shown.

20. *Cast-iron and wrought-iron work.*

All cast-iron ventilating grates and closed manhole covers with frames, gas-check frames, gully-gratings and frames, galvanised wrought-iron step-irons, &c., required for this contract to be supplied by the Government to the contractor, and to be received and removed by him when not required, as provided in clauses 264 and 265 of the schedule to specification. Contractor to place said ironwork in position, wall in, joint, and fix same in the works, as specified in clauses 138, 139, 168, and 170 of the schedule to specification, as shown on drawings, and as shall be directed.

21. *Order of works.*

The excavation of all shafts to be commenced simultaneously within three weeks after the date the contract has been signed and all shafts to be completed within nine weeks after commencement of excavation. The five working shafts shown on lines of tunnels provide seven working faces. The driving of the tunnels to be commenced from all faces simultaneously, and the average total progress at all working faces during every day of twenty-four hours to be not less than 11.666 feet or 70 feet during every week of six working days of tunnel excavation complete.

The various excavations of open trenches for sewers, piers, and abutment piers of aqueducts, approaches to same, roads, &c., to be commenced in each length from the different faces simultaneously. The piling where such has been ordered for foundations of piers of aqueducts, all pipelaying, concrete work, brickwork, masonry, &c., required in shafts, chambers, junctions, tunnels, foundations of piers, and abutment-piers of aqueducts to level of top of plinths and springing of arches, and in sewers in open cuttings approaching aqueducts, &c., to form the first part of the works.

The construction and completion of all brickwork, concrete work, and masonry of all piers, abutment piers, with all arches of 12-foot, 33-foot, 48-foot, and 57-foot span and spandrels up to level of tops of said arches, to form the second part of the works.

The construction and completion of all concrete work, brickwork, masonry, &c., of all sewers over aqueducts from top of arches to level of top of all parapets, including weir chambers storm-water discharge pipes, sand-filling and asphalt covering over aqueducts, road-making, road-repairing, and every other work required in the completion of the whole contract, to form the third part of the work.

In constructing the various items forming the first and second part of the works, it is to be distinctly understood that all piers and abutment piers for arches of 12-foot, 33-foot, 48-foot, and 57-foot span, must be built and completed up to level of springing and top of skewbacks, as the case may be, throughout each respective length of aqueduct over each valley, before any of the arches are commenced.

On completion and approval of all piers and abutment piers, each series of arches over each valley to be commenced (unless otherwise directed) at its eastern end, and to advance to its western end, with not less than six centres at a time for the arches of 48-foot span, and with five centres for the arches of 12-foot span, that is to say—

After the first six centres of 48-foot span and the first five centres of the 12-foot span arches are placed in position, the arches over same are to be built and completed one after another, then the spandrels between the 48-foot span arches are to be built with concrete between brick-facings to a height of 11 ft. 3 in. above the springing, after which the centres from underneath the first arch of each series, after the specified period allowed for settlement has expired, to be removed and at once to be re-erected over the sixth or seventh openings, as the case may be, then the centres from the second arch to be removed and re-erected over the seventh and eighth openings, and so on, and the same system to be continued until all arches of one aqueduct have been built and completed.

All centres of arches, cambered as shall be directed, to be strong enough in every part to carry the weight of each arch to be built thereon. Centres under the 12-foot span arches shall not be removed until fourteen days after the completion of each arch. Centres under the 48-foot span arches shall not be removed until twenty-eight days after completion of each arch, and the concrete and brickwork of spandrels between the arches from springing of arch to a height of 11 ft. 3 in. above same, and the centres of the 33-foot span and the 57-foot span arches shall not be removed until fourteen days after the completion of each arch, and until the centres of the adjoining arches at each side of each respective arch have been removed.

After all arches of one aqueduct have been completed as specified, and approved of, the concrete, brickwork, and masonry, as the case may be, to be built in between and above same, in horizontal layers transversely and parallel with gradient of sewer longitudinally, so that all arches of one aqueduct (except where otherwise directed) shall be gradually, uniformly, and equally weighted, as the superstructure rises to the levels hereinbefore specified.

22. *Schedule to specification, special condition, and conditions of contract.*

Notwithstanding that certain clauses of the schedule to specification are especially enumerated, it is to be understood that the schedule to specification, special condition, and the general conditions attached to the specification, shall be held binding in all matters relating to this contract, as far as the Engineer may deem the same applicable.

23. *Note.*

Parties tendering are particularly requested to observe that they must name only one rate of percentage above or below all the prices in schedule, and not one rate of percentage upon certain items, and another rate or rates upon others.

"C"

SCHEDULE TO SPECIFICATION.

*Land required for works.*

1. Access to the site of the works (other than by public roads) to be had by means of such land the Engineer may deem necessary.
2. For the purpose of sinking, working, and building shafts on lines of streets, and on private ground, the contractor to have temporary possession of an area of 24 ft. by 17 ft. at the site of each shaft, unless otherwise directed.
3. For the purpose of excavating open trenches, and for constructing the various works therein, and raising embankments over same, or where ordered, contractor to have temporary possession of such land, of the exact widths and lengths which, in the opinion of the Engineer, is required for these works.
4. The land herein referred to, to be set out by the Engineer upon receiving written application from the contractor. Such application must be made four weeks prior to the time the said land is required.

*Setting-out work.*

5. The centre lines of sewers, &c., are shown on general plans by full lines, which will be marked on the surface of the ground, the same as on plans, as the works proceed.
6. Contractor shall at his own cost and expense at any time—by day or by night, either on working days or on Sundays or holidays—render all such assistance and supply all such labour, plant, and lighting as the Engineer or Superintending Officer may require, to set out, to check such setting-out, or to inspect any portion of the works, which must for that purpose be left clear and free from any obstruction or impediment. During and for the performance of those operations, contractors shall be obliged to suspend any or all of his work, if required to do so by the superintending officer, and without having any claim for loss or damage on account of such temporary suspension.

*Materials.*

7. All materials supplied by the contractor are to be of the best quality and description of their respective kinds. Samples of each kind to be submitted for the approval of the Engineer, and retained in office; and, on approval having been obtained, they are to be delivered on the works ready for use, as per sample.
8. The contractor shall inform the Engineer of the sources whence the various materials are supplied, or of the places of their manufacture, and afford him every facility to inspect their supply or manufacture at any stage of the same.
9. Due notice shall be given by contractor to the Superintending Officer when any material is brought on the ground, all of which must be neatly stacked in regular heaps, submitted for approval, and approved of in writing by the Superintending Officer, before it may be used in the works. None but that so approved shall be used.
10. The contractor to provide approved gauge-boxes or scales for measuring or weighing all materials supplied.
11. Bricks to be double-pressed, of well-mixed material of approved quality and uniform fineness; to be new, sound, hard, and well-burnt kiln bricks, free from cracks and all other defects, equal in every respect to the sample brick to be seen at the Engineer's office. They are to have sharp arrises, and to be of approved dimensions, form, and colour, and, when ordered, to be specially moulded. Radiating and specially-formed bricks to be provided for all segmental shafts. All bricks to be subjected to the following tests:—
- (a) *Tensile strength.*—The tensile strength to be tested, in the departmental testing machine, by laying the brick horizontally on its base of 3 inches, between supports 7 inches apart, and the strain applied across the centre of the brick. An average breaking strain of twelve bricks to be taken, which must not be less than 8,000 lb.
- (b) *Porosity.*—Bricks immersed in water for twenty-four hours must not increase in weight more than 3 per cent.
- Should the twelve bricks fracture under the foregoing average strain, or prove more porous than 3 per cent., then the Engineer may reject the whole stack of bricks from which the twelve bricks were taken.
12. In the event of the contractor delivering bricks of a mixed description and quality, the Superintending Officer shall have the power to require of the contractor to have those bricks which, in his opinion, are suitable for the works, picked out and stacked where directed, and those unsuitable removed from the site of the contract; and in the event of the contractor refusing or failing to comply with such request within twelve hours from the time it has been made, then in all such cases the Superintending Officer shall have the power of rejecting the whole of the bricks so delivered by the contractor.
13. Stoneware pipes to be of well-ground and mixed material, of tough, tenacious, impervious quality, well-burnt, sound, hard, uniform in thickness, true in section, straight longitudinally, uniformly glazed both inside and outside, free from fire and other cracks, flaws, and ash-holes, the collar perfectly joined to the barrel, and in every way equal to sample pipe to be seen at the Engineer's office.

Pipes

Pipes to be of the following thicknesses and depth of collars, namely :—

Dimensions.

Pipes, inside diameter, 9 inches ; thickness,  $1\frac{1}{8}$  inch ; depth of collar, 2 inches.

"	"	12	"	"	1	"	"	2	"
"	"	15	"	"	$1\frac{1}{4}$	"	"	$2\frac{1}{4}$	"
"	"	16	"	"	$1\frac{3}{8}$	"	"	$2\frac{1}{2}$	"
"	"	18	"	"	$1\frac{1}{2}$	"	"	$2\frac{3}{4}$	"
"	"	21	"	"	$1\frac{5}{8}$	"	"	2	"
"	"	24	"	"	$1\frac{3}{4}$	"	"	$2\frac{3}{4}$	"

All parcels of pipes used in these works will be tested and submitted to the following crushing Tests, as applied in the departmental testing machine :—

24-inch diameter pipe, 165 lb. per square inch of bearing surface.

21	"	"	165	"	"	"
18	"	"	142	"	"	"
16	"	"	142	"	"	"
12	"	"	142	"	"	"
9	"	"	142	"	"	"

If the Engineer deems it necessary, the pipes will also be tested for porosity. Should the pipes fracture under the foregoing strains, or not prove impervious to water, then the Engineer may reject the whole parcel from which the pipes were taken.

14. In the event of the contractor delivering quantities of pipes, bends, and junctions of a mixed description and quality, the superintending officer shall have the power to require of the contractor to pick out and stack, where directed, those pipes, bends, and junctions which, in his opinion, are suitable for the works, and those unsuitable removed from the site of the contract; and in the event of the contractor refusing or failing to comply with such request within twelve hours from the time it has been made, then in all such cases the superintending officer shall have the power of rejecting the whole of the pipes, bends, and junctions so delivered by the contractor. Defective pipes, &c.

15. All sandstone used in the construction of these works to be hard, sound, and solid, of the best description, free from all defects, and as per sample to be seen in the Engineer's office, and to stand a crushing strain of 6,500 lb. per square inch. A tensile test will also be required; for this six stones must be prepared, 4 in. by 4 in. by 12 in.; these, when laid on their natural beds upon supports 10 inches apart, must give an average breaking strain of not less than 4,333 lb., the strain being applied across the centre of the stone. Sandstone.

16. All bluestone used in the construction of these works to be of the best description of basaltic bluestone obtainable, free from honeycomb and all defects, and as per sample to be seen at Engineer's office. Bluestone.

17. Sand to be sharp quartz sand, free from all earthy, loamy, or clayey matter, equal in quality to the sample of Nepean River sand to be seen at the Engineer's office, and to be washed perfectly clean whenever the Engineer deems it necessary. Sand.

18. The cement to be used throughout these works to be well packed in strongly-made casks; to be the best Portland cement, of approved brands and manufacture, delivered in thoroughly sound condition, fit for immediate use, and without requiring seasoning or air-slacking; to be free from any symptoms of staleness, caking, damage to the packing, hard or set lumps; and no barrel or portion of same to be used until it has been examined and approved. The Engineer may delay approval of any parcel of cement pending tests extending over a longer period than hereinafter specified. Samples taken from various casks, from each parcel brought on the works, to be submitted for testing. Such samples shall be taken out of the package in an equal section, extending from the surface to the centre of the cask. The cement, when gauged with water to a stiff paste, must set in a damp atmosphere in from one and a half to six and a half hours. Neat cement, of the consistency abovementioned, will be made into pats, kept in moist air until set, and then placed in water at a temperature of between 65° and 80° F., and also in Deval's hot bath, at a temperature of 180° F. These test pats will be examined from day to day, and should they show symptoms of blowing, or any alteration or variation in form or volume, or imperfect setting capacity, the whole parcel from which the cement was taken will be rejected. The cement shall weigh not less than 100 lb. per imperial striked bushel, filled from the hopper. Each cask shall contain not less than 374 lb., exclusive of weight of packing. The specific gravity to be not less than 3.00; but cement up to or exceeding the specified degree of fineness, if of a lighter weight than herein stipulated, but otherwise equal to the specified tests, may be accepted subject to the decision of the Engineer, provided that the deficiency in weight is made up in quantity. The cement must be ground so fine that the residue on a sieve of 6,400 meshes per square inch, without rubbing shall not exceed 20 per cent., and on a sieve of 14,500 meshes not more than 30 per cent. For the test for tensile strength, the cement will be gauged with three times its weight of standard sand (viz., sand from crushed sandstone, washed, dried, and sifted through a sieve of 400 and retained upon one of 900 meshes to the square inch), and mixed with an average of about 10 per cent. of their weight of water, and made into briquettes formed in moulds of 1 inch sectional area at the weakest part. Such briquettes to be kept in a damp atmosphere, and put into water twenty-four hours after they have been made, and remain in water at a temperature of between 60° and 70° F., until their tensile strength is tested. These briquettes must bear a tensile stress of not less than 100 lb. per square inch after seven days, and 200 lb. per square inch after twenty-eight days from being moulded. Cement, when tested neat, must bear a tensile stress of at least 300 lb. to the square inch after three days, two of them in water; and 450 lb. after seven days, six of them in water; and 550 lb. after twenty-eight days, twenty-seven of them in water. Briquettes shall also, after being in a damp atmosphere for twenty-four hours, be kept in water at a temperature of 180° F. for six days, when the tensile stress must be equal to that specified for twenty-eight days at normal temperature. The tensile strength will be ascertained in the Government testing-machine, with the load increasing at the rate of 200 lb. per minute, and the average breaking weight of six briquettes will be taken for each test. Any cement which absorbs in proportion more than 2 milligrams of carbonic acid to 3 grains of cement shall be taken as containing more than the permissible quantity of free lime or magnesia. Should the sample fail in any or all of these tests, or show irregularity in quality, or not show a proper progressive increase Cement.  
Condition.  
Samples.  
Setting test.  
Hydraulicity.  
Weight.  
Specific gravity.  
Fineness.  
Tensile strength.  
Hot test.  
Rate in loading testing machine.  
Free lime.

in strength with age of briquette, then the Engineer may reject the whole parcel from which the sample was taken, and the contractor shall at once remove the said parcel of cement from the site of the works at his own expense; failing which, the Engineer may have it removed at the contractor's cost without further notice. Empty casks to be immediately broken up and removed from off the works. To facilitate the gauging of cement throughout the contract, cement casks will be taken as equal to holding 4 cubic feet; otherwise, the contractor to provide and make approved gauge-boxes, holding exactly 4 cubic feet, for measuring cement.

Contents of casks.

Delivery.

Cement is to be brought on the ground in quantities of not less than fifty casks, provided that this quantity is sufficient for fourteen days' supply, but in no case is less than fourteen days' supply (whatever that may prove to be) to be brought on the ground in one parcel; nor is the supply stored on works to be at any time less than fourteen days' supply. All cement to be kept on the ground in approved weather-tight sheds, under lock and key, which shall be in the custody of the Superintending Officer.

Storage.

Mortar.

19. The mortar to be used in these works to be composed of one part of Portland cement and of two parts of clean washed sharp sand, as described in clauses 17 and 18, the proportion of each to be correctly ascertained by measurement, the whole to be mixed with fresh water, as may be directed, to be well incorporated, and to be used fresh. Any mortar which has become hard or set to be at once rejected. All mortar to be mixed on approved sawn timber platforms close to where it is required.

Special mortar.

20. Special mortar, composed of 1 part of cement and 1 part of sand, and prepared as before described, to be provided and used in all portions of the work where specially specified or directed.

Grout.

21. The grout to be made of mortar as described in clause 20, to be mixed fluid in tubs, close to where it is required, and to be used fresh.

Puddle.

22. Puddle to consist of the best clay to be obtained in the district within a radius of 5 miles; to be carefully turned over and mixed with fresh clean water until the clay, in the opinion of the Engineer, has become of one even and uniform colour and plasticity.

Spun yarn.

23. Spun-yarn to be of the best description of  $\frac{3}{8}$  inch New Zealand flax.

Lead.

24. Lead to be of approved quality, of the best description of soft pig lead, and to be delivered in pigs, which must show the brand or mark of the manufacturer.

Wrought-iron and steel.

25. Wrought-iron and steel to be of the best description and quality, with square arrises, free from scales, blisters, laminations, and all other defects, and subject to tests hereinafter specified.

Tests.

26. The tests for rolled iron shall be as follows:—A piece of iron of such width as shall not exceed 2 inches, or exceed 1 square inch in cross-section, and of a sufficient length to have 10 inches under actual tension, shall be cut, as directed by the Engineer, from any plate or bar about to be used on the work, and the following tensile stresses shall be applied:—

	Stress per square inch without fracture.	Ultimate elongation.	Ultimate contraction of area.
Rolled girders... ..	20 tons	8 per cent.	10 per cent.
Plates—across grain ... ..	18 „	4 „	6 „
„ with grain ... ..	22 „	10 „	12 „
T, L, and bulb T bars ... ..	22 „	10 „	15 „
L bars ... ..	23 „	12 „	18 „
Square, flat, and round bars, and bolts over 4 inches sectional area ...	23 „	12 „	18 „
Square, flat, and round bars, and bolts up to 4 inches sectional area ...	24 „	12 „	25 „

Iron within 10 per cent. of above specified stress will be accepted if the contraction of area and elongation are proportionally higher.

The wrought-iron to be further tested for ductility, as follows:—

A plate planed and rounded on both edges, about 4 in. wide and 1 ft. long, shall bend cold over a slab, the corner of which is rounded to  $\frac{1}{2}$  inch radius, for the following angles, without showing any sign of injury or fracture:—

	With grain.	Across grain.
1 inch plate for ... ..	15 degrees	5 degrees
$\frac{3}{8}$ „ „ ... ..	25 „	10 „
$\frac{1}{2}$ „ „ ... ..	30 „	12 „
$\frac{5}{8}$ „ „ ... ..	35 „	15 „
$\frac{3}{4}$ „ „ ... ..	52 „	20 „
$\frac{7}{8}$ „ „ ... ..	70 „	30 „

27. Rivet-iron must be capable of being bent cold until the sides are in close contact, without sign of fracture on the convex side.

Steel.

28. The tests for rolled steel shall be as follows:—

The steel to be of a mild quality, having an ultimate tensile strength, either lengthways or crossways, of not less than 26 tons, and not more than 31 tons per square inch, on a test bar, cut in a similar manner to those for rolled iron, with a minimum elongation of 20 per cent., and a minimum contraction of area of 40 per cent.

Strips cut from any steel plate, angle, or bar, to be heated to a low cherry red, and cooled in water of 82 degrees Fahrenheit, must, when cold, stand bending double round a curve, of which the radius is not more than one-and-a-half times the thickness of the plates tested, without showing any sign of injury or fracture.

Cast-iron.

29. Cast-iron to be equal to No. 2 pig-iron, or of a proper mixture of No. 1 and No. 3 pig-iron, according to the description of iron-work and pattern; said iron to be of the best quality, tough, close-grained, and capable of being chipped and drilled without difficulty.

Tests.

30. Branded test-bars, 2 in. x 1 in. x 3ft. 6 in., to be cast vertically, in the presence of the Superintending Officer, from the cupola from which castings are being run, and to be then carefully marked with the date. These test-bars will be placed on bearings 3 feet apart, and submitted in the centre to a weight not exceeding 28 cwt., and the deflection caused by this weight must not be less than  $\frac{3}{8}$ -inch before fracture; if the bars do not stand this test to the satisfaction of the Engineer, then the whole of the castings which have been cast of iron of the same quality, shall be at once rejected.

31. All castings of every description, before they leave the foundry, to be carefully examined and weighed, to be slung on chains above ground, and to be sounded with a hammer, and they are again to be carefully examined, slung, and sounded with a hammer when delivery of same is taken at the site of the works. Tests of castings.

32. All straight pipes required in the contract, before delivery of same is taken on the works, shall be, at the foundry or at the site of the works, as shall be directed, duly proved under hydrostatic pressure equal to a column of water of 200 feet, and when under pressure to be thoroughly sounded quickly all over with a hammer of not less than 4 lb. Tests of pipes.

33. The gun-metal required throughout these works to be an alloy composed of eight parts of copper to one part of tin, unless otherwise specified. Gun-metal.

34. The tests for cast-steel shall be as follows:—

Bars turned to  $\frac{3}{4}$ -inch diameter for a sufficient length to have 5 inches under actual tension, shall have an ultimate tensile strength of not less than 26 tons per square inch, and a minimum elongation of 18 per cent. Cast-steel tests.

35. The cost of providing the materials and wrought and cast iron works, &c., herein described, required by the Engineer for testing purposes, and the carriage of same to the Public Works testing-room, place of manufacture, site of works, or to the University, as the case may be, and as shall be directed, shall be borne solely by the contractor; and any of the materials, or any part of the wrought-iron and gun-metal work, or any of the pipes, castings, &c., injured or broken by the testing, shall be immediately replaced by new and sound materials at contractor's expense; wrought-iron, gun-metal, cast-iron pipes, or other castings, to be again tested as before described, until the whole have been tested to the entire satisfaction of the Engineer. Cost of tests.

36. Timber to be of the best description, sound, straight, free from sap, large or loose knots, wanes, shakes, gum-veins, pipes, or other defects. Timber

37. Hardwood used in the works to be of approved timber.

Round timber to be carefully barked, the diameter given on drawing is to be measured at the small ends. Hardwood

Hewn timber is to be squared true on all sides, and dressed fair and clean with the adze, so as to show no axe-marks, to be of full dimensions, free from sapwood, and no heart timber must appear on the outside.

Sawn timber to have clean sharp arrises, to be cut die square, free from heart timber, and of the full dimensions shown or specified.

38. Softwood timber to be of the best Baltic or yellow deals, and of the exact dimensions specified when finished. Softwood.

39. Split posts and rails for fencing must be perfectly straight and cleanly split, free from large knots, splinters, and other defects. Split fencing timber.

#### *Earth-borings.*

40. When earth-borings have been taken the results have been shown on drawings, but the Government undertake no guarantee whatever regarding the kinds of soil that will be met with or the firmness or stratification of the ground to be excavated, or the amount of unwatering to be done, or the strength of the timbering that may be required, or the nature and extent of other precautions which may have to be adopted.

#### *Clearing and Grubbing.*

41. The areas of the sites for all excavations and of all embankments, together with a margin of 10 feet in width beyond all these areas, to be cleared and grubbed of all trees, scrub, stumps, roots (to the depth of same), and dead timber, and the whole of such trees, scrub, stumps, roots, and dead timber thus grubbed and cleared to be removed and cleared away from any lands set apart for the purposes of this contract. The cost of all clearing and grubbing to be covered by and included in the schedule price for excavation.

#### *Excavation.*

42. No excavation to be commenced on any portion of the contract until, in the opinion of the Engineer, sufficient building materials are on the ground, together with the necessary appliances and plant to ensure the uninterrupted progress and continuance of the works, after they once have been commenced, at any locality, without any delay or stoppage.

43. It is to be distinctly understood that, when sinking shafts and driving tunnels, the materials excavated, on their arrival at level of staging above mouth of shaft, are to be at once removed; and when materials, &c., are to be conveyed through shafts to the tunnel works, that all such materials, on arrival at mouth of shafts, must be at once conveyed to the works underground, as the contractor cannot be allowed to occupy a larger area than that authorised by the Engineer.

44. When excavating in open trenches, if ordered, the materials excavated and raised to the surface are to be at once removed; and when materials are being conveyed to open trenches, where they occur in public roads, they must be at once taken into the work, so as not to impede the usual traffic.

45. The road metal, ballast, pitching, wood-paving, concrete, asphalt, flagging, sodding, &c., when they are met with in excavation, are to be carefully removed, put aside, and stacked where directed.

46. The cross-sections of tunnel excavation are shown on Drawings, but they will vary with the solidity of the ground, and as the Engineer directs. Cross sections to vary.

47. Wherever the solidity of the ground permits it, the excavation in trenches for concrete or brickwork to be taken out with vertical sides to level of springing of sewer arch, and to the exact widths of concrete or brickwork shown on Drawings, and below that level to bottom of trench with curved or vertical sides, as shall be directed. Method of excavation in trenches with out timbering.

48. Where timbering is required, trenches 8 feet deep and under shall have vertical sides, and shall be 1 ft. 3 in. wider to outside of polling-boards than width of concrete or brickwork. Where trenches are over 8 feet deep and require timbering, they shall have vertical sides, and shall be 1 ft. 3 in. wider to outside of polling-boards than the width of the concrete or brickwork for the lower 8 feet. Above that level they shall be 2 feet wider to outside of polling-boards than concrete or brickwork. Width of trenches where timbering is required.

For embankments.

49. The excavation for foundation of embankments to be taken out, where ordered, 12 inches below surface of ground, and to such widths and lengths as shall be directed, or as ordered for benching.

Width of trenches. 50. The excavation in solid rock for pipe-trenches shall have vertical sides, and shall be of the following sizes, viz. :—

For 24-inch diameter stoneware pipe sewers...	...	...	3 ft. 9 in. wide.
21-inch	"	"	3 ft. 4 in. "
18-inch	"	"	3 ft. 0 in. "
15-inch	"	"	2 ft. 6 in. "
12-inch	"	"	2 ft. 0 in. "
9-inch	"	"	2 ft. 0 in. "

51. When timbering is not required in excavation in all other ground for pipe-trenches, the trenches shall be of the same widths as those in solid rock. Where timbering is required, the excavation for pipe-trenches 8 feet deep and under shall have vertical sides, and shall be of the following sizes to the outside of the polling-boards, viz. :—

24-inch diameter stoneware pipe-sewers...	...	...	4 ft. 0 in. wide.
21-inch	"	"	3 ft. 7 in. "
18-inch	"	"	3 ft. 3 in. "
15-inch	"	"	2 ft. 9 in. "
12-inch	"	"	2 ft. 3 in. "
9-inch	"	"	2 ft. 3 in. "

Width of trenches.

52. Where timbering is required, the excavation for pipe-trenches more than 8 feet deep shall have vertical sides, and shall be the widths given in clause 61 for the lower 8 feet and for any depth over and above 8 feet, the trenches shall be of the following sizes to the outside of the 1½-inch polling-boards (unless otherwise ordered in writing), viz. :—

24-inch diameter stoneware pipe-sewers...	...	...	4 ft. 9 in. wide.
21-inch	"	"	4 ft. 4 in. "
18-inch	"	"	4 ft. 0 in. "
15-inch	"	"	3 ft. 6 in. "
12-inch	"	"	3 ft. 0 in. "
9-inch	"	"	3 ft. 0 in. "

Checks. 53. Transverse and other checks to be excavated to receive pipe-sockets and junctions, and for the purpose of making the joints.

Cast-iron pipe trenches. 54. The trenches for the cast-iron pipe-sewers to be excavated to the depths and widths which the Engineer may order. Joint-holes to be excavated to the dimensions specified or ordered by the Engineer.

Trenches. 55. The excavation of trenches to be carried on in such a manner that they shall be always completed and approved for a length of 48 feet (unless otherwise directed) in advance of sewers or other works.

The use of explosives. 56. In ground which, in the opinion of the Engineer, does not require blasting, the excavation is to be carried on by means of picking, and when the ground, in the opinion of the Engineer, is hard and suitable for blasting, charges of compressed powder, not exceeding 4 inches in length by 1¼ inch in diameter, shall be used. The Engineer, however, reserves to himself the right of ordering any excavation which he may consider blasting would facilitate, to be taken out by means of charges of compressed powder not exceeding 2 inches in length by 1½ inch diameter, or he may prohibit the use of explosives altogether, when the excavation shall then be done by means of guttering and gadding. If explosives, other than compressed powder, are permitted to be used, the charges thereof will be determined by the Engineer.

Precautions. 57. When the use of explosives is authorised, the contractor shall use every precaution and carry on such operations with such limited charges of powder only, or other approved explosives, as will loosen the shale, rock, &c., without shattering the same; and to employ approved means to prevent, effectually and thoroughly, all stones or other materials from being thrown out of trench, tunnel mouth, or shaft.

Working hours. 58. Blasting will not be allowed between the hours of 10 p.m. and 6 a.m., nor after 1 p.m. on Saturdays, except by the written authority of the Engineer.

Drilling and charging holes. 59. Every hole drilled for blasting purposes will be measured by an inspector, and charged under his supervision.

Storage of explosives. 60. No larger quantity of explosives shall be taken underground than is likely to be used during any current shift.

Pipe-sewer tunnels. 61. When pipe-sewers are to be laid in tunnels, the dimensions of tunnel to be 4 ft. x 3 ft., exclusive of timbering.

Excessive excavation. 62. If the contractor has exceeded the sectional area of excavation ordered, he shall remove such extra excavation, and in the case of trenches make good and fill in same at sides of trench with approved materials, and at bottom of trench with concrete described in clause 142, at his sole cost; the actual cubic contents only of the excavation and of the concrete work shown on drawings and ordered for each special length of sewer in open trench shall be paid for; and in the case of excavation in tunnels and shafts the contractor shall remove such extra excavation, and make good and fill in same with concrete or brickwork, in the manner herein specified, at his sole cost; the actual cubic contents only of the excavation and of the brick and concrete work shown on drawings, and ordered for each special length of tunnel or shaft, shall be paid for.

Maximum allowance. 63. If, however, in cases where the use of explosives is ordered (and in no other case) the Engineer considers it impracticable to excavate any particular length of tunnel or shaft to the exact sectional area ordered, then he may, according to the nature of the ground, allow a margin of concrete lining not exceeding 3 inches over and above that ordered.

Starting tunnel excavation. 64. Unless otherwise directed, the excavation of the various tunnels to be commenced from the different faces described in the specification, simultaneously within the specified time after the date the contract has been signed.

Ventilation. 65. Ventilating fans or other approved means to be provided and worked by the contractor at all working shafts and tunnel faces where directed by the Engineer. 66.

66. In all cases where a greater thickness of lining, or a greater cross-section area of tunnel or shaft is ordered to be executed, from whatever cause, after the length of tunnel or shaft in question has been excavated to the profile ordered in the first instance, or if any portion of the excavation of open trench is ordered to be deepened, the excess of excavation so ordered shall be paid for at schedule rates for tunnel, shaft, or open trench excavation, as the case may be, and as the Engineer shall classify and direct at the time. Enlarging shaft or tunnel.

67. No concrete or brickwork shall be commenced until the portion of sewer excavation in tunnel or open trench to be operated upon has been cleaned and levelled, and until the Engineer has examined and approved of same. Inspection and approval.

68. Shafts are to be sunk at the various sites shown on longitudinal sections and on general plans, or in lieu of those shown, at such other sites as the Engineer from time to time may determine. Wherever shafts are ordered they are to be sunk truly plumb, and of the full dimensions shown on drawings, or as may be ordered at the time, clear of timbering. Shafts.

69. All excavation for shafts situated within the lengths of open trenches, is to be paid for as "excavation in open trench." Shafts in open trenches.

70. If the contractor desires, to suit his own convenience, to sink temporary shafts, they are to be sunk only at approved places, and on completion of work to be filled in, as specified in clause 95, to the satisfaction of the Engineer. The cost of sinking, timbering, unwatering, &c., and of filling in, withdrawing, or covering up timber of such shafts, to be defrayed entirely by the contractor. Temporary shafts.

All temporary shafts to be sunk to the dimensions directed, clear of timber.

71. All shafts, temporary or permanent, to be provided and fitted during their construction and completion, or during the progress of the contract, if deemed necessary by the Engineer, with approved winding engines and steel-wire ropes capable of resisting a strain equal to six times that of the working maximum strain, or with such other winding arrangements, ladders, staging, &c., as shall be directed and approved of by the Engineer. Shaft plant.

72. Where directed, sumps are to be sunk at the bottom of shafts not less than 6 feet deep below invert of sewer, and afterwards to be filled in with concrete, as specified in clause 142. Sumps.

73. Any other sumps which the contractor, for his own convenience, may think fit to sink on line of sewer, in tunnel, or in open trenches, during the construction of these works, are to be filled in with concrete, as specified in clause 142, and the cost of sinking, timbering, unwatering, and filling in with concrete and removing the materials, &c., to be defrayed entirely by the contractor.

74. The excavation for sub-ducts in tunnel and open trench to be made below invert of sewer, or as shall be directed, with a fall towards each working shaft or face, and of such dimensions and gradients as may be determined at the time. Sub-ducts.

75. Any material obtained from the excavation, which, in the opinion of the Engineer, is suitable for refilling or other works comprised in this contract, shall be put aside in separate spoil-banks beyond the site of the works. Material for "filling."

76. In the case of tunnel and shaft excavation, when "solid rock" or "more or less hard material," or "solid rock" and "more or less hard material" occur, provision is made on the longitudinal section and in the schedule of quantities for the materials to be classified under these headings. No guarantee is given as to the means which may be ordered for excavating such work. The actual excavation done in tunnels, shafts, and open trenches will, however, be paid for, not exceeding that ordered or specified. Classification of material from shafts and tunnels.

77. The schedule price for 1 cubic yard of excavation in any situation shall include the cost of taking out and placing said excavation aside in separate temporary spoil-banks beyond the actual site of work, together with the works comprised in clauses 41 and 107. Works covered by 1 cubic yard of excavation.

#### *Sub-ducts.*

78. Sub-ducts to be constructed, when decided on, along lines of tunnels and open trenches, commencing on each length midway, or thereabouts, between two working shafts or faces, 33 inches below invert of sewer, &c., or as shall be directed at the time, and having a fall towards each working shaft, or face of such gradients as may be determined at the time. Sub-ducts of 9 inches, or of a greater or less internal diameter, to be laid immediately underneath the timber floor of tunnel or open trench, or at sides of sewer, in hardwood boxes varying in size and dimensions as shown on drawing. Said boxes to be laid straight and true to levels decided upon, and the pipes to be laid therein, upon, and surrounded by sandstone chippings and quarry refuse. Dry sandstone packing, 4-inch gauge, to be put over pipes.

79. In solid and disintegrated rock the excavation for sub-duct to be executed as shown on cross-sections, and as shall be directed, and the sub-duct to consist of glazed stoneware spigot and faucet pipes of 9 inch internal diameter, more or less, as the case may be. The pipes to be jointed dry, and the filling above same up to under side of sewer lining, to be of dry stone, hand-packed, as before described. The Engineer may also, if he deems it necessary, order the pipes to be jointed altogether, or in part, with tarred gasket, 1½ inch deep, and cement mortar 1¾ inch deep. The mortar to be prepared of 1 part cement to 2 parts of sand.

#### *Existing Gas, Water, and Sewer Pipes, and Sewers.*

80. During the excavation and construction of these works, the contractor is to take every precaution and provide and execute all, which in the opinion of the Engineer is necessary, to prevent the existing gas, water, or sewer pipes, and sewers wherever met with, or that are adjacent to these works, from injury, and to maintain the same at his sole cost, until, in the opinion of the Engineer, the refilling of excavation and the general progress of the works render further precaution unnecessary. All damage to existing water, gas, or sewer pipes, and sewers, to be repaired at once by contractor at his own cost to the satisfaction of the Engineer.

#### *Railway and Tramway.*

81. Before proceeding to excavate underneath or near any railway or tramway, the contractor must give ample notice in writing to the District Railway or Tramway Engineer of his intention to commence operations; and he must adopt such precautions as the said Engineer may think necessary or prudent for the safety or preservation of the traffic over the said railway or tramway. The contractor will

will be held wholly responsible for all stoppage of traffic, delays, accidents &c., that he or his men may cause, no matter how brought about, during the execution of the work under or near any railway or tramway.

82. The Railway Commissioners may, if they consider it advisable, place a watchman or watchmen on all work to be executed under or near any railway or tramway, for the purpose of seeing that no danger to the traffic is allowed to occur; but this shall not relieve the contractor of any of the responsibilities set forth in the foregoing clause, and the expense of such watchman or watchmen is to be borne by the contractor.

*Diverting Water.*

83. During the construction of these works the contractor shall, at his own cost, do all work which may be required for the effectual diversion of surface-water, subsoil water, and storm-water across and beyond the site of the works, to keep the trenches free from water during the whole time the works are in progress, and in preventing any injury to the works by floods or any other causes.

*Diverting Sewage.*

84. During the construction of the works in general, and of all points of intersection of existing and new sewers, and until completion of all works connected therewith, the contractor, at his own cost, to execute all the works of every description required to prevent injury to private property or to the existing or new works by sewage, and erect and construct watertight fluming across sites of works for the purpose of conveying constantly the whole of the sewage which may flow in said sewers at any time, to the entire satisfaction of the Engineer.

*Unwatering.*

85. All water which, during the progress of the work, may drain into excavations, to be properly, effectively, and continually pumped out, and the whole to be kept dry until after the completion, setting, and hardening of all brick and concrete work and pipe sewers, at the sole cost of the contractor. The greatest care to be taken to prevent running water passing over any of the brick, concrete, and pipe-work until it has set perfectly hard; any concrete, mortar, and cement jointing exposed to wash of water must be taken up at once, and replaced by fresh concrete, mortar, and jointing, at contractor's expense.

*Temporary Bridges, Roads, Fences, &c.*

86. The contractor shall provide, erect, and maintain all necessary temporary bridges, footways, &c., over rivers, creeks, water-courses, open trenches, and underneath railways, tramways, roads, streets, and foot-paths, so as to ensure that the flow of water or traffic is uninterrupted, as the case may be, during the period of contract. He shall also provide, erect, and maintain all temporary fences, hoarding-barriers, night-lights, &c., necessary to thoroughly protect both the general public, land, and property; and shall also properly ballast the temporary roads which may be required for the convenience of the public, and which the Engineer may order.

In the event of the contractor refusing or neglecting to carry out any of the above work, the Engineer shall have power (after having given twenty-four hours' notice in writing of such intention) to do the same at the contractor's expense, and the cost thereof shall be charged to the contractor on account of this contract.

*Temporary Timbering.*

87. During the excavation the contractor to adopt every precaution, and provide all materials, as planking, strutting, shoring, timbering, piling, sheet-piling; all packing materials, as straw, asphalted felt, bags, tarred gasket, puddle, &c., and carefully execute (unless where otherwise specified) all piling, sheet-piling, timbering, &c., where they are required, and carefully and securely close up and pack against the outside of all joints and open spaces between polling-boards, sheet-piles, or timbering, wherever they occur, and caulk open joints where directed, and execute whatever may be required to prevent any buildings, or other superstructures, road and other surfaces over and adjacent to the line of sewer, from settling, cracking, being shaken, slipping, or falling in, and to prevent any portion of the floors, sides, roofs, and end faces of excavation, beyond the exact cross-sections and dimensions determined on, from slipping, falling, running in, or being forced through joints and open spaces in the timbering and sheet-piling, and maintain said timbering, piling, shoring, &c., where and when directed till completion of the works, to the entire satisfaction of the Engineer and at the contractor's sole cost.

*Filling.*

88. The materials referred to in clauses 75 and 93, to be used in filling in the spaces between sides of excavation, and of concrete and brickwork, over sewers, into headings, filling in abandoned open channels, low ground adjoining channels, into road and other embankments, &c., as shown on drawings and as ordered by the Engineer. Sand only to be used in filling over sewer between copings on lines of aqueducts. All filling, unless otherwise specified, to be brought up in level layers, spread 6 inches thick, each layer to be rammed (and watered if directed) until approved of, before the succeeding layer is put on. This filling to be carried up to the surface of the ground, or to such other level or slope, &c., as may be directed at the time. Embankments to be formed as shown on longitudinal sections, to be finished in horizontal layers 9 inches thick after spreading, to be well rammed (and watered when directed) until approved of before the succeeding layer is put on, with side slopes and top widths, as shown on drawings, or as may be determined at the time; to be finished with such benches and curves as shall be directed. Only iron-shod rammers of not less than 10lb. weight, of approved pattern, to be used, and one man to be employed in ramming to each man employed in filling.

89. Material only of approved quality shall be used in refilling the spaces between sides of pipes, &c., and sides of excavation, and over pipes, &c. The refilling to be done in level layers, spread 6 inches thick (and watered when directed), each layer to be carefully and separately rammed as hereinbefore specified. The lower layers up to level of top of pipes to be carefully packed and rammed solidly under and at sides of pipes and socket-joints with spades or other narrow tools. The filling to be done as above described, to such a distance below the level of the street, road, path, &c., as the case may be, to admit of the ballasting, metal, or other covering being replaced.

Embankments.

Rammers.

Filling pipe  
trenches.

90. On completion of concrete, brickwork, &c., in shafts, the space between the sides of excavation and outer face of brickwork or concrete to be filled in in 6-inch layers, well rammed (and watered where directed) with materials provided for in clauses 75 and 93, great care being taken in lowering the materials to the bottom, so that stones do not fall on top, or against sides of pipe-shafts, brick or concrete lining. Where stones are permitted to be used as filling they are to be put in in alternate layers with the earth, and at least 12 inches of earth to be placed nearest and round the pipe-shafts, brick or concrete lining.

91. Shafts not required as manholes or ventilators, on completion of contract, or when directed by the Engineer, to have all timber withdrawn (as specified in clause 95), and to be carefully filled in.

92. Where it is found necessary to carry the excavation deeper than the underside of concrete foundations, in order to obtain a compact solid bottom, the portion so excavated to be filled in to the underside of concrete foundation, or as may be directed, with good quarry filling, spread 6 inches thick, rammed and watered until approved. The price per cubic yard for providing and putting in position quarry filling is to be 1 cubic yard of "filling." Quarry filling.

93. All soil, sand, and other materials which the excavations of this contract do not supply, and which it is necessary to obtain for the completion of the embankments and filling of every description, the contractor shall procure, of approved quality, from any other source or land outside the limits of this contract. The cost of providing to be included in the price per cubic yard for "filling." Extra material required.

94. As the works proceed, all shoring, timbering, staging, temporary bridges, piling, sheet-piling, &c., shall be withdrawn, excepting permanent timbering, as shown on drawings, and in all other cases where, in the opinion of the Engineer, the withdrawing of the same is impracticable, or would endanger the safety of the works, buildings, streets, and other surfaces over and adjacent to the works, when the contractor must obtain an order in writing, signed by the Engineer, to the effect that piling, sheet-piling, shoring, timbering, &c., may be covered up. Timber left in.

95. In withdrawing timbering from open trenches and shafts, the same shall be commenced from bottom of excavation, or, as the Engineer may direct, from lowest practicable portion of same, and continued upwards; the contractor to exercise every precaution by means of intermediate shoring, plankings, props, &c., and the filling in around and above sewer and shaft lining to be carried on simultaneously with the withdrawing of the timbering. The cost of withdrawing to be included in the price per cubic yard for "filling." Withdrawing timbering.

96. Refilling into excavation shall be measured, the net dimensions of excavation, less the actual displacement of any permanent works. Any other "filling" shall be measured the actual cross-sections ordered. Measurement of "filling."

97. The schedule price for 1 cubic yard of filling in any situation shall include the cost of removing the materials from temporary spoil-banks, or from other sources outside the limits of this contract, and the depositing same in accordance with the plans and specification, together with the work and material described in clauses 92, 93, 95, and 107. Works covered by 1 cubic yard of filling.

#### *Surplus Material.*

98. The excavated material not required, or approved for filling, to be removed off the works to such places as shall be ordered, spread and trimmed, and to be paid for as lead. Lead on spoil.

99. The surplus materials to be measured, the actual net excavations less the actual net refilling. Measurements.

100. The distance of lead shall be measured from top of shaft or end of open cutting to centre of spoil-bank or other place of deposit. Length of lead.

#### *Restoration of Roads and other Surfaces.*

101. After the filling in of sewer trenches and shafts has been consolidated and approved, the surfaces of roads, streets, paths, &c., to be at once restored in the manner hereafter described, viz.: In the case of streets which are wood-blocked on concrete, the City Surveyor will replace same on behalf of the contractor, at the rate per square yard stated in specification; in the case of roads or streets which are ballasted and metalled, 9 inches of ballast shall be laid thereon, and after this has been blinded with selected and approved material, the metal put aside, as specified in clause No. 45, shall be evenly spread and rammed until approved; in the case of roads or streets which are ballasted only, 9 inches of ballast shall be laid thereon, and blinded as above; and in the case of other coverings, the surfaces to be restored to the same condition as they were before the commencement of the work. Materials damaged, injured, or otherwise not approved of as fit for reinstating surfaces, to be replaced by contractor with new, sound, and approved materials of their respective kinds, together with any additional ballast which may be required, over and above that found on the site of the excavation and referred to in clause 45. If, however, in the opinion of the Engineer, sufficient hard rock is excavated from the tunnels, shafts, and open cuttings, the contractor will be allowed to break such rock to a 4-inch gauge, and use same for restoring road surfaces. Wood-blocked streets.  
Ballasted and metalled str etc.  
Ballasted only streets.  
Damaged materials from road surfaces.  
4-inch gauge sandstone ballast.

102. Immediately the pipes are laid, or concrete and other work in connection with shafts, manholes, lampholes, &c., are executed, and the ground filled in over same in any length of sewer, it is to be distinctly understood that all surplus material is to be carted away, the road cleaned until approved, and the road and other surface to be made good, flush with surrounding surfaces of roads, paths, &c., to the satisfaction of the Municipal authorities and the Engineer, in accordance with the specification; and if the contractor fails to do this, the Engineer shall be at liberty, without further notice, to get the roads cleaned, and the road and other surfaces made good at contractor's cost. Clearing roads and streets.

103. The contractor shall maintain the surface of the roads, streets, &c., after the excavations have been filled in, where the streets, roads, &c., have been broken up or injured during the progress of the work, during the period of the contract time, and afterwards during the period of maintenance, and shall from time to time make good any sinkings in the surface, and shall provide any additional metal, ballast, or other material that may be necessary during these periods. Maintenance of roads, streets, &c.

104. The whole cost of work and materials in connection with the restoration of road and other surfaces to be solely borne by the contractor. Cost.

105. The contractor shall, at the termination of the period of maintenance, procure certificates from the Municipal authorities concerned, that the roads, &c., in their respective districts are in a satisfactory condition. Municipal certificates.

*Restoring Buildings, Walls, Fences, &c.*

106. All buildings, walls, fences, and works of any description met with on the site of the works, that it is found necessary to remove or that may be disturbed, are to be replaced or repaired, at the sole cost of the contractor, and left, at the completion of the works, in the same order and condition as they were before the commencement of the works.

*Trimming.*

107. On completion of all embankments, cuttings, and filling, all top surfaces and slopes to be dressed and trimmed off to the specified inclinations and surfaces, and to such other inclinations, slopes, and surfaces as may be directed at the time, and all materials accumulating after trimming and levelling top surfaces and slopes, &c., shall at the completion of the works be removed, carted away, or spread about, as may be directed by the Engineer; and the schedule rates for filling and excavation shall include and cover all costs for trimming and dressing surfaces, and of removing, carting away, or spreading about all superfluous accumulations at the conclusion of contract.

*Sodding.*

108. On completion of embanking and filling, where ordered, all top surfaces and slopes to be protected by sodding. The surfaces to be sodded are to be boxed out the widths and depths required for the reception of turf-lining. The materials boxed out to be dealt with as provided in clause 107. The sods to be the best obtainable within a radius of 5 miles, of approved quality, not less than 3 inches in thickness and 10 inches square, full cut, with square arrises, to be laid in approved bond on their flat beds, close jointed over all top surfaces of filling or embanking, to be beaten down as the work proceeds with proper tools, as shall be directed, and when finished to present throughout perfectly smooth and plain surfaces. If the season requires it, the turfing to be properly and regularly watered to ensure the grass taking fresh root. The boxing out and turfing to be carried out simultaneously, and no greater area to be boxed out at any time than can be covered with turfing during two working days. The price for sodding to cover all the work described in this clause.

*Soiling and Sowing.*

109. All slopes of embankments, cuttings, and fillings, after they have been trimmed, to be covered, when directed, with a layer of surface soil, to be carefully rolled, and when finished to be of a thickness of not less than 3 inches. All slopes, soiled or not soiled, or embankments, cuttings, or filling (where not sodded), after they have been trimmed, &c., and when ordered, to be sown with couch grass seed, as shall be directed, and to be rolled afterwards.

*Piling, Timbering, &c.*

Quantities of piling.

110. Piling to be executed as required and ordered, but the actual quantities required can only be ascertained during the progress of the excavations, and as the trial piles are sunk.

Delivery. Stacking.

111. The whole of the timber which in the opinion of the Engineer is required for each part of the various works, or for such portions of the same as he may determine at the time, shall be cut and delivered on the ground prior to contractor commencing the excavation of such part or portion of said work. All timber, when brought on the ground to be at once properly and carefully stacked on even plain surfaces, and all timbers to lay perfectly straight in the stacks; all timbers bent, split, unsound, or objected to on other grounds by the Engineer shall be removed by the contractor from the ground within twenty-four hours after such objections have been made known to him, and if he neglects to do so they shall be removed without further notice by the Engineer, at contractor's cost; all rejected timbers to be marked by a brand or axe-mark.

Dimensions.

112. All timbers required and delivered for each respective part of works, to be, when dressed, pointed, placed, and fixed in position, of the various lengths and dimensions indicated and shown on the drawings referring to such works, or of such other dimensions which the Engineer may deem suitable for the works.

Pointing piling.

113. All square or round piles shall be sharpened (pointed) at the lower end, the sharpened sides to be cut to a batter of 1 to 6, finished at lowest end with a flatter diamond-cut point, as shown on drawings; the lowest point to be exactly in the straight line of the true axis of the pile, and the sharpened sides to be cut true to the axis of pile to prevent same from twisting and slanting when being driven.

Pointing sheet-piles.

114. All lower ends of sheet-piles to be sharpened on one side only to an inclined edge as shown on drawings, and as shall be directed, to ensure the pile when being driven to drift towards the pile last driven; all sheet-piles of the same length and thickness within each respective panel to have their ends sharpened exactly the same as regards length of cut surface and inclination of bottom edge.

Dressing piles.

115. All round, square, and sheet piles to be straight-grown timber, and before being driven, all square, angle and guide piles to be faced truly straight on the sides against which sheet-piles are to be driven and finished as shown on plans; all round piles for staging across rivers, against which planked sides for concrete filling are to be fixed, to be finished with a straight adzed face the depth required for reception of said planking.

Ringing and shoeing piles.

116. All sheet-piles to be perfectly parallel, and, before being driven, to be truly faced and fitted to each other within each panel (between each pair of guide-piles), as shown on drawings, forming a straight close joint.

117. All round, square, and sheet-piles are to be hooped with wrought-iron rings at the top, such rings to be of not less than 2 in. x 1 in. iron for the square and round piles, and of not less than 2 in. x ½ in. iron for the sheet-piles; stronger rings to be provided and used when directed. All piles are to be pointed, as hereinbefore described, and where driven into hard ground, when directed and ordered, the points to be protected by wrought-iron steel-pointed shoes, weighing, except where otherwise directed, 28 lb. each for the main and guide piles, and 8 lb. each for the sheet-piles. All shoes to be provided and made of such shape and workmanship as the Engineer shall approve of. They are to be carefully and truly fitted and fixed on to points of piles, and the lowest points of shoes for the round and square piles to be fixed exactly in a straight line with the axis of each pile.

Lining out, &c.

118. The exact lines and positions of all piles shall be carefully and correctly ascertained and staked out by the contractor, to the satisfaction of the Engineer, and all stakes fixed in water or river-beds

to extend above high-water level before any piles are placed and driven. After the staking out, piles to be placed truly plumb, or to such batters as may be directed, in their respective positions between guide-wales. All sheet-piles to be placed, truly plumb, between each pair of guide-piles, and lowered into their respective positions between two walings, fitted and fixed on both sides of guide-piles, as shown on drawings.

119. After the excavations for the various foundations have been completed, timbered, and approved, the pile-driving as indicated on drawings, or where ordered, to be proceeded with as follows:— In order to ascertain the lengths of piles required for the foundations of the different piers and abutments, as indicated on drawings, the contractor is first to drive trial piles, in the manner hereinafter specified, in positions required for permanent purposes, one for each alternate pier, or as shall be directed. Any extra expense in connection with trial piles to be borne by the contractor. After the different lengths of piles required for the works have been in this manner ascertained, the permanent piles to be placed in their exact positions, and then to be driven perfectly plumb (or to such batters as may be directed) until tested and approved, as specified. Pile-driving.

120. Long piles from 25 feet and upwards, of 12 inches and greater diameters, to be driven with a ram weighing from 20 to 30 cwt., having a drop over head of pile of not less than 5 feet, the drop to increase in height as the pile is driven, as shall be directed. Any pile driven with a ram of 20 cwt. or more, as the case may be, falling 10 feet, to be driven until at the last stroke it does not drive more than the specified depth, and any pile not standing this test to be drawn when ordered, and to be replaced by a longer pile. Shorter piles may be driven with a ram of less weight than 20 cwt.; and when rams of lighter weight are allowed to be used over shorter piles, sheet-piles, &c., the height of drop to vary from 12 to 18 feet, as the Engineer shall direct. Weight and fall of ram.

121. All piles to be pitched of such lengths as will ensure good sound heads at the levels shown on drawings, or as may be given at the time by the Engineer. No pile shall be pitched until measured and marked by an officer of the Department, nor cut off until tested and approved. Tenons, 8 in. x 4 in. x 6 in. deep, to be neatly cut on pile heads. Any pile which may be too short, or which may have been driven out of plumb, or out of the stipulated batter, or which may split below the level of the required height when driven, to be at once drawn, and to be replaced by a sound pile, driven plumb, or battered, as the case may be, of the required length, at contractor's cost. The contractor must be careful not to pitch any pile which he is not satisfied will be long enough. Scarfing of piles is not permitted. The driving of piles to be commenced and carried on in such order of works as specified, and as shall be directed. Pitching piles.

122. Where close piling is shown on drawings, all angle-piles and guide-piles to be driven first, after which the upper guide-wales are to be fitted and fixed on to heads of main piles, and then the whole of the sheet-piles of one panel, after being prepared and fitted, to be lowered and placed into position for driving, after which they are to be driven each a few feet at a time, so that the whole panel of sheet-piles shall be driven to the specified depth, as near as possible together; in this manner each panel is to be driven, one after another, unless otherwise ordered. Close and sheet-piling.

123. As the sheet-piling and excavation between same proceeds, the lower guide-wales to be fitted and fixed together with all transverse, diagonal, and angle struts as shown on drawings, and with such additional and intermediate struts as the Engineer may deem necessary during the progress of the works. Timbering, framing, staging.

124. Capsills to be accurately mortised, placed upon bearing piles, and to bear truly on pile-heads. Transverse sleepers to be spaced as shown, placed upon capsills, halved out 1½ inch deep at points of intersection; and planks to be laid and close-fitted between sleepers upon the capsills. Sleepers and planks to be secured to capsills with wrought-iron ½-inch square 9-inch spikes. Capsills, transverse sleepers.

125. The net quantities of all permanent timbering, planking, and piling, as shown on drawing, and where ordered, and of all other shoring, timbering, piling, sheet-piling, which the Engineer has ordered to be covered up, shall be ascertained by measurement before any timbers are covered up, and paid for at schedule rates, which shall cover and include the cost of timber fixed in works, iron used in fixing same, wrought-iron shoes for piles, packing materials, &c. Net quantities.

126. The measurements to be taken to ascertain the net quantities of timber to be paid for under this contract, shall be as under, viz.:—For all hewn and sawn timber where ordered, in any situation in the construction of these works, the width multiplied by the depth and the actual length (tenons included) shall be the net measurement. For round timber, other than piles, ordered to be covered up, the diameter given is to be measured, exclusive of bark, at the smallest end, and the area of such diameter multiplied by the actual length fixed in the works, shall be the net measurement. For piles where ordered, in any situation in the construction of these works, the measurement shall be the actual number of lineal feet (tenons included) of each such pile as placed in position, driven, and fixed in the works. Measurements.

#### *Carpenter's Work.*

127. The whole of the carpenter's work for girders, planks, working-platforms, railings, &c., to be of the timbers specified or approved, and of the best workmanship, to be framed, fitted and fixed, finished, cleaned off, rough parts sand-papered (where directed), and completed in the best possible manner, in strict accordance with drawings, and measurements indicated and dimensions figured thereon, with all necessary nails, spikes, screw-bolts, drift-bolts, wood-screws, coach-screws, wrought-iron straps, stays, and other fastenings of the best quality and approved workmanship. All holes for bolts, spikes, nails, &c., to be bored with the exact augers, and all mortise holes and tenons, &c., to be cut so as to fit exactly, to prevent timbers from splitting. All timber split during the progress of the work and its term of maintenance to be at once replaced by sound timber. All scantlings requiring scarfing in places are to be joined together as shown on sections, and as shall be directed.

#### *Cylinders.*

128. The cylinders for piers, buildings, &c., to be bolted up in the necessary lengths, accurately placed in position, lowered, and the sinking proceeded with by weighting as long as cylinders continue to go down, the tops to be finished at same level. As the cylinders are sinking into the ground the materials inside to be removed by such excavating appliances as may be approved. On completing the excavation of each cylinder to secure and approved foundations, the water to be expelled by pressure of air or other approved

approved method, and on having ascertained the cylinder to be perfectly true in position and plumb, the bottom to be thoroughly cleaned and levelled, after which the concrete, as specified in clauses 140 to 145, and 148, to be filled in for the first 6 feet under air pressure, or as shall be directed, till twenty-four hours after having deposited same in position. Above this level the cylinders to be filled in with concrete, as specified, to level of top of cast-iron cap.

**Concrete filling.**  
**Sinking to greater depths.** 129. The sinking of cylinders to be continued, if required, to greater depths than shown on drawings; such additional depths to be paid for at schedule rate, which is to include all charges, except cost of extra lengths of cast-iron cylinder; a corresponding deduction to be made if secure foundations are obtained at lesser depths.

**Rock, &c.** 130. If rock, boulders, dead logs, &c., are met with in an irregular manner, or at one side, while sinking cylinders, the air-lock, or other approved method, must be applied, and the obstructions removed, so as to ensure the cylinders to sink plumb, and to rest on a perfectly flat and solid bottom; no powder or other explosives to be used in the removal of such obstacles. The sinking to be proceeded with as soon as possible after delivery of ironwork, to ensure the erection of bridges, &c., without delay.

**Fitting lengths.** 131. After the sinking is completed, making up or fitting lengths are to be provided and cast, at schedule rate, so as to bring the top of the cylinders to the exact level shown on drawings.

#### *Sewers, Storm-water Channels, &c.*

132. As the cross-section area of each respective length of tunnel and open trench has been excavated, cleaned, and approved, the sewers, storm-water channels, and other works specified, shown on drawing and determined by the Engineer, to be built therein.

**Tunnel lining.** 133. In rock and other compact formation the concrete and brick lining to be filled in solid between internal surfaces of sewer, storm-water channel, &c. (less, in the case of concrete,  $\frac{3}{8}$ -inch space required for cement facing), and surfaces of tunnel or open trench.

**Relieving arches.** 134. Under all shafts, when ordered, relieving arches of brick or concrete to be built of a thickness, form, and width, as shall be directed at the time. Under temporary shafts excavated by contractor for his own convenience, the extra brick and concrete work to be at the contractor's cost.

**Lining.** 135. The thickness and description of the lining, whether concrete only, of brick and concrete, or of brick only, required for the different portions of tunnels and open trenches, depends upon the nature of the ground through which they are driven or excavated, as the case may be, and shall be determined by the Engineer as the excavation advances.

136. In strong compact rock,  $4\frac{1}{2}$ -inch concrete and brick lining will be requisite; and, as the materials occur less compact, two or three rings of brickwork or brick and concrete lining, as shall be determined by the Engineer as the tunnel proceeds, may be required.

**Junctions and inlet chambers.** 137. Junction chambers for sub-main and reticulating pipes, upper inlet chambers in shafts for junctions with reticulating pipe-sewers, drop-shafts, penstock and gas-check chambers, flushing-stations, weir-chambers with storm-water discharge pipes, ventilating shafts, aqueducts on arches, and on wrought-iron girders, syphons, buildings, bridges, culverts, storm-water channel junctions, intersections with existing roads, sewer, and water pipes, branch inlets, man-holes, gullies, road work, &c., to be constructed in connection with main sewers, branch sewers, and storm-water channels of concrete, brickwork, masonry, cement-facing, iron, timber, stoneware, and cast-iron pipes, &c., of the exact sizes, heights, shapes, forms, curves, and with such ornamental red, white, and other bricks, panels, mouldings, piling, &c., as shown on drawings, and as may be ordered and directed at the time. Shafts to be built of concrete or brickwork, at the option of the Engineer, to the thickness and shape shown on drawings, or as shall be directed.

**Curved junctions.** Curved junctions for branch, oval, or pipe sewers, as shown on drawings, and where ordered, to be constructed in concrete, to enter the main sewers at such levels above the invert, with such radius and longitudinal fall as shown, or as shall be determined at the time.

**Cast-iron work.** 138. Cast-iron pipes, landing platforms,  $\perp$  bars, scupper boxes, gully gratings, girders, over weir and shaft-chambers, or other castings, flushing-valves, gas-check frames, penstocks, man-hole covers, saddles, stop-board grooves, &c., to be walled and built in, as shown on Drawings; at points of intersection, branch junctions, gas-check chambers, pipe ventilating shafts, where ordered, &c.

**Building in wrought-iron work.** 139. Step-irons, supports to wrought-iron ladders, holdfasts, ends of wrought and cast iron girders, bars, &c., to be built into side walls of shafts, and anchor bolts for fixing cast-iron frame for penstocks, gas-checks, &c., to be built into walls of shaft chambers, as shall be directed. Flap-traps to be built in where ordered. Permanent putlog holes in shapes of reveals, for temporary staging, are to be left in walls of gas-check chambers, shaft chambers, and shafts where directed; and, in all cases, unless otherwise ordered, the reveals are to be built round of the same thickness of brick or concrete as shown on walls of shafts or chambers at the places referred to. Putlog holes to be included in the schedule price for brickwork. Stop-board grooves to be formed in concrete where ordered.

#### *Concrete work.*

**Bluestone concrete.** 140. Bluestone concrete used in these works to be composed of one part of cement, two parts of sand, and four parts of bluestone metal. The bluestone metal to be broken to a size to pass freely with its largest dimensions, through a ring of  $1\frac{1}{2}$  inch in diameter, to be free from dirt, quarry refuse, and to be screened through a sieve of  $\frac{1}{8}$  inch meshes, and then to be washed with fresh water until approved.

**Special concrete.** 141. Special concrete, if required, to be composed of 2 parts of cement, 3 parts of sand, and 7 parts of bluestone metal, prepared as specified in clause 140.

**Sandstone concrete.** 142. Sandstone concrete, where ordered to be used in these works, to be composed of 1 part of cement, 2 parts of sand, and 5 parts of sandstone metal. The sandstone metal to be free from dirt, quarry refuse, sieved (as specified in clause 140), washed, and of a size to pass with its largest dimensions through a ring of 2 inches in diameter.

**Mixing.** 143. All concrete to be prepared close to where it is required on a sawn timber plank platform. All proportions to be correctly ascertained by measurement, the metal to be well washed when put on the platform and levelled at top, the sand to be placed in a level layer upon the metal, and the cement to be placed in a level layer upon the sand; after which all materials to be carefully mixed and turned over twice, and then the whole to be mixed with fresh clean water, and thoroughly turned over twice, and oftener if required, until, in the opinion of the Engineer, it shall be fit for the work before it leaves the platform;

platform; it shall then be conveyed to the works as shall be directed, and be used fresh. Referring to clause 10, the gauge boxes are to be made to the following internal dimensions, viz.:—For stone 3 feet square in plan, and for sand 2 ft. 6 in. square. The depth of each box to be made so as to give the correct proportion of material.

144. If the concrete is made by machinery, all materials to be prepared as previously described, then to be mixed dry, and afterwards with fresh clean water, as may be directed and as shall be approved of; to be used fresh. Mixing by machinery.

145. The different kinds of concrete described under clauses 140, 141, and 142, as bluestone concrete, special concrete, and sandstone concrete, respectively, shall be used in the various parts of these works as specified, and as may be ordered at the time.

146. After the excavation for foundation of each respective part of the works, and the piling, planking, timbering, staging, &c., for same have been completed, and the bottom of excavations has been cleared and approved, the concrete work to be built thereon to the exact dimensions, and of such forms and shapes as shown on the drawings referring to each respective part of said works. Order of work.

147. The contractor to provide, at his own cost, approved concrete boxes, centres, staging, shoring, planking, &c., of the exact forms, shapes, curves, &c., required; in a proper, secure, and substantial manner, due allowance being made for  $\frac{1}{8}$  inch thick cement-facing over all internal exposed surfaces of concrete work; and great care being taken that all centering and concrete boxes can be easily withdrawn. After completion of any portion of the concrete, the concrete boxes and the centering, as the case may be, shall not be removed until the Engineer or his superintending officer has given written permission to that effect. Boxing, timbering, centering.

148. The concrete, after it has been approved of, to be conveyed into cast-iron cylinders, shafts, excavations for piers, and other deep foundations, in skips of approved size, and to every other part of the work as may be directed, and as shall be approved of, and tipped into same and upon the surface of each layer from a height not exceeding 18 inches, to be quickly spread out in layers not exceeding 9 inches in thickness. Commencing at each part of the work at lowest level of excavation or surface of work, the concrete to be brought up in horizontal layers or parallel with specified longitudinal gradients of works; each layer, when spread, to be quickly and evenly rammed all over until approved of. Method of work.

149. In circular, oval, elliptical, and open channels, the concrete to be filled first into central pads, or, in accordance with the transverse curvature of invert or bottom of channel, into central strips, not exceeding 2 feet in width for wide open channels, then into bottom layer right up to extreme width at sides, and then into the curved sides, as shown on drawings, up to top of side walls in open channels, or to level of springing in closed channels. Below springing line.

150. After the concrete has been carried up to the level of springing, all concrete arches to be commenced at both walls or abutments simultaneously, and carried on towards centre line in radiating parallel strips, spread 9 inches thick, of the whole width of arch, or in lengths as specified in clauses 157 and 158, and as shall be directed at the time, and rammed as before described. Where the arch is thicker than 9 inches, the lower layer to be always completed throughout 12 inches in advance of the upper succeeding layer. Above springing line.

151. After completion of the closing arch, all concrete work above springing of the same, at sides of arch, in manholes, chambers, shafts, &c., to be carried up in the same manner as specified in clause 148, and of the exact dimensions, curves, and thicknesses, &c., as shown on drawings. Above arches.

152. No portion of the concrete work described in the previous clauses (unless otherwise directed in writing) to be covered up with earth or brickwork until it has been examined and approved of by the Engineer. Any leakage that may appear in each layer to be carefully attended to and be made good and repaired at the time, as shall be approved, before each succeeding layer is put on. Covering up work. Leakage.

153. All end faces of layers of concrete to be stopped back at each respective length of sewer or other work, as shall be directed, to be carefully washed clean with fresh water, and then to be grouted prior to each layer of the adjoining length being commenced and joined on to the same. Joining lengths.

154. No traffic shall pass over any fresh concrete work except where such is duly protected against injury by boarding, planks, or any other means approved of by the Engineer or superintending officer at the time. Injury to work.

155. In the event of any stoppage occurring to the work, from whatever cause, or in anticipation of rainfall, the contractor, before temporarily stopping work, shall finish it off at whatever level the work may be raised at the time, by thoroughly grouting the whole of the surface with cement grout. The contractor also to provide and have always on hand approved tarpaulins for the purpose of covering all fresh concrete work and brickwork, when ordered, so as to protect the same during all stoppages in the daytime and at night from sun and rain, and during hot or dry weather, to keep said tarpaulins watered to prevent the work from cracking and setting too quickly on the outside. Treatment after any stoppage.

156. In all cases where a layer at mid-day or at evening is left incomplete the said layer shall not be continued after any stoppage until the surface of the lower and the end of the upper layer have been washed clean and then grouted with cement grout.

157. The concrete and brickwork in sewers and channels to be built in open trenches, in three continuous lengths of 40 feet each (unless otherwise directed), that is to say, when the arching-in of the first 40 feet commences, the next length of 40 feet must be completed up to the springing of arch, and the third 40 feet length must be in progress, and the latter so timed that the work is raised up to springing of arch by the time the closing-in of the adjoining length commences. Order of work in open trench.

158. The concrete and brickwork in sewers and channels on completion of each length of tunnel to be carried on in each length, from the middle towards each end simultaneously, in three continuous lengths of 16 ft. 6 in. each, unless otherwise directed; that is to say, when the arching of the first 16 ft. 6 in. commences; the next 16 ft. 6 in. length must be in progress from height of invert up to the springing of arch; the third 16 ft. 6 in. length must be in progress between floor of tunnel and level of invert of sewer. Order of work in tunnel.

159. At all plinths for piers of arches and abutments, piers of arches, abutments, between wings of abutments, pilasters, foundations, of buildings, culverts, &c., unless otherwise directed, each layer to be completed right through the whole length and width of the work before the succeeding layer is put on. Where concrete has to be walled or filled in against and between brick facings or masonry, the latter in each case to be well wetted and grouted, and then to be covered with a coat of cement mortar  $\frac{1}{2}$  inch thick before Order of works. Sundry.

before the concrete is built against it, and it is to be brought up simultaneously with same in layers 6 inches thick after ramming, the brick or masonry facings, however, being always kept 6 inches (or more, as the case may be) higher than the concrete work up to the level of string-course or other defined limit, when the work has to be finished level all through.

Aqueeducts.

160. The brickwork, masonry, and concrete-filling between all arches and at sides of end-arches to be carried up simultaneously over the whole length and width of every aqueduct, building, or other structure (unless otherwise directed), so that all arches or other structures shall be simultaneously and equally weighted as the brick, stone, and concrete work rises against and over same.

Aqueeducts.

161. The concrete in piers of arches of aqueducts, abutments, and approaches to aqueducts to be carried up in the first instance from bottom of excavations to level of top of plinths; in the second instance to level of top of skewbacks; in the third instance to level of underside of string-course; and in the fourth instance to level of top of coping of aqueducts.

Aqueeducts.

162. When all piers and abutments of aqueducts have been built to level of springing of arches or to top of skewbacks, as the case may be, the concrete, brick, and stone arches, as specified, to be built one after another over the openings upon centres, cambered as shall be directed, of such number as shall be specified, strong enough in every part to carry the weight of the arch to be built thereon, till all openings of one aqueduct are arched over, after which the whole of the arches shall be allowed two weeks' time to set and harden before the brick and stone facings, and the concrete, &c., between the arches and at sides of end-arches is commenced. In filling in, between arches and at sides of end-arches the various layers of concrete, of the thickness specified in clauses 148 and 159, as the case may be, to be brought up extending on to extrados of arches till the thickness of each layer at its end is reduced to  $4\frac{1}{2}$  inches above extrados, when it is to be finished at the time with a radiating end face before the succeeding layer is put on. The junctions of the storm-water sewers to be constructed with such curves, shapes, forms, flat arches between wrought-iron rolled girders, &c., as shown on drawings. On completion of junctions, or any lengths of storm-water channel, as may be specified, to exact level of underside of iron girders, the latter to be laid transversely over side-walls of junctions or channels, bedded in and upon special cement mortar,  $\frac{3}{4}$ -inch thick, truly parallel to each other, and spaced 4 feet from centre to centre, or as may be specified, after which the concrete filling along side-walls, between and over ends of girders, to be completed. The arches of 4-foot span or thereabout, with a rise of 5 inches in centre between the girders, to be commenced from lower end, and to advance to the upper end of the junction or channel in each case (all girders being carefully stiffened and held in position by props, as shall be directed), with not less than twelve centres or as may be directed, of the exact width of junction or channel between side walls. The arches to be built as specified in clause 150, and on completion to form a level concrete decking 3 inches above level of top of girders.

Junctions.

Iron girders.

Jack arches.

Lining round sewer on arches.

163. The concrete lining round sewer on lines of aqueducts and approaches (between underside of string-course and underside of coping, unless where otherwise specified) to be brought up between brick and stone facings (where such occur) simultaneously with same, as specified in clause 159. The concrete to be finished transversely level with underside of copings. This work to be carried on along each line of aqueduct in the manner and in lengths as specified in clauses 161 and 162.

Bond-rods.

164. In conjunction with the concrete surrounding sewer, where the latter is built upon arches and in embankments, the contractor to provide, fit, place in position, and wall in with the concrete, longitudinally in each corner at top and bottom of concrete lining  $\frac{3}{8}$ -inch diameter bond-rods in 16-foot lengths. The ends to overlap 12 inches, and tied together with binding-wire, and, transversely,  $\frac{5}{8}$ -inch diameter bond-rods  $4\frac{1}{2}$  inches above soffit of sewer of such lengths as to fit between the outer brick lining, or as shall be directed, spaced 10 feet from centre to centre. The cost of providing, fitting, placing, and walling-in said bond-rods to be included in the schedule price per cubic yard of concrete.

Cracking.

165. Special care to be taken by contractor to prevent the concrete, &c., from cracking at ends of each respective and successive length of sewer and channel in any situation in consequence of the draught in same, by providing and carefully closing up ends of sewers or channels with canvas or wooden shields or doors, and by carrying the works on in continuous lengths, without delays and stoppages, so as to prevent air-cracks or shrinkage.

Repairing cracks.

166. Should, however, cracks occur at ends of any length of sewer, storm-water channel, or other work, during its construction and time of maintenance, they shall be opened up for their whole length and depth, and of such width as may be directed at the time, and filled in with neat cement mortar and grout by the contractor, at his own expense, to the satisfaction of the Engineer, or he may order such cracked parts of the works to be taken down and rebuilt at contractor's cost.

Allowance for rendering.

167. The concrete work comprised in this contract to be completed to the exact dimensions shown on drawings, less  $\frac{5}{8}$  inch at all exposed inner and outer surfaces, and after the boxes and centerings have been removed, all exposed outer and inner surfaces shall present compact, solid, even, plain faces. All faulty and honeycomb portions, cavities, holes, or other defects, to be at once repaired by the contractor, at his own cost, with concrete or mortar, as the case may require, to the satisfaction of the Engineer. No portion of the concrete work to be covered up with earth or brickwork until it has been examined and approved.

Bedding and fixing cast and wrought iron-work.

168. After the concrete or masonry has been built to the exact height and gradient (leaving sufficient space for jointing), the whole of the cast and wrought iron work, after having been washed clean with fresh water, is to be truly laid and jointed in its exact positions, lines and gradients, on fillets of mortar; and as the concrete rises against and around the castings, bond-rods, &c., leaving a space of not less than  $\frac{1}{2}$  inch all round between the concrete and iron, this space round the invert, or underneath bottom of plates and rods, as the case may be, to be filled in with grout or mortar, as shall be directed at the time, whilst above the springing line the outer surface of the castings, &c., to be grouted, and then to be covered with a coat of special mortar  $\frac{1}{2}$  inch thick before the concrete is built on to and around said pipes, castings, frames, &c.

Anchor-bolts.

169. All anchor-bolts in connection with cast-iron and wrought-iron work, to be placed in the exact positions required; to be washed clean, wetted, bedded upon, and surrounded with special mortar in each case before the concrete is built round same.

Laying and fixing cast-iron and stoneware pipes.

170. All stoneware or cast-iron pipes, &c., where they are shown to be or ordered to be surrounded with concrete, to be clean washed with fresh water, to be laid and jointed in the exact lines and gradients on fillets of mortar, and to be grouted all round as the concrete is being built round same. 171.

171. Prior to commencing any concrete which has to be built on to and against rock faces, all shaken and loose rock to be removed; all rock surfaces to be well cleaned, washed, and wetted, and all beds, open joints, and spaces between concrete and rock faces to be carefully filled in with cement mortar, and the cost of thus preparing rock faces, washing, grouting, flushing, &c., to be included in, and covered by the schedule price per cube yard for the concrete. Building on or against rock.

#### *Brickwork.*

172. In executing the brickwork in any situation in the construction of these works, all bricks to be thoroughly soaked in clean fresh water immediately before being used, and all work to be built with whole bricks (except where otherwise directed), of approved shape and dimensions, to ensure the bond of each particular part of the work being executed, in the manner as shown on drawings, and as may be ordered at the time, with  $\frac{1}{4}$ -inch joints, each brick to be set full upon and rubbed in cement mortar, and every course to be carefully and thoroughly grouted, and well wetted before the succeeding course is put on, care being taken to keep the inner and outer faces of work clean by placing fillets of mortar on outer and inner edges before grouting. Method of work.

173. The brickwork in arches up to 12-foot span to be built as shown on longitudinal and cross sections in radiating courses, with radiated bricks where ordered, in  $4\frac{1}{2}$ -inch rings, in approved bond, the bricks of each course to break joint over the centre of those above or below. Where the brickwork consists of two or more rings, said rings to be built simultaneously, the lower ring to be always completed throughout  $4\frac{1}{2}$  inches in advance of the upper succeeding ring, each brick to be set full upon and rubbed in cement mortar, and each ring to be keyed in centre and to be covered with a coat of cement mortar  $\frac{1}{2}$ -inch thick, to ensure the thorough bonding between the different rings. When completing any length of brick closing arch of main sewer, storm-water channels, &c., the courses at end of same to be stepped back, as shall be directed, and the end face of each ring or course to be well wetted, and then grouted, prior to each ring of the succeeding length being commenced. Radiating bricks.  
Stepping ends.

174. The brickwork in arches over 12-foot span to be built in radiating through-courses, of rubbed and gauged bricks if directed, in approved bond; to be commenced at both abutments simultaneously, the whole width of same, and to be completed in the most perfect manner throughout the full width and thickness of arch, and to be keyed in centre. Arches over 12-foot spans.

175. The brickwork in abutments, abutment piers, wings, parapets, pilasters, spandrels, piers, face-walls, &c., to be built of the various heights, thicknesses, and other dimensions, together with all recesses, projections, panelling, &c., and carried up at each special part or length of work simultaneously with the concrete and masonry, in English or other approved bond, in truly level courses or in courses truly parallel with longitudinal gradient of work, and in such other lines and curves as shown on drawings, or as may be ordered at the time. Where directed, all outer and inner faces of walls to be carried up straight, square, and plumb, with perfectly fair and even faces. Simultaneous progress of various works.  
Faces.

176. Weep-holes of the sizes shown, to be left through the brick walls where directed, and every thing to be made good where necessary. Weep-holes.

177. The brick-on-edge flooring of invert of storm-water channels on steep gradients, as shown on drawings, and where ordered, in any situation in the construction of these works, to be laid in approved bond; each brick to be set full upon and rubbed in special cement mortar, after which the whole of the surfaces of the brick-on-edge flooring to be carefully and thoroughly grouted. Brick inverts in storm-water channels.

178. The  $\frac{1}{2}$ -inch thick mortar covering (pargetting) of outside faces of brickwork or concrete of ventilating shafts, manholes, sewer-chambers, and sewers, as shown on drawings, shall not be measured and paid for as cement facing, but included in the measurement of the brick or concrete work, and paid for as such. Pargetting shafts.

179. All putlog holes to be filled in, taking particular care to match the bricks and the mortar. All external faces of brickwork to be thoroughly cleaned, and all joints to be raked (if ordered  $\frac{3}{4}$  inch deep), and pointed with special cement mortar, and to be finished off with a neatly struck and cut joint. Putlog holes.  
Pointing up.

#### *Cement Facing.*

180. The whole of the internal and external concrete (and brick surfaces, if ordered), where such is shown on drawings, and in any situation in the construction of these works, to be protected by a cement facing to be put on in two thicknesses; the facing throughout, when finished, to be  $\frac{5}{8}$  inch in thickness. All surfaces of concrete or brickwork to be well wetted before the cement facing is put on. The cement facing of all surfaces of works to be finished, as shown on drawings, and, where directed, with joints struck in imitation of ashlar masonry. Thickness.

181. The different kinds of cement facing with which the exposed surfaces of these works are to be protected, are:—Cement facing, prepared of cement and sand in the proportion of 1 of cement to 2 of sand; and special cement facing, prepared of cement and sand in the proportion of 1 of cement and 1 of sand. The different qualities of cement facing, as above described, to be executed in the various parts of these works as shall be specified, and as may be ordered at the time. Proportions.  
Qualities.

#### *Masonry.*

182. All freestone and bluestone ashlar of the exact sizes, forms, and shapes, to be built in where shown on drawings, and where directed, simultaneously with the concrete and brickwork. Stones to be washed clean and to be well wetted with fresh clean water immediately before being used, to be laid upon their natural beds in approved bond, and set solidly upon and in cement mortar in the exact positions required; after which all joints between stones, between stones and brickwork, and between stones and concrete, to be carefully filled in with grout. Prior to each succeeding course being put on, the surface of the previous course to be well wetted and washed clean. All ashlar stones to be properly lifted by lewisings, or as shall be directed when being placed in position. All beds and joints to be punched, axed, and picked, so as to form  $\frac{3}{4}$  inch joints throughout. All exposed joints of masonry and between masonry and brickwork, &c., to be carefully raked out,  $\frac{1}{2}$  inch deep, and filled in solid with special mortar, neatly pointed, finished flush with outside faces of work. All masonry to be left perfectly clean at completion of works. Method of building ashlar.

freestone ashlar.

183. Freestone ashlar, to be provided in any situation in the construction of these works, of the exact dimensions, moulded, sunk, weathered, throated, checked, grooved, radiated, curved, channeled, fine-axed, battered, hammer-dressed, worked, rubbed where directed, and finished off in the best possible manner, as shown on drawings, and in accordance with any details which the Engineer may provide during the progress of the works. All stones to be in lengths, as shown, and as shall be directed, with truly squared and axe-dressed beds, joints, and backs. All joints from exposed surfaces of stones, and from faces of concrete work, as the case may be, to be axed-in 2 inches deep. The plinths, where shown on drawings, to be weathered with 2 inches parallel drafted margin, under edge of weathering and at all external angles of same. All external faces of plinths, skewbacks, abutments, piers, wings of abutments, &c., to be pitched-faced, no part of which to project more than approved of beyond true line of wall, with a true pitched line along each exposed arris, and with 2-inch parallel drafted margin as shown. All capstones over pilasters to be of one stone. Holes for lewis-bolts to be sunk where directed, of the depth and size required. All quoins, of the exact sizes specified, to be set in and out bond to all angles.

Bluestone ashlar.

184. Bluestone ashlar to be provided in any situation in the construction of these works, of the exact dimensions, forms, shapes, moulded, weathered, throated, fine-axed, sunk for reception of cast-iron bearing plates; and faces of weir-crest stones to be radiated, and to have vertical bird's-mouth grooves sunk along centre line of joints, as shall be directed; to be built in with the concrete, brickwork, and freestone masonry, as the case may be, and as the latter rises, where shown on drawings and as may be directed, to be lewised and set as specified in clause 182. All stones to be washed clean and to be well wetted before being used. Holes for lewis and anchor bolts to be sunk, where directed, of the depth and size required.

Squared rubble masonry.

185. Squared freestone rubble masonry in any situation in the construction of these works, to be built of squared hammer-dressed throughstones, unless otherwise directed, in from 10 to 14 inch level courses, as may be directed at the time, or on lines of open channels in courses parallel with longitudinal gradient. Said masonry to be built straight, curved, battered, or sloped, every stone to be set full up on and in cement mortar. When the exposed face of wall is battered, the surface of each course to be at right angles with line of batter, the top course to be built of larger stones, level at top and squared at back. All stones to be punched, dressed, and picked to the exact thicknesses, sizes, and forms required, and set in the most approved bond, with joints throughout not exceeding  $\frac{1}{2}$ -inch in thickness. All stones to be washed clean and wetted with clean fresh water before being used. Every course to be carefully grouted before the succeeding course is put on. All masonry to be finished with a neatly struck and cut joint as the work proceeds, and to be left perfectly clean on completion.

#### *Squared Bluestone Pitching.*

186. Squared bluestone pitchers, in any situation in the construction of these works, to be set in sand, in regular 9-inch courses, lengthwise across the channel, in the most approved bond, and in single ring or course round manhole covers, &c. All stones to be dressed and picked so as to ensure the joints all through not to exceed  $\frac{1}{2}$ -inch in thickness. No stone to be less than 9 in. x 9 in. x 9 in., but to be longer, curved, and radiated if directed.

#### *Squared Freestone Pitching and Channelling.*

187. Squared freestone pitchers, in any situation in the construction of these works, to be set upon their natural beds in sand or in cement mortar, as may be specified, in regular 12-inch courses, lengthwise across the course of the channel, in approved bond, with  $\frac{1}{2}$ -inch wide joints throughout. No stone to be less than 12 inches deep, 12 inches wide, and 12 inches in length, but to be longer, curved, and radiated if directed. If the pitchers are set in cement, all stones to be washed clean and well wetted with clean fresh water before being used, to be set full upon and in cement mortar, and on completion of pitching, all joints to be carefully filled with cement grout. All pitching in road channels to be set in sand in regular courses parallel with kerb-stones, in approved bond, with  $\frac{1}{2}$ -inch joints, no stone to be less than 12 inches wide, 8 inches deep, unless otherwise specified, and 18 inches long, but to be longer, curved, and radiated, if directed. On completion of pitching set in sand all joints to be carefully filled in with sand.

#### *Freestone Kerbing.*

188. Kerb-stones in such lengths, picked and axe-dressed to such widths, depths, shapes, and forms, with squared and axed ends, insuring  $\frac{1}{4}$ -inch joints throughout, to be set upon their natural beds in sand, in any situation in the construction of these works, along such lines, levels, gradients, and curves as shown on drawings, and as may be directed at the time.

#### *Pipe-laying and Jointing.*

Glazed stoneware pipes.

189. After the trenches have been excavated to the exact depths, levels, and gradients, and after the foundation layer of concrete has been filled in where ordered, as the case may be (leaving sufficient room for jointing), glazed stoneware pipes of the required diameter to be laid thereon, along such lines, curves, and inclinations, as shown on general plans and longitudinal sections, true, straight, and solid; and for all vertical branch pipe-sewers and ventilating pipe-shafts, the pipes to be set true, straight, and plumb.

Foundations.

190. In clay or similar soil the pipes to rest direct and solid upon the soil. In rock they are to be laid as shown on drawing, on a 1-inch bed of poor mortar, composed of one part of cement and six parts of sand, the cost of same to be included in items for pipe-laying. In soil liable to be scoured out or easily shifted, they shall, if directed by the Engineer, be laid on sandstone concrete, as shown on drawing.

Laying.

191. In every case the pipes shall be laid in such a manner that their barrels shall bear firmly and evenly on their bed, the sockets being entirely free from pressure in the joint-hole, and the spigots concentric with the sockets.

Jointing pipes.

192. The pipes are to be jointed as follows:—The 6-inch pipes with tarred gasket  $\frac{1}{4}$  inch deep after setting, and special cement mortar  $1\frac{1}{4}$  inch deep within socket of pipe; the 9-inch pipes with tarred gasket  $\frac{1}{2}$  inch deep after setting, and special cement mortar  $1\frac{3}{8}$  inch deep within socket of pipe; the 10-inch pipes with tarred gasket  $\frac{1}{2}$  inch deep after setting, and special cement mortar  $1\frac{3}{8}$  inch deep within socket of pipe; the 12-inch pipes with tarred gasket  $\frac{5}{8}$  inch deep after setting, and special cement mortar  $1\frac{3}{8}$  inch deep within socket of pipe; the 15-inch pipes with tarred gasket  $\frac{5}{8}$  inch deep after setting, and special cement mortar

mortar  $1\frac{3}{8}$  inch deep within socket of pipe; the 16-inch pipes with tarred gasket  $\frac{3}{4}$  inch deep after setting, and special cement mortar  $1\frac{1}{2}$  inch deep within socket of pipe; the 18-inch pipes with tarred gasket  $\frac{3}{4}$  inch deep after setting, and special cement mortar  $1\frac{3}{4}$  inch deep within socket of pipe; the 21-inch pipes with tarred gasket  $\frac{5}{8}$  inch deep after setting, and special cement mortar  $1\frac{7}{8}$  inch deep within socket of pipe; the 24-inch pipes with tarred gasket  $\frac{7}{8}$  inch deep after setting, and special cement mortar 2 inches deep within socket of pipe.

193. The tarred gasket to be placed in the faucet and set tight round spigot end of pipe, after which the remaining space in faucet to be cleaned, wetted, and filled in with stiff special cement mortar, packed in solid, splayed off outside to an angle of 45 degrees, and neatly finished off. The inner joints between pipes to be carefully filled with special cement mortar all round, neatly wiped off as a finish. Each pipe length thus finished to be carefully cleaned out before another pipe length is added. Inner joints.

194. Junction pipes of any desired size are to be laid into the line of pipe-sewers wherever required by the Engineer. The socket ends of all junction pipes, junction blocks, junction holes, ventilating pipes, and dead ends are to be protected against the ingress of foreign substances, and made easily accessible for effecting future connections, by being closed with earthenware discs having a temporary watertight joint all round, the cost of providing and fixing same to be included in items for pipe-laying. Junction pipes.

#### *Cast-iron Pipe-laying.*

195. After the pipe-trenches have been excavated to the exact depths, levels, and gradients required, cast-iron pipes of the diameters shown or ordered, to be laid along lines (curved or straight), and solid upon the bottom of the trench, or upon a foundation layer of concrete, and the vertical pipes placed as shown, leaving sufficient room for jointing. Cast-iron spigot and faucet pipes.

196. The pipes are to be jointed as follows:—The 6-inch and 7-inch diameter pipes with spun-yarn  $2\frac{3}{4}$  inch and 3 inch deep respectively after setting up, and soft lead  $1\frac{1}{2}$  inch deep after setting up; the 8-inch, 9-inch, and 10-inch diameter pipes with spun-yarn 3 inches,  $3\frac{1}{4}$  inches, and  $3\frac{1}{4}$  inches deep respectively after setting up, and soft lead  $1\frac{1}{2}$  inch deep after setting up; the 11-inch, 12-inch, 14-inch, 15-inch, and 18-inch diameter pipes with spun-yarn 3 inches, 3 inches,  $3\frac{1}{4}$  inches,  $3\frac{1}{4}$  inches, and  $3\frac{1}{4}$  inches deep respectively after setting up, and soft lead  $1\frac{1}{2}$  inch deep after setting up; the 20-inch, 22-inch, 24-inch, 26-inch, 28-inch, 30-inch, 32-inch, 34-inch, and 36-inch diameter pipes with spun-yarn 3 inches,  $3\frac{1}{4}$  inches,  $3\frac{1}{4}$  inches,  $3\frac{1}{4}$  inches,  $3\frac{1}{4}$  inches,  $3\frac{1}{2}$  inches,  $3\frac{1}{2}$  inches,  $3\frac{1}{2}$  inches,  $3\frac{1}{2}$  inches, and  $3\frac{1}{2}$  inches deep respectively after setting up, and soft lead 2 inches deep after setting up. Jointing.

197. Should the faucets of pipes used in these works, in places, be of greater or lesser depths than indicated in the previous clause, then the spun-yarn packing is to be of greater or lesser depths as may be required, the depths of the lead joints to remain as specified. Expansion joints to be made in the same manner, but of such special depth of lead joint, with or without spun-yarn packing as shown on drawings and as may be ordered at the time. All curves on lines of pipe-sewers to be accurately formed with the spigot and faucet joints of the pipes without any abrupt horizontal and vertical dip, rise, or bend. The spun-yarn to be tightly platted or laid round each spigot end, so as to fill the socket of each pipe after setting up to the exact depth specified, leaving in each instance the remaining depth of faucet for the specified lead joint, the latter to be made at each joint in the trench with one running, and when cold to be set up with proper irons to one smooth, even, plain surface all round the pipe, and  $\frac{1}{8}$  inch within socket of same. Expansion joints.

198. The setting up of all lead-joints to be made with a proper set of setting irons, commencing from outer surface of spigot end with  $\frac{1}{8}$  inch thick setting irons, and continuing towards outer edge of lead-joint, with setting irons advancing gradually by  $\frac{1}{16}$  inch in thickness at the time. Special setting irons to be used for setting up expansion joints. After the pipes have been laid and the joints of every description made, examined, and approved, they are at once to be covered up, but in no case are they to remain longer than twelve hours uncovered after they have been approved of. Curved pipe lines.

199. Faulty and objectionable lead joints to be immediately and carefully chiseled out (they are not allowed to be burnt out) and fresh lead joints to be made and set up until approved of. Attempts to repair defective joints are under no consideration to be permitted. Setting up lead joints.

#### *Road-making.*

200. The different roads shown on drawings, are to be formed 30 feet wide between edges of slopes, whether on embankments or in cuttings. The longitudinal gradients of approaches to be at an inclination of 1 in 20, or as shall be directed. All roadways to be formed with a crown, which at the centre line is to be 6 inches higher than the edges. Width, slopes, gradient, formation.

201. After the roadway has been formed and approved, it is to be carefully boxed out along centre line, if ordered, for the reception of the road material, 8 inches deep for ballast, and 4 inches deep for metal—12 inches in all, by a width of 24 feet. Boxing-out.

202. After the boxing-out has been completed, its bottom surface to be covered by a layer of 4-inch gauge sandstone ballast, spread 8 inches thick throughout, and then covered with bluestone metal spread 4 inches thick throughout. Ballasting and metalling.

203. After the metalling has been completed and approved, the whole of its surface to be covered with about one-eighth of its own bulk of bluestone chippings of a uniform thickness, after which the whole road surface to be watered and rolled until approved. Blinding.

204. The stone used for metalling to be basalt or other similar hard stone of approved quality; to be broken to angular fragments of a size to pass freely with their largest dimensions through a ring  $2\frac{1}{2}$  inches diameter, and to be free from dirt, quarry refuse, &c. Quality of metal, size.

The prices per cubic yard for bluestone metal and sandstone ballast for road surface to include the cost of providing and spreading blinding.

#### *Tarred Metal Deck.*

205. After the tarring of upper surface of metal flooring, and after the sand-filling over arches and abutments of aqueducts has been completed, levelled, and approved, or in any other situation in the construction of these works, the whole of these surfaces as shown on drawings, to the thicknesses figured or ordered at the time, to be covered with the tarred metal decking, as follows:—

206. The stone to be basalt, broken to a 2-inch gauge, free from dirt; the screenings to be crushed from the same stone, and to pass through a  $\frac{1}{16}$ -inch sieve. All stones and screenings to be perfectly clean and one for tar.

and dry, to be heated before admixture with tar. The tar to be coal-tar, free from all adulterations, and boiled a sufficient time to get rid of the light oils before being used.

The stones and screenings to be mixed with the boiled tar separately; to be then stacked where directed, so as to allow the surplus tar to drain away for at least three weeks before being laid in position.

207. The 2-inch stone to be spread over the whole bridge, upon the concrete filling of roadway, and upon the 7-inch thick sand layer of footpaths, between kerb-logs, to such thicknesses and surfaces, and with such curvature to roadway, when rolled, as shown in drawing, and to be then covered with about one-eighth of its own bulk of screenings. Both layers to be well rolled and cross-rolled with a 30-cwt. roller, having not less than a 3 feet width of face, until they form solid compact surfaces to the required levels and curvature.

208. The sides along kerb-logs and all places where the roller cannot work, to be well punned by hand with a flat-faced 42-lb. iron rammer. When approved by the Engineer, the whole of the surfaces to be brushed over with a coat of hot coal-tar, and a layer of heated fine bluestone screenings, with dust left in, spread over it.

#### *Coke Concrete Deck.*

209. Coke concrete to be provided, placed in position where directed in the manner specified for other concrete, and to be mixed as described in clause 143, but in the following proportions:—16 cubic feet of approved coke broken to a strict 1-inch gauge, 8 cubic feet of sand, and 1 cask of cement.

#### *Fencing.*

210. Fencing is to be erected in such line and situation, and of such description as shall be directed, and as marked out by the superintending officer, and of the form and to the dimensions marked on the drawings.

211. Ordnance fences to be provided, framed, fitted, and erected where ordered, of sawn hardwood timber, unless where otherwise specified, as viz.: Posts 6 in. x 4 in. x 6 ft. 6 in., top rail 4 in. x 4 in., intermediate and lower rails, 4 in. x 3 in. Posts spaced 6 ft. 6 in. from centre to centre, sunk in rock not less than 18 in., and into other ground not less than 2 ft. 6 in. deep. On road embankments, where ordered, posts to be 7 ft. 9 in. long, mortised into sills 9 in. diameter x 5 ft. long, secured by 1 inch diameter hardwood tree-nail, stayed to posts by 4 in. x 4 in. struts, secured to posts and sills by  $\frac{5}{8}$ -inch screw-bolts, and  $\frac{7}{16}$ -inch diameter spikes,  $7\frac{1}{2}$  inches long. Angle and end posts, 10 inches diameter at smallest end, x 8 feet long, to be sunk 3 feet deep in the ground, mortised 6 inches deep for reception of ends of rails. Tops of round posts to be protected by caps of 6 lb. sheet-lead, secured to posts by lead-headed nails 2 inches long, and wrought-iron 2 in. x  $\frac{1}{4}$  in. rings, secured each by four 3-inch wood screws. Sawn posts to be notched at top for reception of top rail and halved out for reception of intermediate and lower rails, spaced as shown. Top rail to be laid aris uppermost into notches, secured to posts with 2 in. x  $\frac{1}{2}$ -in. hoop-straps, and four 2-inch long wood screws to each strap. Intermediate and lower rails to be fitted flush with inner faces of sawn posts, and secured to each with two 4-inch wood screws. All sawn timber above ground to be planed, all scarf-joints of rails to be made as directed, over posts only, and all sills, struts, and ends of posts under ground to be charred thoroughly. The ground round posts to be well rammed, and the clearing spaces round ends of posts stepped in rock holes, to be carefully filled in with cement grout.

212. The split timber fencing may be of one or more of the three following descriptions:—

- 1st. Fence consisting of split hardwood posts, two split rails (wired if shown), and round posts where required.
- 2nd. Fence, consisting of split hardwood posts, three split rails, and round posts where required.
- 3rd. Fence consisting of split hardwood posts, two split rails, covered with split hardwood palings, with round posts where required.

213. Posts to be 6 ft. 6 in. long, 8 inches broad by  $2\frac{1}{2}$  inches thick, except those for the paling-fence, which shall be 7 feet long, with mortises 6 in. x 3 in., cut square to the gauge shown on the drawings. All posts to be charred for a length of 2 ft. 6 in. from the bottom, sunk 2 feet into the ground, set uniform and upright, and spaced 8 ft. 3 in. apart from centre to centre, and the earth well rammed in round them until the posts stand solid and firm.

214. Rails to be 9 feet long, the top rail not less than 7 in. x 2 in., and the bottom rail not less than 8 in. x 2 in. in the two-rail fencing, and in the three-rail fencing the centre rail to be not less than 8 in. x 2 in., and the bottom rail 7 in. x 2 in. Tenons to be 6 inches long, carefully adzed to fit closely into the mortises, shouldered square with the saw, and fitted so as to butt close up to the posts.

215. Palings are to be sound, straight, cleanly split, and free from sap, and of approved timber, 5 feet long, not less than 4 inches wide, and  $\frac{1}{2}$  inch thick. They are to be sawn off square, placed upright, close together, and to a straight line on top, and securely fixed by  $1\frac{1}{2}$  inch strong wire nails, two nails to every paling in each rail. They are to be further secured along the rails by galvanised hoop-iron of 18-gauge, 1 inch wide, well nailed by  $1\frac{1}{4}$  inch clout nails at intervals not exceeding 12 inches apart.

216. At all intersections with existing fences, and at all angles, a round post is to be provided and fixed, 9 inches in diameter, charred for a length of 3 feet from the bottom, and sunk 2 ft. 6 in. into the ground, and the earth well rammed in until the post stands solid and firm. These posts are to be of such length as to leave the top 6 inches above the upper rail. At existing fences the junctions are to be made good and connected with these posts, which are to be mortised for the rails to suit the fence in the same manner as shown on drawing.

217. Where necessary, posts, either round or split, are to have a hardwood strut 6 in. x 3 in., checked at upper end into the post, and secured by a 6 in. x  $\frac{1}{2}$  in. round spike. A hardwood stake, 3 ft. long x 8 in. x 3 in., to be driven close into the foot of the strut, as shown on drawing.

218. The crossing of ditches, watercourses, or hollows in the ground, are to be made secure, either by supporting the fence on logs, extra long posts, or as may be directed.

219. The fencing is to be erected to a true line on top, and is not to follow the minor irregularities of the ground.

220. The wire used in fences to be that known as No. 8 "best best annealed drawn," or other approved fencing wire; to be passed through the posts, which are to be bored for the purpose with a quarter ( $\frac{1}{4}$ ) inch auger, and strained tight by means of F. Morton & Co's., or other approved straining bracket, fixed to the straining posts by wood screws or spikes, so as to suit the gauge, as shown on the drawing. Fencing wire and straining brackets.

The works and materials comprised in clauses Nos. 217, 218, and 220 to be included in the schedule rates for fencing.

*Wrought-iron Work.*

221. All wrought-iron spindles, bolts,  $\perp$ ,  $\Gamma$ , and  $\sqcup$  irons, flat and round bar, plates, straps, axles, pins, anchor-bolts, rolled girders, nuts, washers, rods, rivets, holding-down bars, gratings, frames, keys, chains, &c., to be of the exact dimensions and forms shown on drawings. The greatest care to be taken in any welds to ensure perfect soundness, and the contractor to be at the expense of any test which the Engineer shall think fit to submit the welds to. All plates, bars, channel-irons, rods, &c., to be perfectly true and of even uniform thickness; all angle-irons and bars to be sound, uniform, and regular on edges; all joints and edges to be truly planed to the dimensions on drawings; all wrought-iron parts to be rolled or forged out of one piece, unless otherwise specified and directed. Ends of spindles, shackles, &c., to be forged with eye-holes, and holes for male and female joints of the exact forms. All bolts, handles, hand-rails, spindles, keys, chains, pins, axles, bars, crosses, &c., to be forged with projecting necks, and welded with ends of large diameters or otherwise for screw-ends, and made of the exact shapes, forms, dimensions, lengths, widths, and diameters shown on drawings, with angular and square threads, as the case may be, to all bolts, spindles, &c., with the correct pitch, angle, and depth. All portions fastened with screws, bolts, or rivets to fit close together. The chains attached to blades of penstocks, and the whole of the wrought-iron gratings, channel-irons, &c., connected therewith, wrought-iron girders to working platforms, hand-rails to platforms and stairs, to be galvanised before being fixed in the works. Wrought-iron work. Welds.

222. All joints in plate, angle,  $\Gamma$  irons, &c., to be made only in such positions as shown on drawings and where directed; and all covering plates, wrappers,  $\perp$ , and angle irons, to be truly cut at ends to insure a perfect fit. Joints.

223. All screw-bolts and screws to flanged pipes, penstocks, valves, all other castings and wrought ironwork of every description, to be of the exact diameters and lengths shown on drawings, with hexagon heads and nuts, and to be angular threaded with the correct pitch and angle of the Whitworth screw. Screw-bolts and screws.

224. Joints of shafts, spindles for penstocks, axle shafts for strainers and traveller, engines, &c., to be made by said shafts being truly turned and cut at ends, and cast-iron flanged and turned sockets, with turned spigot and faucet, the internal diameter of socket to be turned exactly, and slightly of less diameter than ends of shafts. Socket and ends of shafts to be grooved, as shown for steel key. Sockets to be heated and then fitted on to ends of shafts with keys, after which the flanges to be bolted together, forming coupling, as shown on drawings. Joints of shafts, &c.

225. All joints and working parts of wrought-iron on penstocks, valves, strainers, standards, engines, travelling cranes, travellers, gratings, troughs, louvre shutters, brackets, &c., to be turned, scraped, or ground and glazed bright, as the case may require, and as shall be directed. Joints and working parts.

226. All handles and levers for working penstocks, valves, strainers, travellers, travelling cranes, &c., to be ground and glazed bright. Handles and levers.

227. The rivets throughout to be made from  $\frac{1}{2}$ -inch,  $\frac{3}{8}$ -inch,  $\frac{1}{2}$ -inch,  $\frac{7}{8}$ -inch, 1-inch, and  $1\frac{1}{8}$ -inch iron respectively, with heads and necks, as shown on drawings. The Engineer may require any holes to be drilled and the bolts turned for same, or he may order bolts to be substituted for rivets, or other changes of the kind, in such places as he may consider necessary, without extra charge. Rivets and bolts.

228. All rivet, bolt, and screw-holes to correspond as to diameter and position with the drawings, and to be carefully drilled parallel, and at right angles with face of work. All the holes in booms of main girders, bearing plates, lattice bars, wrought-iron aqueduct pipes, rolled  $\perp$ , channel,  $\Gamma$ , and flat bar irons to be drilled—the respective pieces being clamped in their proper positions and secured under drill and bored right through; holes in cylinder bracing, cross-girders, and wind bracing girders may be punched. No drifting or rhymering to be done without the consent of the officer in charge, and then rhymering only when the plates can in no other way be made to coincide. Holes which are directed to be punched or drilled at the building site to be about  $\frac{1}{16}$  inch narrower than the diameter of the rivet required, so as to insure a good fit after its being enlarged with the rhymer. Where several holes meet each other in the parts to be united, a horizontal dislocation of not more than 5 per cent. of the diameter of the hole is allowable, the hole then to be made perfectly equal with the rhymer, and not by filing on one side, and rivet-bolts of proportionately large size to be used in holes thus enlarged. Holes for rivets, bolts, &c.

229. All rivets to be inserted at a bright heat, after being carefully freed from scales, into the duly cleared holes, to be quite firm after the head is completed. If not firm, rivets to be at once removed and replaced by others, and of larger size when directed. In putting together parts, care to be taken that none of them are forced into one-sided tension; any portions distorted in riveting the connections to be at once loosened and the faults remedied. All rivets to be finished with cup heads, and when countersunk the sinking to be drilled and the heads to be finished perfectly flush. All rivets and heads of bolts to be countersunk where plates, when fixed, will bear on other work, and where they form the inner surfaces of aqueduct pipes. All riveting to be done in the neatest and most workmanlike manner. Riveting.

230. Wrought-iron gratings to be of the exact dimensions, straight or curved, as the case may be, the bars spaced and riveted as shown, all bars to have rounded-off top surfaces. All hooks, rings, and chains attached to flushing valves, &c., to be galvanised before being fixed in the works. Wrought-iron gratings.

231. Wrought-iron ladders in lengths shown on drawing, and as may be ordered, consisting of  $2\frac{1}{2}$  in. x  $\frac{5}{8}$  in. uprights, spaced  $13\frac{3}{4}$  inches apart, and  $\frac{7}{8}$  inch round bar rungs spaced 12 inches from centre to centre. Joints of uprights to occur only at supports, where directed. Supports, spaced as shown, to consist of two 6 in. x 3 in. x  $\frac{3}{4}$  in. channel irons fixed to uprights with  $\frac{3}{4}$ -inch screw-bolts, stiffened off at ends, at top and bottom, with  $\frac{1}{4}$ -inch plates varying from 12 inches to  $13\frac{1}{2}$  inches in length, riveted on to top and bottom flanges of channel irons, as shown. Wrought-iron ladders.

*Cast-iron Work.*

232. The whole of the castings to be perfectly sound, free from all cold shuts, honeycomb, holes, or other defects; to be cast in dry sand moulds, unless where otherwise directed. Casting.

- Castings.** 233. All castings to be true in sectional form, straight longitudinally where shown to be so, or of such shapes, projections, curves, angles, and forms as shown on drawings; and each portion of such castings to be of equal strength and of the specified thickness throughout its respective length.
234. The external and internal surfaces of all castings to be perfectly clean and smooth and in strict accordance with sections.
- Casting cylinders and pipes.** 235. All cylinders and pipes to be cast vertically, with the socket or flanged end downwards; to be straight longitudinally; all straight pipes with faucet, or flanged, and with spigot ends, to have the latter cast 9 inches longer than shown on drawings; all cylinders to be cast with such head of metal as shall be directed. After the castings have been cleaned and coated, the head of metal over the cylinders, and the 9 inches at spigot ends of pipes to be cut off, so as to leave same perfectly square on section and true and equal in circumference, so as to fit the socket, leaving an equal space all round of the exact thickness shown on drawings for lead joints.
- Faucet ends.** 236. The faucet of each pipe or casting to be perfectly square and true, of the exact dimensions shown on drawings, and to be cast with a groove of the size and depth as required by the Engineer. The faucet of large circular and oval pipe for expansion joints to be cast as shown with an inner narrower faucet and projecting rim, and both inner sides of narrower faucet and of projecting rim to be truly turned and polished.
- Faucet for expansion joint.** 237. The feathers and flanges, where such are shown, to be of the exact widths, forms, and thicknesses, and all surfaces of contact to be planed and turned to true and even faces.
- Feathers and flanges.** 238. All spigot ends for expansion joints, where shown on drawings, to be cast with a recessed end for reception of wrought-iron ferrule on inner face, and a corresponding projecting face on the outside; said recessed inner and projecting outside faces to be truly turned and polished to the exact cross section for reception of lead joint, gun-metal packing ring, and wrought-iron cover-plate, as the case may be.
- Spigot ends for expansion joints.** 239. The thimbles for expansion joints for large, circular, and oval pipes, to be cast with faucets as described in clause 236, and with web-plates, ribs, and bed-plates cored out, with bosses truly bored for heads of anchor-bolts; the whole to be of the exact shapes, forms, and dimensions, as shown on drawings.
- Thimbles for expansion joints.** 240. The flanges of gas-check frames to be provided with a projecting face, planed and turned to true and even faces, of the exact dimensions shown on drawings.
- Gas-check frames.** 241. All holes in hinge-brackets at top of gas-check frames to be truly bored to the diameter required for the reception of hinge-bolts.
- Boring holes.** 242. All bolt-holes to be of the exact sizes, spaced as shown, and to be truly bored and turned.
- Bolt holes.** 243. All flange-joints, unless where otherwise directed, to be made tight with red lead.
- Flange joints.** 244. Frames of penstocks to be of the different parts, and of the exact shapes, forms, and dimensions, with all screw and bolt-holes, and the exact circular valve openings, with flanged end at back, projecting rim round opening in front and at sides of same, with cap-pieces on top, upright slide frames, flanged, bolted together, cored out with bosses and web-plates between, to receive front guide-plate, with inner projecting faces screwed into bosses of upright frames. Guide-pieces, with flange and web, faced on surface of contact, with boss in centre, the latter truly bored and turned for reception of brasses and spindle to pass through, fitted with bolt-holes, and screwed on to guide-plates.
- Penstock frames.** 245. All landing and other plates and grates to be complete with ribs, flanges, hinged and other lids, close or ventilating covers, girders of the exact shapes, forms, dimensions, projections, recesses, &c., as shown on drawing.
- Landing grates and plates.** 246. Valve blades to be of the exact diameters, forms, shapes, and dimensions, with circular projecting faces back and front, and vertical projecting faces corresponding with and bearing on projecting faces of guide-plates and framing, and vertical racks or brackets, with eye-holes truly bored for fixing foot of valve spindle, as the case may be. All seatings to be truly faced and bored out to receive gun-metal faces, and all stuffing boxes, glands, foot-step bearings, and journal-boxes, to be bored and turned and polished where directed.
- Valve blades for penstocks.** 247. All girders, brackets, standards, wheels for chains, and balance weights, tubes, boxes, glands, plunger-blocks, and boxes for lifting or turning spindles, as the case may be, foot-brackets for upper spindles, flanged pipes for spindles, street-boxes, &c., of the different parts, and of the exact lengths, forms, and dimensions, to be truly faced, turned, and polished at all joints, bored and turned for reception of screws, nuts, and brasses, with all bolts and screw-holes of the sizes shown, bolted at all joints, and all faces of flange-joints and working parts and other faces, where directed, to be truly planed, turned, faced, and scraped, to the necessary surfaces.
- Sundry ironwork to be turned and bored.** 248. All penstocks, scour-valves, &c., to be carefully and truly fitted and fixed together, with all lifting and turning-gear, gun-metal facings, spindles, wrought-iron work, street-boxes, screws, bolts, nuts, &c., complete, in strict accordance with drawings and dimensions figured thereon, and all valves to close watertight.
- Penstocks, scour-valves to be fitted.** 249. The frame and flap-valve of flushing valve, with bracket, pulley, &c., to be complete, with wrought-iron galvanised chain, to be cast of the exact diameter, shapes, forms, and dimensions; the flushing valves to have a projecting rim all round, the inner face truly faced and turned to a "V shape" of the exact dimensions, so that when the flap is placed in position the edge of the V rim to lie exactly against the centre line of the square tuck or lead-packing of opposite groove in frame, planed out to a dovetail for the purpose.
- Flushing valve.** 250. Couplings, flanged, turned, bored, faced, with turned and bored spigot and faucet, and bolt-holes of the exact diameters, to be of the exact forms and dimensions for making joints of valve-spindles, &c.
- Couplings.** 251. Cast-iron frame with 22-inch diameter opening, with non-ventilating lid fitting easily into frame, complete with sawn and tarred ironbark wood-bricks fitted into panels, the whole to be in strict accordance with drawings and dimensions shown thereon.
- Cast-iron frame.** 252. Scupper-pipes, with cistern-heads, and grating-cover for inlets of scupper-pipes, and plain cover-plates over inlets of scupper-pipes, as shown, to be cast to the exact shapes, forms, with the exact openings, and to the dimensions figured on drawings.
- Scupper-pipes, grating-covers, and cover-plates.** 253. All grooves for stop-boards to be cast with a connecting ledge at top, to be cut off when casting is completed. All grooves to be cast true, of the exact dimensions, shapes, and forms; and all working parts of frames and slide-valves, grooves, and stop-plates, to be truly planed and faced so as to fit, but not too tight. All stop-plates to be complete with wrought-iron shackles, 12-foot galvanised chain, hook, and rings.
- Stop-board grooves.**

*Gun-metal Work.*

254. All portions tinted yellow on drawings, as in nuts, bolts, shackles, bearings, and working parts, Gun-metal tinted yellow.  
nuts and naves of wheels, seatings of valves, penstocks, standards, hangers, and brackets, and all other brasses in working and lifting gear, &c., to be made of gun-metal. The gas-check flaps to be of muntz Gas-check flaps.  
or delta metal.

255. The whole of the castings to be solid and perfectly sound, and free from all honeycomb, holes, Castings.  
or other defects.

256. All spindles to be cast on end, having a riser on top of each not less than 3 feet in height, after Spindles.  
which they are to be turned and finished to the exact lengths and diameters; to be straight, and work true in stuffing boxes, nuts, glands, &c.

257. All screw ends and nuts, unless where otherwise specified and directed, to be angular, Nuts and screws.  
threaded with the correct pitch and angle; and all naves of wheels, nuts for lifting gear in standards and for off-let valves, bearing nuts of end brackets for shafts, &c., where shown, to be turned with the square thread and correct pitch, and angle of the Whitworth screw.

258. All nuts, naves, pins, lubricators, shackles, eyeholes, sockets, hinges, hinge-bolts, guide and other brasses in plummer blocks, brackets, standards, valves, penstocks, &c., to be truly bored, turned, General direc-  
faced, and finished to the exact lengths and diameters, shapes, and forms, and to be straight and work true on all bearings and working faces. work.

259. All projecting rims, straps, eye-hole brackets, &c., to be provided and fitted on to gas-check Gas-checks.  
flaps, to be cast of the sizes, shapes, and forms as shown on drawings, to be faced on surface of contact, Soldering.  
and to be soldered on to the flaps with zinc, after having been placed truly in position, and then riveted as shown. All gas-check flaps to be of the exact thickness shown on drawings. When the rims and straps for each flap are not cast in one casting, then they are to be cast in parts as shall be directed; and prior to fixing such parts in position, they are to be truly fitted and jointed together. All such joints to be scarfed and braced, as, viz., the edges filed or scraped clean and bright, covered with spelter and powdered borax, and exposed in a clear fire to a heat sufficient to melt the solder, which, for all scarf-joints, to be an alloy composed of four parts of copper to three of zinc. All scarf-joints to be placed where directed. All hinge axles to be truly turned. All links of shackles to be made with one joint, scarfed, brazed, and riveted together.

260. At expansion joints of large cast-iron pipes, where shown, a gun-metal packing ring of the Packing ring.  
size specified, to be provided, placed, and fitted round spigot end of pipe, carefully set up flush with end face of inner recess of faucet.

261. All portions of castings, as exposed surfaces of nuts, hinge-bolts, hinges, shackles, rims, straps, brackets, hooks, links, &c., are to be cleaned as they leave the mould, and all irregularities to be removed. All other portions of gun-metal work to be truly faced on all surfaces. All gun-metal facings and fittings to be truly turned and faced on all surfaces, to fit exactly, to be forced into positions, screwed where shown, and to sit perfectly firm and true.

*Wrought-iron Work, Gun-metal Work, and Cast-iron Work.*

262. The whole of the wrought-iron, cast-iron, and gun-metal work to be of first-rate quality and workmanship, in strict accordance with the specification and the dimensions and patterns shown on the drawings, and any details which the Engineer may provide during the progress of the contract. Quality and workmanship.

263. Wrought and cast ironwork and gun-metal work not to be more than 3 per cent. below the scheduled weight, and the contractor shall only be entitled to payment of the weights as per schedule, at Weights.  
the various prices set forth therein, and payment will not be made for any excess on such weights.

264. All ironwork and gun-metal work supplied by Government to the contractor to be delivered free of charge at the various sites of the works where they are required. For each article so delivered Contractor to  
the contractor shall give a written receipt, after which he shall be held solely responsible for same; and give a receipt  
shall, if any such article be lost, stolen, damaged, or destroyed, refund the cost to the Government. for ironwork  
supplied.

265. All ironwork and gun-metal work, &c., provided by the Government, which, at the completion Surplus iron-  
of the contract, by direction of the Engineer, has not been built or permanently fixed in the works, shall work.  
be conveyed by the contractor to the site of the Field Office, or to the iron store at Camperdown, as may be directed.

*Painting.*

266. All wrought-iron work (except where otherwise specified and directed) before leaving the foundry to be scraped and cleaned, and well coated with boiled linseed oil; and, prior to being fixed in position (excluding internal surfaces of circular and oval wrought-iron tubing, and excepting all working parts) after it has been cleaned and scraped free from scales, &c., and inspected, to receive two coats of anti-corrosive paint over all surfaces, and after being fixed in position, to be finished with two coats of best oil-colour, in approved tints. Wrought-iron  
work.

267. All bolt-heads, washers, nuts, straps, and all other exposed ironwork of timber bridges above level of kerbs, ordnance fencing, &c., to be finished with two coats of black varnish instead of oil-colour.

268. The whole of the cast-iron work to be properly cleaned immediately after completion; and, Cast-iron work.  
after being inspected, except where otherwise specified, to receive over all surfaces two coats of anti-corrosive paint (except working parts and joints), and to be finished afterwards with two coats of best oil-colour, in approved tints.

269. All carpenter's work of timber bridges above level of kerbs, and all ordnance fencing above ground, handrails, travelling cranes, &c., to be properly prepared, knotted and primed, and painted with four coats of best oil-colour, finished with approved tints. All tenons, mortises, notches, halvings, joints, scarfs and butting surfaces, to receive two coats of approved paint before being fixed in position. Carpenter's  
work.

270. No paint to be applied during or immediately after wet weather, or while surface of timber or metal work is wet; and an interval of forty-eight hours must elapse between each application.

*Tarring.*

271. All cast-iron cylinders, pipes, short lengths, bends, junctions, and any other castings, &c., Castings.  
which will be placed or laid under water, or which are to be covered up in earth, concrete, &c., and all non-ventilating man-hole covers, street-boxes, flushing-flaps and frames, scupper pipes, precipitating tanks, grooves,

grooves, landing plates and frames, grates, cover-plates, gully grates, &c., as soon they have been cast and inspected, to be properly cleaned and then heated, and whilst hot to be dipped or coated twice in hot gas-tar.

Wrought-iron work.

272. All flat, segmental, and buckled plates, rolled girders, bulb T irons, &c., before being placed in position, unless otherwise ordered, to receive one coat of tar, and after erection is completed, to receive a second coat; the tar to be coal tar, mixed with kerosene in the proportion of three of tar to one of kerosene, and applied hot.

Timber work.

273. Kerbs, flooring planks, timber in girders, longitudinal stringers, cross-girders, corbels, capsills, sills, piles, pier-bracing, abutment platforms, ends of handrail posts below level of tops of kerbs, to receive three coats of tar and composition; the first coat to be all tar laid on hot, the second and third coats to be composed of seven parts coal tar, four parts of Stockholm tar, and one part of pitch thoroughly melted together and applied hot, the last coat on top of deck to be well sprinkled with a layer of clean sharp sand and lime. All joints and butting surfaces to be well payed with the hot composition before fixing, and in finished work the composition to be poured into interstices and joints. Any timber inaccessible for tarring when fixed, to receive three coats before being placed in position.

274. No tar to be applied during or immediately after wet weather, or while surface of iron or timber is wet; and an interval of forty-eight hours to elapse between each application.

#### *Tar Varnish.*

Interior surfaces of wrought-iron work.

275. The whole of the interior surfaces (working parts and joints excepted) of the wrought-iron circular and oval tubes, cast-iron thinbles, expansion joint castings, short lengths of cast-iron circular and oval pipes, &c., after having been placed in position in the works, to be thoroughly cleaned of all scales, rust, and previous coating of linseed oil or paint, &c., and then to be coated twice with a tar-varnish composed of 30 gal. of coal tar, fresh, with all its naphtha retained, 6 lb. tallow, 1½ lb. resin, 3 lb. lamp-black, and 30 lb. freshly-slacked lime finely sifted; all materials to be approved of, and then to be intimately mixed as shall be directed, and applied hot, like paint.

#### *Day Labour.*

Prices given in schedule.

276. When "day labour" is required by the Superintending Officer to execute any works other than those for which a special price is given in the schedule of quantities and prices, the contractor shall provide the same at the several rates for "day labour" inserted in said schedule.

To include.

The price for day labour is to include supervision as well as all tools, lighting, and implements of every kind necessary for carrying on the work, and shall be returned in the usual monthly progress certificate.

Accounts to be sent in half-weekly.

277. The accounts for this "day labour" shall, however, be rendered by contractor to the Superintending Officer in half-weekly intervals, that is to say, during the forenoon of every Monday and Thursday, failing this he shall lose all claim to payments for the "day labour" performed by him during the preceding three days.

Length of day

278. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

#### *Measurements and Payments.*

Contractor to be present.

279. The contractor shall be present at all measurements, and, if required, assist in making the same. If he fail to attend after twenty-four hours' notice in writing has been delivered to him of the Superintending Officer's intention to take measurements, and clearly setting forth the locality of such intended operation, the measurements made by the Superintending Officer shall be binding on the contractor.

When and how measurements are to be made.

280. On satisfactory completion of any portion of the works, and at all other suitable times, the dimensions of such work shall be measured by the Superintending Officer, as specified, and recorded in a book kept for that purpose; and these quantities shall serve as the basis for arriving at the contract sum on completion of contract.

Progress payments.

281. For the purpose of making progress payments, the dimensions of still unfinished portions of the work will be measured in a summary way monthly, or as near as may be, but without prejudice to the ultimate acceptance or rejection of such unfinished portion of work.

Contractor to sign measurement book.

282. The contractor shall sign the measurement book each month, before the monthly progress payments are made, accepting the detailed quantities, prices, and amounts. Should he, however, disagree with the detailed quantities, prices, and amounts, he is at once to state in the measurement book in what particulars he disagrees, and the grounds of his disagreement; and unless this is done it is to be distinctly understood that the detailed quantities, prices, and amounts, as recorded in the measurement book, shall be binding.

Final measurements.

283. The final measurements, based upon the measurements made during the progress of the works, will be prepared within thirty days, or as nearly as may be after the completion of the work; and the contractor will be required to accept such measurement before the fixed deposit is returned.

#### *Junction with other Contracts.*

284. If two different contractors execute simultaneously two adjoining sections of the works, they shall be held jointly and severally responsible for effecting a proper junction of the sections.

#### *Suspension of Works.*

285. The contractor shall suspend the whole or any portion of the works, on receiving a written notice to that effect from the Engineer. He shall have no claim for loss or damage on this account, and such suspension shall in no wise vitiate the contract, but a commensurate extension of time for completing the works will be granted to the contractor, as set forth in clause 24 of the General Conditions.

#### *Duties.*

286. In the event of any materials being imported by contractor for use on this contract, no refund will be made of any duties which may be legally chargeable on such materials; and the contractor shall bear and pay all duty stamps, licenses, building or surveyor's fees or other charges or fees whatsoever legally demanded by any municipal or other authorities.

*Testing*

*Testing the Whole of the Works.*

287. It is to be distinctly understood that, on completion of the works, the Engineer shall have the power of ordering, and having the sewers, or portions of same, &c., closed in such order as he shall direct, and the whole of the sewers and aqueduct tubes, &c., filled with water for such a time as he may deem necessary for the purpose of testing the works; and any injuries, faults of whatsoever description, caused by or detected in consequence of such testing, to the work, shall be at once repaired, replaced by new work, and made good, the whole expense being borne solely by the contractor; and, after the completion of these repairs, replacing with new works, and making good any damages, injuries, faults, &c., the whole of the works shall again be tested, as before described, until they shall be satisfactory to the Engineer.

This is the schedule to specification marked "C" referred to in our annexed agreement with Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

Witness,—H. F. NORRIE.

JOHN CARTER.  
FRANK MOOREHOUSE GUMMOW  
(By his Attorney, JOHN CARTER).

This is the schedule to specification marked "C" referred to in my annexed bond to Her Majesty the Queen, dated 16th day of May, A.D. 1895.

Witness,—H. F. NORRIE.

JAMES GILLAN.

This is the schedule to specification marked "C" referred to in my annexed bond to Her Majesty the Queen, dated 16th day of May, A.D. 1895.

Witness,—H. F. NORRIE.

GEO. FORREST.

## D.

## GENERAL CONDITIONS.

*Interpretation of Terms.*

1. WHENEVER the terms hereafter explained in the present clause occur in these or any special conditions, or in the contract or specification, they shall be held to mean, and shall mean, as follows:—

"Government" shall mean the Government of New South Wales promoting this undertaking.

"Minister" shall mean the Secretary for Public Works of the Colony of New South Wales for the time being.

"Engineer" shall mean the Engineer-in-Chief having the principal charge of the works, or the person acting as such for the time being.

"Superintending Officer" shall mean any person or persons who may from time to time be entrusted with the superintendence of the works on behalf of the Government.

"Contractor" shall mean the person or persons who contracted to execute the works.

"Special conditions" shall mean any "special conditions" hereto attached and forming part of the contract; and such special conditions shall be read with the general conditions as part and parcel of the contract.

"Schedule of prices" shall mean the rates at which the contractor has offered or agreed to execute the contract, where the same is based on a schedule of prices; and be the basis on which the value of any extra works or of any deductions shall be calculated, and progress payments made, whether the contract be one of a schedule of prices or a bulk sum.

"Plans" shall mean and include all drawings referring to the works and explanatory of, or supplementary to, the specification.

"Works" shall mean the works set out in the specification and plans, or, in the event of there being no plans, in the specification only.

"Net claim" shall mean the sum claimed by the contractor after deducting therefrom the sum acknowledged by the Department to be due.

"Net award" shall mean the sum awarded on arbitration, after deducting therefrom the sum acknowledged by the Department to be due.

*Supply of Labour, Materials, and Plant.*

2. The contractor shall, except in so far as the specification may expressly state to the contrary, provide at his own cost and expense all labour, materials, and plant, and everything which the Engineer may consider necessary for the proper and complete performance of this contract. No materials or plant placed on the site of the works shall be removed therefrom, or otherwise disposed of, without the consent of the Engineer.

*Plans, Specifications, &c.*

3. The plans and specifications represent generally the form, dimensions, and description of the several works. Where any discrepancy exists between the dimensions as indicated by the scale and those marked in figures, the figures are to be considered as correct, and are to be taken in all cases in preference to the measurements by scale. Or if there be any discrepancy between the figures or dimensions, or the form of construction, or the material as indicated in the plans, and the dimensions and materials given in the specification, the directions of the specification shall be adopted; and in all cases of defective description, or any ambiguity, the explanation given by the Engineer shall be binding upon the contractor. Also, anything contained in the plans, and not in the specification, or anything contained in the specification and not shown in the plans, shall be equally binding as if it were contained in both. If neither specification nor plans contain any mention of minor parts, which, in the opinion of the Engineer, are reasonably and obviously necessary for the satisfactory completion of the works, such parts are to be provided by the contractor without any extra charge, as if they were specially mentioned, and shall be deemed to be, and hereby are, included in this contract.

All

All works described in, or implied by, the specification or shown in any of the plans, or set forth in any lists or tables thereon, or attached thereto, as well as those expressly provided for, are to be made and executed in every detail conformably to the several plans already prepared or which may be prepared hereafter for the purpose of this contract, in strict accordance with the provisions of the specification and conditions, and to the entire satisfaction of the Engineer.

*Copies of Plans, &c.*

4. A copy of all plans and specifications required by the contractor for carrying on the works will be provided by the Government, but must be returned before a final certificate for the work can be given. Any additional copies which may be required and are supplied by the Department shall be paid for by the contractor at a rate to be fixed by the Engineer.

*Setting out Works.*

5. The works will be set out—that is to say, all necessary centre lines and levels will be given to the contractor—except in the case of buildings, when, in the absence of setting out, a block plan will be supplied, from which he must work; but the contractor must satisfy himself of the accuracy of the setting out, as no work incorrectly set out or improperly executed will be paid for.

*Protecting and maintaining Signals and Marks.*

6. All bench marks, pegs, and signals on the surface, and all alignments, and level marks underground put in by the Engineer or Superintending Officer for the purpose of checking the contractor's work, will be confided to the care of the contractor. He shall, at his own expense, take all proper and reasonable precaution and care to preserve and maintain them in their true position; in the event, however, of their being disturbed or obliterated by accident or from any other cause whatever, they may, if necessary, be replaced by the Engineer or Superintending Officer at the contractor's expense, and the cost thereof deducted from any moneys then due or thereafter becoming due to the contractor.

*Possession of Ground.*

7. In giving the contractor possession of the site it shall not be deemed that he is to have the exclusive possession, but only a limited possession; that is to say, such possession as will enable him to perform the works comprised in this contract. The Minister may at any time take possession of any portion of the works or ground or intended site of the works for the purpose of carrying on any other works or for any purpose whatsoever. The contractor must procure for himself all other land which he may deem requisite for any temporary purposes, or for his own convenience.

*Access to Works.*

8. The Engineer, or any other person authorised by him, shall have free and uninterrupted access at all times to the works, and during working hours to any workshop or premises, not on the site of the works, where materials may be in preparation or stored for the purpose of this contract. The contractor shall give the Engineer all particulars as to the mode and place of manufacture of any of the materials proposed to be used in connection with this contract, and shall facilitate in every way the inspection of the same.

*Contractor's Risk.*

9. The contractor shall take upon himself the whole risk of executing the works to the satisfaction of the Engineer, and in accordance with the plans, sections, and specifications.

*Contractor to be represented.*

10. The contractor at all times during the progress of the works, when he is not personally superintending them, must have a responsible agent or overseer in charge to receive instructions from the Superintending Officer or Engineer, and to represent the contractor for all purposes of this contract.

Any notice or any written instructions to be given or delivered to the contractor under this contract shall be deemed to have been so given or delivered when given or delivered to the contractor or his representative at the work, or left at the contractor's usual or last-known place of abode or business.

*Order of Procedure.*

11. The Engineer shall have full power to decide in what order in point of time the various parts of the work or works comprised under this contract shall be carried out.

*Power of Entry.*

12. The Engineer shall have the power, at his discretion, without vacating this contract, to enter upon, by himself or his agents, and make use of any part or parts of the work comprised under this contract, and his doing so shall in no wise be held as a waiver of the responsibility of the contractor in respect of this contract, except in so far as any injury may accrue to such work so entered upon, by reason of any proved carelessness, to the satisfaction of the Engineer, of any employee of the Government, in which event the contractor shall be free from liability on account thereof, but not otherwise.

*Instructions to be obeyed.*

13. Should the contractor refuse or neglect to carry out the instructions of the Engineer or the Superintending Officer, the Engineer shall have the power of suspending the usual monthly certificate until such instructions have been complied with.

*Power to dismiss men.*

14. The Engineer may require the dismissal, within twenty-four hours by the contractor, of any agent, overseer, foreman, workman, or other person employed on the works, and in the event of the contractor refusing or neglecting to comply with such requisitions, all further payments on account of the work may be stopped until such dismissal is effected.

*Bad Materials or Improper Works to be removed.*

15. The contractor shall be bound to remove, within twenty-four hours, if written notice from the Engineer or Superintending Officer to that effect be given, any materials or work, whether fixed or not, which may appear to the Engineer to be of an inferior or improper description; and, in case of refusal, the Engineer shall have the power to get such materials or work removed at the contractor's expense, and to withhold all payments until such instructions have been complied with.

*Extra Works—Omissions of Works.*

16. If at any time whilst the works are in hand it shall be deemed expedient by the Engineer to order material or work of a different description to that specified, or to increase or diminish the dimensions or extent of any works to be done under this contract, or to alter their situation or vary the form or dimensions of any of the said works, or of any part thereof, or to make any deviation or to substitute one class of work for another, he shall have full power to do so, and to order and direct any such increase, diminution, alteration, deviation, or substitution, and the works involved in any such increase, alteration, deviation, or substitution, shall be executed by the contractor if of the class of works provided for in the schedule of prices, at such schedule prices; and no such increase, diminution, alteration, deviation, or substitution of works shall in any way annul or set aside this contract, or extend the time for the completion thereof, unless the Minister shall see fit to grant such extension; but such additions or alterations shall be measured and paid for, or deducted from the contractor's account, as the case may require, according to the schedule of prices. Provided that if any portion of the works so ordered to be done shall not be, in the opinion of the Engineer, of the same value or class of works provided for in the schedule of prices, the same shall be executed by the contractor at such prices as may be agreed upon with the Engineer; but if the contractor and Engineer cannot agree as to the price to be paid, the Engineer may order and direct the same to be done by such person or persons as he may think fit. Before any extra work, or work of an altered value or class, is undertaken by the contractor, it shall be imperative for him to procure an order in writing from the Engineer for carrying out such extra or variation of work, and the contractor shall not be entitled to any payment for such extras or variations unless he produce the written order for the same, as aforesaid, and he shall not be entitled to plead that the Engineer omitted to give such written order, as it is to be distinctly understood that the onus of obtaining such order shall be on the contractor. The contractor shall not be entitled to any other rate than the schedule rate on any plea that the work was in a different position or of a different class from, or in a more difficult position than that shown on plan or specification, or carried out under circumstances not contemplated in the specification, unless an agreement entitling him to payment by other than the schedule rates shall have been previously made and signed by the Engineer and the contractor.

*Valuation of Omissions.*

17. The Engineer shall have the power to direct the omission of the carrying out of any part or parts of the said works, but not amounting to the omission of the whole; and the value of such work so omitted in such case, calculated at the schedule rates, or in the event of there being no schedule rates, calculated on the basis of the proportionate value which such work bears to the lump sum, as ascertained by the Engineer, whose decision on that point shall be final, shall be deducted from the contract sum, subject, however, to arbitration clauses Nos. 36 to 41.

*Net Measurements.*

18. The whole of the work shall be executed and paid for according to the contract dimensions, and no allowance will be made for any excess of dimensions above those found on the working plans now exhibited, or which may be afterwards supplied, notwithstanding any general or local custom to the contrary, unless such excess has been expressly ordered. In the case of dressed masonry all cubic measurements will be taken at the extremes, and in the case of rock-faced masonry all measurements will be taken to the draft. With regard to timber, all framed work will be paid to extremes, but in no case will scarfs in hewn or round logs be paid for.

*Contractor liable for injury to adjoining Lands, Properties, &c.*

19. The contractor shall not commit any act of trespass, and shall effectually protect all adjoining properties and owners thereof against any loss, damage, or injury that may occur through the carrying on of the works, whether to buildings, goods, property of any kind, or to persons; and in case any such trespass be committed, or any such loss, damage, or injury occur, the contractor shall make full compensation, and shall make good all or any such loss, damage, or injury; and if any such compensation for trespass, or any such loss, damage, or injury be recovered against the Government in the first instance, it may be deducted from any money due or coming due to the contractor under this contract, or may be recoverable from the contractor or his sureties as liquidated damages in that respect incurred.

*Damages, &c., to be paid for by the Contractor.*

20. All damage, injury, or loss that may happen to the works from any cause whatever during their progress must be made good by the contractor at his own expense; and the whole of the works must be delivered up, complete in every respect, according to this contract, and the care and maintenance of all works under this contract shall remain with the contractor until the Engineer shall, by notice in writing under his hand, inform the contractor that he has taken charge thereof; and until such notice shall have been given, the contractor shall be responsible for all accidents, from whatever cause arising, and shall make good all damages thereto.

*Contractor not to Sublet Works or Assign Moneys.*

21. The contractor shall not assign or underlet this contract, or any part thereof, or assign or mortgage, charge or encumber all or any of the moneys payable or to become payable under this contract, or any other benefit whatsoever arising, or which may arise, under this contract, to any person without the consent in writing of the Minister being first obtained. The contractor for each and every breach of this condition shall be liable to pay to the Government the sum of £50 as and for liquidated damages; and the sum or sums payable as such damages may be deducted from any sum or sums due to the contractor

contractor under this or any other contract with the Government. And any permission to assign or underlet works to be done under this contract shall not discharge the contractor from any liability in respect of this contract, and shall extend only to the permission actually given, but not so as to prevent any proceedings for any subsequent breach of this condition; and all rights under these conditions shall remain in full force, and shall be available as against any such subsequent breach.

*Truck System not allowed.*

22. The workmen and labourers of every class employed on the works shall be paid their wages in full, in money, current coin of the Colony, at least once in every month, and no ticket or other system of payment by provisions, liquors, or goods will on any pretence be allowed; nor shall the contractor, or any person or persons employed by him, or in any way connected with him, establish any shop for the supply of provisions, liquors, or goods; nor shall the contractor oblige his workmen to take provisions, liquors, or goods of any kind from any person in particular. The workmen and labourers of every class shall be paid on the works if it be possible, or in some building in the vicinity; and in no case shall they be paid at a public-house or other place where liquors or refreshments are sold. The contractor, for each and every breach of this condition, shall pay to the Government the sum of £50 as and for liquidated damages; and the sum or sums payable as such damages may be deducted from any sum or sums due to the contractor under this or any other contract with the Government.

*Power of the Government to pay Workmen and Tradesmen.*

23. Before the payment of any money to the contractor, the Engineer may require from him a statutory declaration that the tradesmen supplying materials for or incidental to the works, and the workmen and labourers of every class employed on the works, have been paid their claims of every kind in full, in current coin of the Colony, and to the latest date at which such wages or claims are due; and the Engineer may withhold the payment of any money that may be due or become due to the contractor until such declaration has been made and delivered to him.

If the contractor shall fail or omit to pay the claims of any such tradesmen, workmen, or labourers, in the current coin of the Colony, it shall be lawful for the Minister or the Engineer, as often as the same shall happen, upon complaint of such failure or omission made by any such tradesman, workman, or labourer, and upon proof to the satisfaction of the Minister or Engineer of such failure or omission to pay the amount of such claim to such tradesman, workman, or labourer, and to deduct the same amount from any money then due or owing, or thereafter to become due or owing, to the contractor under this contract.

*Delay by Minister.*

24. If the contractor shall not be able to obtain possession of any portion of the ground required for the execution of the works to be done in connection with this contract, or if from the non-delivery, or any delay in the delivery to the contractor, of any materials which under this contract the Minister is to supply, or from any cause whatever arising out of the acts or defaults of the Minister, or any officers or servants in his employment, or from any accident happening to the said works during their progress not arising from the neglect or default of the contractor or his servants or workmen, the contractor shall be delayed or impeded in the execution of his contract, the contractor may from time to time within seven days of the happening or occurring of such act, default, or accident, apply in writing to the Engineer for an extension of time on account of such act, default, or accident, setting forth the cause of such application, and the Engineer shall, if the Minister think the cause sufficient, but not otherwise, allow by writing under his hand such an extension of time as the Minister shall think adequate; and the penalties, sets-off, and deductions to which under this contract the contractor is liable shall not attach until the expiration of such extension of time, but shall attach, and the contractor shall become liable to the same from the date of the expiration of such extended time or times. And unless the contractor shall make such application within the time and in the manner aforesaid, and unless and until the Minister shall allow such extension or extensions of time as aforesaid, the contractor shall not by reason of any delay arising from the cause or causes aforesaid, or any of them, be relieved in any way or to any extent of his liability to finish and complete the works within the time in this contract specified; and in default of his so doing, to pay and be subject to the liquidated damages, deductions, and sets-off as in these conditions provided; nor shall the Minister be deprived in any way or to any extent of his right to deduct or recover any sum or sums as liquidated damages, and not as or in the nature of a penalty or to make deductions or sets-off which under this contract he is entitled to make, deduct, set-off, or receive from the contractor for or by reason or on account of any delay in the completion of the work or any portion of the same, nor shall the rights, powers, and authorities by these conditions given to or vested in him be in any way affected.

*Patent Rights to be included.*

25. The contractor is to include in his tender the amount of all patent rights and royalties which may be claimed by any patentee or patentees for the manufacture and use of any portion of this work, and must undertake to liquidate the same when required to do so.

*Free Passes, &c.*

26. No free passes on any of the Government Railways will be granted either to the contractor or his agents, nor will any materials or articles of any description be conveyed free of charge.

*Conditions not to be Waived.*

27. None of the conditions of this contract shall be varied, waived, and discharged, or released, either at law or in equity, unless by the express consent of the Minister, testified in writing under his hand.

*Progress Payments without Prejudice.*

28. No progress payment given to the contractor shall prevent the Engineer from at any future time before the final settlement rejecting all unsound materials and improper workmanship discovered subsequently to the giving of any previous payment; and notwithstanding any approval given or made by the Superintending Officer that portions or the whole of the works have been satisfactorily performed, the Engineer may require the contractor to remove or amend at any future time previously to the final payment

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on account of the work, any work that may be found not in accordance with this contract; and the contractor must remove and amend at his own cost all such work when so required; and if he refuse or neglect to do so, the Engineer shall have the power to carry out such work, and to deduct the whole cost thereof from any moneys that may be due, or that may become due, to the contractor.

If, in the opinion of the Engineer, further inquiry is necessary or desirable before any progress payment is made, he shall have the power to withhold the certificate on which such payment would have been made, for any period which he may consider necessary for the purpose of such inquiry.

#### *Security.*

29. Within fourteen days after the notice of the acceptance of his tender shall have been given to the contractor, or posted to the address of his last-known place of business or residence, he shall deposit with the Minister, or at the option of the Minister, in some bank or banks in Sydney, upon fixed deposit in the name of the Minister, a sum calculated at the rate of £5 for every £100 or part thereof on the amount of his tender up to the sum of £100,000, and at the rate of £1 for every £100 or part thereof in addition, for any amount over that sum, to be held by the Minister as security for the due and proper performance and completion of this contract until the Engineer has certified that the whole of the work in the said contract has been completed to his satisfaction, or until this contract has been cancelled by the Minister under the power given to him in that respect under clause 32 of these conditions, in which last-mentioned event happening the money so deposited shall become forfeited to the Crown, and shall be held by the Colonial Treasurer, for and on behalf of Her Majesty the Queen, as liquidated damages. If, however, this contract shall not have been cancelled under the said clause, and if the works comprised in this contract are not completed within the time mentioned in clause 34 of these conditions, the liquidated damages which under the last-mentioned clause are made payable to the Minister may be deducted and taken from the money so deposited.

If the contractor fail to deposit the sum as hereinbefore provided within fourteen days from the acceptance of the tender, or if he fail to execute the contract for the due performance of the works mentioned in the said tender, the Minister shall have the option of and full power and authority to declare such acceptance to be annulled, in which case the amount of the preliminary deposit will be absolutely forfeited to the Crown, as provided by the Regulations of the Tender Board.

No tenderer will be authorised to proceed with the work tendered for until he has made the deposit as aforesaid, and has executed the required contract for the due performance of the said works, it being hereby declared that for all or any work done or materials found and provided by the contractor before the due execution of the said contract, or the said moneys being deposited as aforesaid, he shall not have any right of action, claim, or demand against the Minister.

The contractor will be entitled to receive any interest that may be payable upon the fixed deposit of the money, if the money be placed in a bank at fixed deposit, as such interest becomes payable; but it is expressly declared that the Minister is not to be held liable or answerable in any way for any loss on the money so deposited, or for any loss of interest from the fixed deposit not being renewed.

#### *Payments.*

30. Progress payments may be made once in every month, unless the same shall become not payable by reason of anything contained in these conditions, on the certificate of the Engineer, as the work proceeds, in the proportion of 80 per cent. of the value of the work returned, until the sum retained reaches the amount of the deposit provided for in the preceding clause, when no further deductions will be made. The amount of the retention money will be held by the Minister, in addition to the cash security, unless otherwise provided for in the specification, until the Engineer has certified that the whole of the works have been satisfactorily completed, and the period specified for the maintenance of the said works has expired, and all accounts finally adjusted, when the retention money, in addition to the cash security, will be paid to the contractor; and it is expressly declared that until a certificate has been given by the Engineer to the Minister that the work done by the contractor has been executed and completed to his satisfaction, the contractor shall have no right or claim in respect of any work done or materials provided, nor to the payments from time to time to be made under this contract, or to the final payment upon the whole of the works being finished.

#### *Delay or Bad Work, Bankruptcy, &c.*

31. In case the Engineer shall be at any time dissatisfied with the mode of proceeding, or at the rate of progress of the work or any part thereof, or in case the contractor shall at any time neglect or omit to carry out the instructions of the Engineer, or to dismiss any person employed when required, or shall neglect or omit to remove any materials or work which he is required to remove under condition 15 or in case the contractor shall assign or underlet this contract, or any part thereof, or assign or mortgage, charge or encumber, or attempt to assign, mortgage, charge or encumber, all or any of the moneys payable or to become payable under this contract, or any other benefit whatsoever arising or which may arise under this contract, without the consent in writing of the Minister being first obtained, or in case the contractor shall make default in insuring and keeping insured, in cases where insurance is specified, and depositing the policies and receipts for premiums in accordance with these conditions, or in case the contractor shall become bankrupt, or shall make an assignment of his estate for the benefit of creditors, or shall make an arrangement or composition with his creditors, then and in every such case the Minister shall be at liberty, without vitiating this contract, and without prejudice to any right that may have accrued to liquidated damages under any of these conditions, to take the works wholly or partially out of the hands of the contractor and to employ or contract with any other person or persons to execute the same, and for that purpose to take possession of and use all horses, materials, plant, tools, implements and things on or about the said works, without making any allowances for the same, and all damages and expenses thereby incurred shall be ascertained and certified by the Engineer, and together with any sum payable as liquidated damages under these conditions shall be deducted from any money that may be then due or may thereafter become due to the contractor or may have been deposited by him; and if the money then due, or thereafter becoming due to the contractor, or deposited by him, be not sufficient for that purpose, the balance remaining unpaid shall be a debt due by the contractor to the Minister, and may be recovered accordingly.

*Cancellation of Contract.*

32. In any or either of the events mentioned in the last preceding clause of these conditions, the Minister shall have the option and full power and authority in lieu of proceeding under such clause, and without prejudice to any right that may have accrued to liquidated damages under any of these conditions, to cancel this contract whether there are any works remaining to be done or not; and in such case the moneys which shall have been previously paid to the contractor on account of the works executed, shall be taken by him as full payment for all works done under this contract; and upon notice in writing under the hand of the Minister that he, under the authority of this condition, cancels this contract, being given to the contractor, this contract shall be cancelled, and thereupon all sums of money that may be due to the contractor, or unpaid, together with all implements in his possession, and all materials provided by him, upon the ground upon which the work is being carried on, or adjacent thereto, shall be forfeited, and all sums of money held as security or named as liquidated damages for the non-fulfilment of this contract, within the time specified, shall also be forfeited and become payable to the Government, and the said implements and materials shall become and be the absolute property of the Government, and with the moneys so forfeited and payable as aforesaid shall be considered as ascertained damages for breach of contract.

*Insurance.*

33. The contractor shall from time to time, when required to do so by the terms of the specification, insure the works against loss or damage by fire, in an office to be approved in the name of the Minister for the amount of the full value of the work completed, as determined by the Engineer, and shall lodge with the Engineer the policies and receipts for the premiums for such insurance, and shall continue such policies until possession is given up to the Government; in default of which the Minister shall be at liberty to insure and deduct the amount of the premiums paid from any moneys payable to the contractor, and may refuse payment of any certificate until such policies and receipts are handed in as aforesaid; but this insurance is to be no limit or bar to the liability and obligation of the contractor to deliver up the works to the Minister completed in all respects according to the contract. In case of loss or damage by fire the moneys payable under any such insurance shall be received and retained by the Minister until the works are finally completed, and shall then be credited to the contractor in the final settlement of accounts in the event of the contract not having been previously cancelled under these conditions.

*Time of Completion, &c.*

34. The contractor shall complete the whole of the works comprised in this contract within seventy-eight weeks from the date of the acceptance of his tender, and in the event of their non-completion at the specified times, should the Engineer not have proceeded under clauses Nos. 31 and 32 of these conditions, or either of them, the contractor shall pay, by way of liquidated damages, and not as or in the nature of a penalty, the sum of \_\_\_\_\_ pounds sterling for every week, or for every part of a week, that shall elapse after such specified time, until their completion, and which sum or sums may be deducted from any money payable to the contractor under this or any other contract. The contractor shall have no right to a certificate for payment after the date specified in these conditions for the completion of this contract until the whole of the works shall have been properly completed to the satisfaction of the Engineer, unless the time for the completion of this contract shall have been extended by the Minister, in which case such extended time shall become the time for the completion of this contract, and it is to be expressly understood that the fact of the time having been so extended shall not in any way be taken as a waiver of this contract, or as annulling or setting aside this contract in any respect, nor be taken as releasing the contractor from any of the responsibilities or obligations of this contract, which, in all other respects, shall remain the same as if the time had not been extended.

The like liability also shall hold good as to the obligation of the contractor in the event of any advance being made to him from the retention money, or on material on the ground and not *in situ*.

*Maintenance.*

35. The contractor will be bound to maintain the works for a period of three months after their final completion and use by the Government; and if any part should within that period show signs of weakness, or of giving way, or if any defective workmanship or materials be detected, the contractor, when called upon to do so, shall make good the same at his own expense, to the satisfaction of the Engineer, before any moneys held by the Government on account of this contract will be paid. It is also to be distinctly understood that the Government shall have the full, free, and unrestricted use of the said works, without any interference whatever on the part of the contractor during the currency of this period of maintenance; and such use of the said works on the part of the Government shall not be held as relieving the contractor of any liabilities or obligations whatever in respect of his contract.

*Arbitration.*

36. The following matters shall be decided by the Engineer, whose decision shall be absolute and final:—(1) All questions or disputes which shall arise respecting the true construction or meaning of the plans or specification, or the quality of the workmanship, or quantity or quality of materials necessary for the whole or any part of the contract. (2) All questions and disputes when the net claim shall not amount to the sum of £500.

37. All questions and disputes not hereinbefore provided for shall, if the net claim be £500 or upwards, upon the completion of the works under the said contract, and before payment of the retention money and the money deposited as security for the due carrying out of the contract, be fixed and determined by arbitration as hereinafter provided.

38. If either party consider that he has claims in respect of any matter in which arbitration may be claimed, he shall, within one month of the date of the final certificate, furnish to the other party full particulars in writing of such claims, breaches, doubts, disputes, and differences in respect of which he desires arbitration, giving distinct and separate items, and the amount, if any, claimed under each item; and the other party may thereupon furnish particulars of all claims he has in respect of such matters, irrespective of the aggregate amount of such claims; and the party furnishing the same shall be bound by such particulars; and no claim not included in such statement shall be taken into consideration at such arbitration, or become subject of arbitration or action; and the claim or, respective claims so made as aforesaid shall be determined by arbitration, in the manner as hereinafter provided.

39. If both parties concur in the appointment of a single arbitrator, then the reference shall be to such single arbitrator; but if the parties for twenty-one days after the particulars first mentioned in the last preceding clause shall have been furnished, cannot concur in the appointment of a single arbitrator, the reference shall be to two arbitrators, one to be appointed by each party, or their umpire to be appointed in writing by such arbitrators before they commence the business of the reference; and the arbitration shall, subject to the express provisions herein contained, be made and held pursuant and subject to the Arbitration Act of 1892, or any statutory modification or re-enactment thereof for the time being in force.

40. The costs of and incidental to the arbitration shall be paid or borne by or between the parties in manner hereinafter mentioned, that is to say:—

1. If the sum awarded does not exceed the amount acknowledged by the Department to be due, the contractor shall pay all the costs of and incidental to the arbitration.
2. If the sum awarded shall amount to the sum claimed by the contractor, the Government shall pay all the costs of and incidental to the arbitration.
3. If the sum awarded exceeds the amount acknowledged by the Department to be due, but is less than the sum claimed by the contractor, the costs of both parties shall be added together and the total cost so ascertained shall be paid by the parties in the proportions following, namely:—The Government shall pay such sum as bears the same proportion to the total cost as the net award bears to the net claim, and the balance shall be paid by the contractor.

The award shall direct to, and by whom, and in what proportions the costs shall be paid, in accordance with the provisions hereinbefore contained; but the award need not specify the amount of such costs. Such amount shall, in the event of disagreement, be taxed or settled by the arbitrators or umpire, as between party and party, after the award is made. No costs shall be allowed as between solicitor and client. If either party shall be dissatisfied with the costs allowed by the arbitrators or umpire, the same may be taxed by the Prothonotary or other proper officer of the Supreme Court.

41. It is to be distinctly understood that all claims by either party to have any of the matters which may be submitted to arbitration so dealt with, must be made upon the whole of the work being completed, and before payment to the contractor of the retention money, or of the money deposited as security for the due performance of the contract, and that the acceptance by the contractor of payment of the retention money in cases where a bond to secure the completion of the works has been given, and in other cases of the retention money, or of any balance thereof, and of the money deposited as security for the due performance of the contract, shall be conclusive proof that the contractor has no such claim or claims.

Roads and Bridges and Sewerage Branch,  
Department of Public Works.

ROBT. HICKSON,  
Commissioner and Engineer-in-Chief,  
Roads, Bridges, and Sewerage.

These are the general conditions marked "D" referred to in the annexed agreement with Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

Witness,—H. F. NORRIE.

JOHN CARTER,  
FRANK MOORHOUSE GUMMOW  
(By his Attorney, JOHN CARTER).

These are the general conditions marked "D" referred to in my annexed bond to Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

Witness,—H. F. NORRIE.

JAS. GILLAN.

These are the general conditions marked "D" referred to in my annexed bond to Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

Witness,—H. F. NORRIE.

GEO. FORREST.

#### "E."

#### RATES OF WAGES TO BE PAID.

Not less than the several rates of wages as set out in the schedule herein shall be paid by the contractor (or—in the event of the Minister approving of the sub-letting of any portion or portions of the works—by the sub-contractor) for the various services to be performed under this contract, and, in case of dispute as to the classification of workmen, the decision of the Engineer shall be final; the rates, however, do not include those to be paid to apprentices or boys.

With respect to overtime, the recognised rules of the particular trade then prevailing in the district where the work is situated shall be observed.

If it shall at any time be proved to the satisfaction of the Minister that the contractor or any approved sub-contractor is paying or has paid a lesser rate of wage for services rendered during the progress of the works to any workman employed thereon than is set out in the following schedule, the Minister shall have the option and full power and authority to cancel the contract, as if such breach was and is one of the events mentioned in clause 32 of the general conditions. Any permission to sub-let shall not discharge the contractor from any liability in respect of the rate of wages to be paid under this contract.

In all classes of labour, forty-eight hours shall be considered as a week's work. This rule, however, shall not apply to those workmen, the necessities of whose employment demand that longer hours shall be worked, as in the case of firemen, who usually have to get up steam in readiness for the day's work. The necessity for longer hours of labour in special cases shall be determined by the Engineer, whose decision shall be final.

The

The following is the schedule referred to :—

Trade.	Rate.
	s. d.
Carpenters .....	8 0 per day.
Masons .....	10 0 "
Bricklayers .....	9 0 "
Plasterers .....	9 0 "
Blacksmiths .....	8 6 "
Boilermakers and riveters .....	9 0 "
Fitters .....	9 0 "
Painters .....	7 6 "
Plumbers .....	8 6 "
Shipwrights .....	9 6 "
Copper and brass workers .....	9 0 "
Moulders .....	7 0 "
Engine drivers .....	7 6 "
Workmen not included in the foregoing list .....	6 0 "

These are the special conditions marked "E" referred to in our annexed agreement with Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

JOHN CARTER.  
FRANK MOOREHOUSE GUMMOW  
(By his Attorney—JOHN CARTER).

Witness,—H. F. NORRIE.

These are the special conditions marked "E" referred to in my annexed bond to Her Majesty the Queen, dated 16th May, A.D. 1895.

JAMES GILLAN.

Witness,—H. F. NORRIE.

These are the special conditions marked "E" referred to in my annexed bond to Her Majesty the Queen, dated 16th day of May, A.D. 1895.

GEO. FORREST.

Witness,—H. F. NORRIE.

"F."

#### TENDER FORM.

IN pursuance of advertisement in the *Government Gazette* (I or we), the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Northern Main Sewer, Leichhardt and Annandale section (Contract No. 77), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected and lodged by (me or us), for the sum of £15,500, and to complete the same within eighteen months from the date of the acceptance of this tender; and (I or we) hereby undertake that (I or we) will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works, a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and (I or we) enclose herewith (our or my) cheque for the sum of £160 as a preliminary deposit; and (I or we) agree that such sum shall be absolutely forfeited if (I or we) at any time within thirty days after the said tender is opened withdraw the same, or if in the event of this tender being accepted (I or we) fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board regulations, printed on the back hereof, and by which (I or we) agree to be bound.

Dated this 13th day of March, 1895.

JOHN CARTER.  
F. M. GUMMOW.  
D. S. SNODGRASS.

Witness,—A. R. BURKETT.

Carter, Gummow, & Co., Box No. 10, North Sydney.

#### TENDER BOARD REGULATIONS.

No tender shall be received after 11 a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work has to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive...	£5 0 0
For amounts exceeding £500 and not exceeding £1,000...	£10 0 0

For all sums over £1,000 1 per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When the bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

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This is the tender marked "F" referred to in the annexed agreement with Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

JOHN CARTER,  
FRANK MOOREHOUSE GUMMOW  
(By his Attorney), JOHN CARTER.

Witness,—H. F. NORRIE.

This is the tender marked "F" referred to in my annexed bond to Her Majesty the Queen, dated 16th day of May, A.D. 1895.

Witness,—H. F. NORRIE.

JAMES GILLAN.

This is the tender marked "F" referred to in my annexed bond to Her Majesty the Queen, dated 16th day of May, A.D. 1895.

Witness,—H. F. NORRIE.

GEO. FORREST.

The plans herein referred to are those exhibited by the Department (with the exception of aqueduct plans), together with plans on our patent system lodged with Public Works Department.

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"G."

SUPPLEMENTARY SPECIFICATION.

THE structure above the level of the skewbacks of main arches to be constructed as shown on drawing which accompanies the contractor's tender of cement mortar (except the cement facing), composed of one part of cement to three parts of sand, and wrought-iron rods on the "Monier system."

The foundations of piers are to be in conformity with the drawings attached to the contract, except as regards to the extra size necessitated by the larger pier shown on the contractor's plan, and are to be to the satisfaction of the Engineer.

Should the piers be required to be put down to a greater depth than shown on the drawings, or a greater number of them require piling than shown, the work is to be executed as ordered without extra payment being made.

The piers are to be built with sandstone concrete of the quality specified, and faced with cement mortar, composed of one part of cement and two parts of sand.

The cement facing of the structure, above the level of the springing of main arches is to be composed of one part of cement and one part of sand.

The works generally are to be carried out in accordance with the specification, schedule to specification, and the plans therein referred to, save and except such structural parts as are to be carried out under the "Monier system," or necessarily enlarged to meet the requirements of the contractor's plan, and within the time set out in the general conditions.

The contractors shall continue to maintain the said works at their own cost after the period of maintenance set forth in the general conditions, for a further period of three years, computed from such date to the satisfaction of the Engineer, whose decision shall be final and conclusive upon all points concerning workmanship and materials, and the permanency and durability of the said works, and the contractors shall enter into a bond to Her Majesty the Queen in the penal sum of £12,000, and find two sufficient sureties to enter into separate bonds in the penal sum of £6,000 each, to secure the removal of so much of the said works as shall have been constructed on the "Monier system," if the Engineer shall be dissatisfied with the same at any time during the said periods of maintenance, and to re-erect and  
construct

construct the said works at their own cost and expense in accordance with all things with the specification, schedule to specification, and plans therein referred to, within thirty-nine weeks from the date of being called upon so to do.

This is the supplementary specification marked "G" referred to in our annexed agreement with Her Majesty the Queen, dated the \_\_\_\_\_ day of \_\_\_\_\_ A.D. 1895.

JOHN CARTER,  
FRANK MOORHOUSE GUMMOW  
(By his Attorney, JOHN CARTER).  
D. G. SNODGRASS.

This is the supplementary specification marked "G" referred to in my annexed bond to Her Majesty the Queen, dated the 16th day of May, 1895.

Witness,—HAROLD F. NORRIE.

JAMES GILLAN.

This is the supplementary specification marked "G" referred to in my annexed bond to Her Majesty the Queen, dated the 16th day of May, A.D., 1895.

Witness,—HAROLD F. NORRIE.

GEO. FORREST.

"H."

Gentlemen,

Public Works Department, Sydney, 11 April, 1895.

I have the honor, by direction of the Secretary for Public Works, to inform you that your tender, dated the 13th March last, is accepted for the construction of the northern main sewer, Leichhardt and Annandale Section, No. 77, at the sum of £15,500, in the terms set out in the supplementary specification, a copy of which is sent herewith, and subject to the following special conditions, viz. :—

That if it shall be represented to the Secretary for Public Works at any time during the progress of this contract that an undue number of men are being employed thereon who have not been domiciled in this Colony for six months previously to such employment, and such allegation be proved to his satisfaction, the Minister shall have the power to call upon you to discharge any or all such men, and on such direction being conveyed to you under the hand of the Under Secretary for Public Works, you shall discharge such men forthwith, and in the event of your non-compliance with any such direction, the Minister shall have the power to declare this contract to be cancelled as if this stipulation had been expressly set out in the cancellation clause of the general conditions relating to this contract.

The work is to be carried out in strict accordance with the several contract exhibits relating to this contract modified by the supplementary specification above referred to, and the plan submitted with your tender, and to be completed within seventy-eight weeks from this date.

A fixed deposit receipt, in favour of the Secretary for Public Works, for the sum of £775 will be required as security for the due performance of contract within the stipulated time, and a personal bond in the sum of £12,000, and two bondsmen in the sum of £6,000 each in connection with the maintenance as set out in the supplementary specification. Will you be good enough to notify to me your assent to these terms, and at the same time submit the names of two responsible persons who are willing to act as your sureties.

I have to refer you to the Engineer-in-Chief for Metropolitan Sewerage Construction for further information, and to request that you will, when required to do so, call upon the officer in charge of bonds and contracts at this office with your sureties for the purpose of executing the necessary documents for the due observance of your contract.

I am, &c.,

J. BARLING,

Under Secretary.

Messrs. Carter, Gummow & Co., contractors, Box No. 10, North Sydney.

This is the copy acceptance marked "H" referred to in our annexed agreement with Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

JOHN CARTER,  
FRANK MOORHOUSE GUMMOW  
(By his Attorney), JOHN CARTER.  
D. G. SNODGRASS.

Witness,—HAROLD F. NORRIE.

This is the copy acceptance of tender marked "H" referred to in my annexed bond to Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

Witness,—HAROLD F. NORRIE.

JAMES GILLAN.

This is the copy acceptance marked "H" referred to in my annexed bond to Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

Witness,—HAROLD F. NORRIE.

GEORGE FORREST.

"T."

Sir,

North Sydney, 15 April, 1895.

We have the honor to acknowledge the receipt of your letter, re Contract No. 77, Sydney Sewerage, and to inform you that we accept the terms thereof.

We propose as our sureties Mr. James Gillan, Dulwich Hill, and Mr. George Forrest, Marrickville.

We are, &c.,

The Under Secretary, Public Works.

CARTER, GUMMOW, & CO.

Thi

This is the letter of assent marked "I" referred to in our annexed agreement with Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

JOHN CARTER,  
FRANK MOOREHOUSE GUMMOW  
(By his Attorney, JOHN CARTER),  
D. G. SNODGRASS.

Witness,—HAROLD F. NORRIE.

This is the letter of assent marked "I" referred to in my annexed bond to Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

Witness,—HAROLD F. NORRIE.

JAMES GILLAN.

This is the letter of assent marked "I" referred to in my annexed bond to Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

Witness,—HAROLD F. NORRIE.

GEO. FORREST.

## No. 8.

### Draft of Supplementary Specification.

The structure above the level of the skewbacks of main arches to be constructed as shown on drawing, which accompanied the contractor's tender, of cement mortar (except the cement facing), composed of one part of cement to three parts of sand, and wrought-iron rods on the "Monier system."

The foundations of piers are to be in conformity to the drawings attached to the contract, except with regard to the extra size necessitated by the larger pier shown on the contractor's plan, and are to be to the satisfaction of the Engineer.

Should the piers be required to be put down to a greater depth than shown on the drawings, or a greater number of them require piling than shown, the work is to be executed as ordered, without extra payment being made.

The piers are to be built with sandstone concrete of the quality specified, and faced with cement mortar composed of one part of cement and two parts of sand.

The cement facing of the structure above the level of the springing of main arches is to be composed of one part of cement and one part of sand.

The works generally are to be carried out in accordance with the specification, schedule to specification, and the plans therein referred to, save and except such structure parts as are to be carried out under the "Monier system," or necessarily enlarged to meet the requirements of the contractor's plan, and within the time set out in the general conditions.

The contractors shall continue to maintain the said works at their own cost after the period of maintenance set forth in the general conditions, for a further period of three years, computed from such date to the satisfaction of the Engineer, whose decision shall be final and conclusive upon all points concerning workmanship and materials, and the permanency and durability of the said sewer works, and the contractors shall enter into a bond with Her Majesty the Queen with two sufficient sureties in the penal sum of £12,000 to secure the removal of so much of the said works as shall have been constructed on the "Monier system," if the Engineer shall be dissatisfied with the same at any time during the said periods of maintenance, and to re-erect and construct the said works at their own cost and expense, in accordance with all things with the specification, and schedule to specification and plans, therein referred to, and within weeks from the date of being called upon so to do.

Would it not be desirable to take this opportunity for connecting the President of the Water Supply and Sewerage Board and Engineer-in-Chief for Sewerage Construction with the contract, in lieu of the Engineer-in-Chief for Roads, Bridges, and Sewerage. Would it not be possible for the contractors to take objection hereafter.—C.D., 4/4/95.

Mr. Norrie.—J.D., 4/4/95.

I suggested to Mr. Hickson yesterday the desirability of blotting out his signature and printed title on the conditions, substituting those of Mr. Darley, which was at once assented to. A reference will, too, be made on the agreement and bond to the plans being in Mr. Darley's office.—HAROLD F. NORRIE, 4/4/95.

Mr. Darley is to be styled, so far as he is connected with this Department, "Engineer-in-Chief for Metropolitan Sewerage Construction."—J.B., 5/4/95. Mr. Darley has the other papers; forward these to be placed with them.—Jno. P., 6/4/95.

## No. 9.

### Inspector G. A. Fowle to Resident-Engineer Weedon.

Sir,

19 February, 1894.

I beg to report that on several occasions I have had to complain about the time the sandstone concrete is mixed for packing brickwork in shafts. To-day two 20-foot mixings were made up at 2 p.m. at No. 5 shaft. This concrete will not be put down shaft for use till 5-30 p.m. I have instructed Connor's foreman, who has charge of this work, not to have the concrete mixed so long before being used. He states to me that he has to take his instructions from the firm.

I saw Mr. Snodgrass last Friday, and complained to him about this matter, when he promised it should not be mixed until one hour before it is required to be used. I spoke to road contractor's representative to-day, and he states that they shall mix the cement when convenient for themselves.

Inspector Reid informs me that on Saturday last, 17th February, about 1 p.m., at No. 6 shaft, it required half mixing 10 feet of sandstone concrete to finish brickwork packing in shaft. Henderson, bricklayer, working in shaft, was on mixing board, and started to assist labourer gauge the stone. Inspector Reid

Reid instructed Henderson to use the fork in place of shovel in filling gauge-box, as the stone which is broken close to mixing-board, is not free from refuse. Inspector Reid asked Henderson the second time to use fork. Henderson replied that it did not want forking. Connor's foreman came on the scene and said to Henderson, "Go on; don't take any notice of him; he is only a damn big buck navy."

G. A. FOWLE,  
Inspector.

When I first observed mixed concrete on the board at mouth of shaft No. 5, and found from Inspector Reid that it would not be used before evening. I pointed out to him that this was too long for it to stand, for, though mixed dry, the stone had been soaked with water and the sand wetted by the rain. He told me the matter had been inquired into and settled by yourself and the contractors. I am still of opinion that it is detrimental to the strength of the concrete for the cement to be mixed for hours with the other wetted materials before going into the work. I beg to point out that such friction as is evident by this report, between our inspector and the contractor's men should be put a stop to at once by removing the offending party from the works, as no satisfactory work can be done under the strained conditions obtaining at present.—S.H.W., 20/2/94.

Mr. Davis,—Ask Carter & Co. to see me.—R.R.P.H., 21/2/94.

The Engineer-in-Chief decided that Connor was to be removed from the North Shore contract, and that Reid was to leave when the work on Contract No. 79 was finished. Inspector Reid is also to go from Contract No. 79. I have already instructed Mr. Weedon to let Inspector Reid change places with Inspector Eyre.—J.D., 22/2/94. Mr. Weedon. Accordingly.—S.H.W., 23/2/94.

Sir,

5, Spring-street, Sydney, 3 April, 1893.

I have the honour to direct your attention to a patent, No. 4,084, issued on 3rd November, 1892, to Messrs. Carter, Snodgrass, and Baltzer, for the purpose of strengthening, and at the same time cheapening, the construction of sewer and other arches as described in such patent as "invention of improvements" in concrete, cement, and mortar building, and other constructions and manufactures.

I am desired by my clients to state that they are willing to dispose of their sole powers and rights granted in such patent, and to offer the same to your Department for the sum of £1,500.

I have, &c.,

The Hon. W. J. Lyne,  
Department of Works.

A. ARMSTRONG,  
Agent for Messrs. Carter & Co.

Mr. Hickson.—D.C.M'L. (*pro* U.S.), B.C., 4/4/93.  
this patent?—R.H., 5/4/93. Report herewith.

Does Mr. Bagge know anything about

#### Purchase of Messrs. Carter, Snodgrass, and Baltzer's Patent.

The patent herein referred to is, I believe, based upon the "System Monier." Monsieur Monier was the proprietor of a garden near Paris, who, in endeavouring to construct large and durable flower pots of cement mortar, which enclosed a frame of wire netting, detected the extraordinary strength of this material as compared with cement only, and in this manner speedily developed this system in manufacturing and constructing upon the same principle—bridges, roofs, gas and water tanks, ceilings, walls, &c., until the extraordinary strength of the Monier material became gradually very favourably known. Messrs. G. A. Wayfs & Co., in Berlin and Leipzig, are the patentees for Germany; they manufacture from the "Monier material" floors, wells, tanks, arched ceilings, roofs, bridges, stairs, pipes, columns, &c., in such a manner and to such an extent that the Monier system has been very creditably mentioned in the proceedings of the Association of Engineers in Germany since early in 1888.

The Monier construction system has been founded and developed by experiments on natural scale (which have been carefully watched by this Department for some years) and can only be carried on by persons trained in the works, or trained by experiments under the guidance of initiated persons; it should therefore be introduced here in a manufactory, and by an agent of the company experienced in the work, who should be in a position to offer the manufactured articles at their prices, subject to any tests which the authorities might deem necessary to enforce.

As regards the patent offered by Messrs. Carter, Snodgrass, and Baltzer, I have not had the opportunity of examining it to discover in what way it differs from the "Monier patent," nor do I know if the Monier system has been patented in this Colony; if it has not, I presume it is free to public use as it has been known in the Colony for some years.

The patentees might be requested to furnish a copy of their patent, with drawings and calculations of strength, so that further examination of its merits may be made.

C. H. OHLFSEN BAGGE, 7/4/93.

Ask one of the firm to see me.—R.H., 10/4/93. Carter & Co. informed.—F.C.P., 11/4/93.

I find Messrs. Carter & Co. have patented in Australia "Monier's patent concrete arch." This arch has been under my consideration for some time, long before it was patented here, and as soon as funds are available I have arranged for the erection of a small culvert on this principle, without a patent fee. In any case I could not recommend compliance with this request. A small fee per bridge might be granted if it is found desirable to erect any more on this design.—R.H., 12/4/93.

List to so inform.—J.B., 17/4/93. Approved by Minister.—W.J.L. Order No. 1,225.—D.C.M'L., 24/4/93. Inform.—J.B., 24/4/93. A. Armstrong, Esq., 28/4/93. Will Mr. Hickson kindly see me about this at his convenience.—J.B., 8/5/93. Put away for the present.—R.H., 16/6/93.

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LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

## MESSRS. CARTER, GUMMOW, & CO.'S CONTRACT AT BALMAIN.

(REPORT OF THE ENGINEER-IN-CHIEF FOR PUBLIC WORKS RESPECTING THE TERMS OF THE SPECIFICATION REFERRING TO SAND.)

*Ordered by the Legislative Assembly to be printed, 30 October, 1895.*

[Laid upon the Table in answer to Question No. 5, of 30th October, 1895.]

### Question.

- (5.) MESSRS. CARTER, GUMMOW, & CO.'S SEWERAGE CONTRACT AT BALMAIN:—MR. WILKS asked THE SECRETARY FOR PUBLIC WORKS,—
- (1.) Is it a fact that the specification for sewerage works of the contract of Messrs. Carter, Gummow, & Co., at Balmain, provides that the best Nepean River filtered sand is to be used in the work?
  - (2.) Is it a fact that in the works mentioned local sand is being used?
  - (3.) If so, what is the cost saved to the contractors by this concession, as the trade price for Nepean sand is 14s. per yard, and the local product is about 2s. per yard?

### Answer.

THE clause in the specification referring to sand is as follows:—

“The sand to be sharp, quartz sand, free from all earthy, loamy, or clayey matter, equal in quality to the sample of Nepean River sand to be seen at the Engineer's office, and to be washed perfectly clean whenever the Engineer deems it necessary.”

The sand used on the Johnson's Creek storm-water sewer is crushed sandstone, which, as will be seen from the following results, is better in quality than the Nepean sand referred to.

Description of Test.	Standard Sand.	Sample Sand.
Coefficient for tensile strain ... ..	100	{ 112 } and { 132 } average, 122.
Coefficient for crushing strain ... ..	100	{ 99 } { 101 } average, 101·33. { 104 }

No concession has been granted; and as long as a contractor supplies material equal to that specified, it is no concern of the Department what he pays for it.

ROBERT HICKSON,  
Engineer-in-Chief for Public Works.



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## LEGISLATIVE ASSEMBLY.

## NEW SOUTH WALES.

## WATER SUPPLY AND SEWERAGE BOARD.

(CONTRACTS LET TO MESSRS. CARTER, GUMMOW, AND COMPANY.)

*Ordered by the Legislative Assembly to be printed, 19 September, 1895.*

E. M. Clark, Esq., M.P., to The Under Secretary for Public Works.

Sir,

Legislative Assembly, New South Wales, Sydney, 6 March, 1894.

As the portion of the North Shore Sewerage Works contained in Messrs. Carter & Co.'s contract is now nearly completed, I desire to bring under the notice of the Minister for Works that this work will be perfectly useless until that portion connecting Milson's Point at Jeffrey-street is completed, and to urge upon him the necessity for at once carrying out this part of the work. I may point out that it will serve a very large population, besides assisting to get rid of the offensive matter now finding its way into the harbour through the storm-water sewer at Careening Cove and other places, becoming more offensive every day, and a source of very numerous complaints. I understand that Messrs. Carter & Co., having the plant, would be able to carry out this work on very advantageous terms, to provide work for a large number of men now employed on their present works, who will otherwise be thrown on an overcrowded labour market by the completion of their present contract. As this work is absolutely necessary to the completion of the North Shore Sewerage Scheme, I would urge its being put in hand at once.

Yours, &amp;c.,

EDWARD M. CLARK.

Commissioner for Roads.—D. M'L. (for U.S.), B.C., 7/3/94.  
Report herewith.—O. BAGGE, 15/3/94.

For report.—R.R.P.H., 9/3/94.

M. O. Bagge, Esq., to The Engineer-in-Chief.

*Necessity for doing that portion of the North Shore Sewerage Works which connects Milson's Point at Jeffrey-street.*

THE present contract, No. 79, comprising a length of 1 mile 25·3 chains of the main North Shore Outfall Sewer, from Willoughby Bay to junction of Alfred and Mount Streets, is the first section of the North Shore Sewerage Works.

The second section should be "The Outlet Works," and the third section, which might be proceeded with simultaneously with the outlet works, would be the extension of the Main Outfall Sewer now asked for, from junction of Alfred and Mount Streets southwards to the junction of Campbell and Jeffrey Streets, being (including some minor branches) a total length of about 76·90 chains.

By way of comparison, I have prepared an office estimate of the cost of this extension, according to present prices, amounting, as per detail statement attached, approximately to £12,831 19s. 6d., and an estimate of the same work in accordance with the contract prices of Contract No. 79, of the Main Outfall Sewer in progress, which, as per detail statement attached, amounts approximately to £16,307 17s. 8d.

The detail plans of the outlet works are unavoidably very intricate, and it will take at least another month (if no other works come between) to complete the quantities.

The designs of the Main Outfall Sewer extension, between Mount and Jeffrey Streets, excepting general plan and section, have not yet been commenced.

M. O. BAGGE, 15/3/94.

There is no reason why this extension should not be gone on with at once. I cannot, however, see my way to recommend that it be carried out as an extension of the existing contract, which, at schedule rates, would amount to £16,307 17s. 8d., whereas the office estimate is £12,831 19s. 6d. The greater part of this difference lies in one item, "excavations in shafts," which in present contract, owing to their great depth, carries a very high price, viz., 78s. per cubic yard. This, Messrs. Carter & Co. are prepared to reduce to 40s. per cubic yard, which would reduce the total cost to £13,700, or about £1,000 above the office estimate. I believe, however, if tenders were invited, we could get the work done under the office estimate.—R.R.P.H., 22/3/94. Under Secretary.

Submitted.—J.B., 28/3/94.

Referring to the Minister's intimation this morning, that he was prepared to let Messrs. Carter & Co. carry out this work as an extension of their present contract, provided they agreed to do so for the departmental estimate of £12,831 19s. 6d., no claims whatsoever to be made for extras, and all payments to be made at the allowed schedule rates, I have had an interview with Mr. Carter, who is prepared, on the part of his firm, to comply with the Minister's decision. Submitted for formal approval.—R.R.P.H., 29/3/94.

For approval.—J.B., 30/3/94.      Accept.—J.B., 30/3/94.      Approved.—W.J.L., 30/3/94.

### Report by Board of Reference.

DEPARTMENT OF PUBLIC WORKS.—BOARD OF REFERENCE.

*Tenders for Contract No. 77 Main Northern Sewer.—Annandale and Leichhardt sections.*

THE tenders for this work were submitted to the Board to-day. In doing so, Mr. Hickson pointed out that fifteen tenders had been received, the lowest being that of Carter, Gummow, & Co., at 28½ per cent. below schedule rates, amounting approximately to £15,757 ls. 9d. The same firm also submitted a lump sum tender for carrying out the work according to a plan sent in by them for the sum of £15,500. The plan submitted is for constructing the work on the "Monier" arch principle. This system has been extensively used during recent years on the continent of Europe with successful results, and Mr. Hickson sees no reason why, under certain restrictions, the opportunity should not be taken to introduce the system in the public works of this Colony. The advantages claimed by the patentees are that works can be carried out at a much cheaper rate wherever this method of construction is used. Mr. Hickson said he had no doubt that the design submitted was thoroughly suitable and likely to be effective; and, as the main principles as regards size and inclination of sewer were as provided for in the departmental design, he was prepared to recommend it for adoption; but if it was decided to accept the tender, a short specification of the work should be included in the bond, and provision also made for the maintenance of the work by the contractors for a certain period after completion.

Mr. Hickson further said that, as Mr. Darley would be the responsible officer for carrying out this work, he had gone into the matter very thoroughly with that gentleman, and Mr. Darley was quite prepared to endorse his views.

The Board, in view of the fact that Messrs. Darley and Hickson are satisfied that the principle is a sound one, and that the adoption of the plan will result in considerable economy, are prepared to endorse the recommendation of these gentlemen, and now submit the matter for the Minister's consideration.

J. BARLING,

Chairman.

C. W. DARLEY,

Engineer-in-Chief for Harbours and Rivers.

ROBERT HICKSON,

Commissioner for Roads.

H. DEANE,

Engineer-in-Chief for Railway Construction.

W. L. VERNON,

The Government Architect.

J. W. HOLLIMAN, Secretary,  
20th March, 1895.

Submitted.—J.B., 27/3/95.      Before approving this proposal I should like an estimate of the actual value of the work to be carried out by the contractor under the substituted scheme.—J.H.Y.

To comply fully with the Minister's minute would mean the taking out of quantities in the plan submitted by Messrs. Carter and Gummow. This would take at least a week to do. I think, however, I can answer sufficiently for the Minister to come to a decision. When plans were being prepared for the extension of the sewers on to the sewage farm, estimates were made for the work on the "Monier" system as well as on the Department's designs. The result was that the estimate of both works was practically the same. Applying that comparison to this case, it would mean that the departmental estimate for the work under consideration would be £22,000.—ROBERT HICKSON, 28/3/95. Under Secretary.

Submitted.—J. BARLING, 28/3/95.      This is quite sufficient for me, and I now approve of the recommendation of the Board being carried out.—J.H.Y., 29/3/95.      Accept.—D. M'L. (for U.S.), 29/3/95.

1895.

## LEGISLATIVE ASSEMBLY.

## NEW SOUTH WALES.

## PUBLIC WORKS.

(REPORT FROM THE ENGINEER-IN-CHIEF FOR PUBLIC WORKS, TOGETHER WITH MINUTES,  
RESPECTING THE CONTRACTS LET TO MESSRS. CARTER, GUMMOW, & CO.)

*Ordered by the Legislative Assembly to be printed, 19 December, 1895.*

## The Engineer-in-Chief for Public Works to The Under Secretary for Public Works.

Department of Public Works, Engineer-in-Chief's Office, Sydney, 21 November, 1895.

As there appears a likelihood of the Session closing without an opportunity being given me of denying the statements made by Mr. Varney Parkes, as regards the connection of Messrs. Carter, Gummow, & Co., with the Public Works Department, and the charges made against myself personally, I am reluctantly compelled to bring the matter again before the Minister.

Although it may be thought, as, indeed, it has been said, that I am making too much of this matter, and that no one really takes any serious notice of these statements, I need hardly point out what a serious matter it would be if they were believed, and either the Minister, my officers, contractors, or the general public lost confidence in me; and there is always a fear of this taking place when charges such as Mr. Parkes has made are not contradicted.

I would, therefore, ask the Minister to consider the advisability of having these charges and statements thoroughly investigated by some independent authority, having full powers to call witnesses and examine them on oath.

ROBT. HICKSON,  
Engineer-in-Chief for Public Works.

Submitted.—J.B., 21/11/95.

Mr. Hickson may be informed that the statements to which he refers herein have never had the effect of diminishing the complete confidence I, as Minister, have always had in him in the important office he holds. That I cannot believe they will, in the slightest degree, affect his position with reference to his officers, contractors, or the general public, and that having consulted the Cabinet as to his request for a commission of inquiry, I am able to state that my colleagues agree with what I have above written. If Mr. Hickson desires to place any rebutting statement before the public I shall have much pleasure in laying it on the Table of the Assembly.—J.H.Y., 10/12/95.

Mr. Hickson.—J.B., 11/12/95.

## The Engineer-in-Chief for Public Works to The Under Secretary for Public Works.

Department of Public Works, Engineer-in-Chief's Office, Sydney, 17 December, 1895.

WHILE I cannot disguise the fact that I feel disappointed that the Minister could not see his way to have the charges made against me in connection with my dealings with the contracting firm of Messrs. Carter, Gummow, & Co. investigated by a Royal Commission, I quite understand the difficulties surrounding such a course, and very gratefully acknowledge the handsome way in which that decision is conveyed to me.

As a written reply to the charges is the only course now open to me, and as the Minister has kindly extended to me the privilege of such reply, I gladly avail myself of his permission, and ask that he will give the following statement such publicity as in his discretion he may deem desirable.

It is difficult in a report of this character to traverse all the charges in anything like an exhaustive manner, but I will endeavour to do so as clearly as possible, and in the order in which they appear in *Hansard*, avoiding all personalities, and confining myself to the simple facts of the case.

With the first portion of Mr. Parkes' statement, that "contracting in vast sums of public money must be conducted with the greatest purity possible," I entirely concur. I contend, and I speak with a fairly large experience of tendering, not only in Australia, but in England and Ireland, that the system adopted in the Public Works Department in this Colony compares favourably with any other with which I am acquainted, in fact the Department is so safeguarded with checks in its dealing with tenders that it would be practically impossible, without almost inconceivable collusion, to find a loophole for corrupt practices to creep in. The tenders are opened in public, and not only are the results published

to

to the world in the daily press, but complete lists of the tenders received and their amounts are at once exhibited in the most conspicuous parts of the public offices, and before being dealt with by the responsible officers. Every subsequent action is capable of being fully criticised by an observant public, in fact a greater publicity is given to all our transactions with tenders, so far as my experience goes, than is granted in any other country in the world.

To come now to the more specific charges, I have, for the sake of convenience, made extracts from Mr. Parkes' speech, giving my replies thereto in consecutive order.

During the week, or the week before, I asked the Secretary for Public Works whether Messrs. Gillan and Forrest were not sureties for the proper fulfilment of the contracts of this firm of Carter, Gummow, & Co. The reply I got was that Messrs. Gillan and Forrest were the sureties for those contractors. I wish honorable members to closely follow this matter. What I am about to read is a notice which appeared in the *Sydney Morning Herald* on the 13th of this month—that is, last Friday week—not very long ago. The notice shows that a dissolution of partnership took place, and that the very sureties for Carter, Gummow, & Co.—Messrs. Gillan and Forrest—are members of this business. The following is the notice:—

“Notice is hereby given that the partnership lately subsisting between us, the undersigned, John Carter, David Graham Snodgrass, George Forrest, Frank Moorhouse Gummow, James Gillan, George Maddison, and Peter Ewing, as contractors, carrying on business in Adelaide (South Australia) and Sydney (New South Wales) under the name, style, or firm of Carter, Gummow, & Co., was on the 1st day of April, 1895, dissolved by mutual consent in so far as regards the said George Maddison and Peter Ewing, who retired as from that date from the said firm. All debts due or owing by the said firm will be received and paid by the said John Carter, David Graham Snodgrass, George Forrest, Frank Moorhouse Gummow, and James Gillan, who continue the business under the same style of Carter, Gummow, & Co.

“As witness our hands this 1st day of April, A.D. 1895.

(Signed)	F. M. GUMMOW.	GEORGE FORREST.
	JOHN CARTER.	GEORGE MADDISON.
	D. G. SNODGRASS.	PETER EWING.”
	JAMES GILLAN.	

This is a nice state of affairs! I wish to point it out to honorable members, if they do not quite realise it. If the Government accept sureties consisting of persons who are members of the firm of contractors, supposing the contractors go insolvent, or cheat the Government by defective work, suppose they enter into fraud to defeat the Government in large contracts of £30,000 or £50,000, what check is there upon them? The very specification which the Government issue makes it imperative that these sureties shall be disinterested persons altogether. The object of having sureties is to have men of means at the back of the contractors, so that if anything goes wrong—if the contractors go insolvent, or defraud the Government, if they carry out bad work—the Government can come down upon the sureties. But here is a case where these contracts total nearly £100,000, with sureties of their own partnership. This is a nice state of affairs.

I wish to go further, and to show that there has seldom been a case, taking it in this way, in which any private business would offer to give away contracts to the extent of £20,000 without offering them to competition and to tender. No private individual would ever dream of going into such a business transaction such as that. Yet this firm of contractors, Messrs. Carter, Gummow, & Co., have received between £45,000 and £50,000 of Government contracts without any tender. Not that there were no contractors to tender, because we know that at the present time of dearth of employment there were any number of contractors to tender, in order to keep their plant from being idle. They were willing to tender for the smallest work possible; yet this work is given out without tender to this special firm of contractors.

I asked the Secretary for Public Works last week what connection Mr. Hickson had with the firm and with this work. I was told that Mr. Hickson was the engineer to those contractors; but I am informed, upon the most reliable authority, that of a Mr. Maddison, the contractor, who has left this firm, that Mr. Hickson took the position as a partner in the firm, he being a son of the Engineer-in-Chief. Now, it is an unfortunate position that this firm should have been allowed contracts under such circumstances as these; their engineer having to communicate with his father, who is in a position in the Public Works Department, in which he could grant all sorts of concessions. This firm are the only contractors who during the last twelve months have received these numerous concessions. I have it upon the authority of Mr. Maddison, who has undertaken to produce a copy of the telegram, that a wire was sent in March, 1894, by one of this firm of contractors, Mr. Carter, to another member of the firm, Mr. Gummow, who was then in South Australia, to this effect:—“Mr. Hickson must be taken into the firm at any cost.” It was about this time that Mr. Hickson left the Department, as his father said, on the score of retrenchment, and took up his position as an alleged partner in this firm, or, as I have been informed by the Minister, their chief engineer.

With reference to Carter & Co.'s contracts with the Public Works Department, a cash deposit has in every case been taken, and in the case of Contract No. 77, at Balmain, an additional personal security has been given for the stability of that portion of the work constructed on the Monier system, valued by the Department at £12,000. The sureties in this case are Messrs. Forrest and Gillan, who are bound in the amount of £6,000 each, whilst the contractors, Messrs. Carter, Gummow, and Snodgrass are bound in the sum of £12,000 (£24,000 in all). This special precaution, which is unique in its way, was taken as the Monier system, though successful elsewhere, had not been previously tested in the colonies, and is far beyond the requirements of the specification, these being already covered by a cash fixed deposit of £775, which is held by the Department.

In this particular contract the Department recognises only Messrs. Carter, Gummow, and Snodgrass as contractors, and so long as the sureties have separate estates to the value of the security required, and on this point every care has been taken (see the printed papers laid on the Table of the House), I contend the Department has been properly safeguarded, especially when, as in this case, the personal security is over and above that usually demanded.

The firm has received one contract only without public tender, viz., Contract 79a, at North Sydney, amounting to £12,832; and even this was an extension of work already in hand.

This contract was given them by the late Minister for Public Works, on the representation of Mr. E. M. Clark, M.P., who pointed out the urgent necessity for pushing on that portion of the work, not only from a sanitary point of view, but so as to prevent some 120 men then employed by Messrs. Carter & Co. on the first section of the North Shore Sewerage Works from being thrown on the already congested labour market. Even so, the extension was granted only on the contractors agreeing to a reduction of £3,476 from schedule rates.

My son is not now, nor never was, a partner in the firm, and as he happened to be in Adelaide, and, as far as I know, knew nothing about the firm's transactions in Sydney, he did not communicate with me, either directly or indirectly, in connection with the firm's business.

I know nothing about the telegram alleged to have been sent in connection with the appointment of my son, having heard of it for the first time in Mr. Parkes' statement, and cannot understand how it could have been sent, seeing that my son left the Department in April, 1893, and that the telegram of March, 1894, is said to have been sent when he had already been in the employ of the firm for nearly twelve months.

Having established this connection between the Engineer-in-Chief's son and the firm, I intend presently to show what concessions were given to these contractors. In the first place, they competed for some sewerage works which were going on at Balmain. Honorable members are well aware that these contracts are tendered for nowadays at schedule prices, that is to say, quantities are taken out and the Government officers place schedule prices upon each of the items. Fifteen firms of contractors tendered for the works at Balmain at schedule prices, and the lowest tenderer was the firm of Messrs. Carter, Gummow, & Co. These contractors sent in a price ridiculously low as compared with the fourteen other firms tendering. Their tender was 28½ per cent. under the schedule prices. The next was 18½ per cent.

After their tender was accepted, and after they were notified of the acceptance, they were enabled to place plans in the department for the carrying out of the work upon an entirely new plan, called the Monier system. The other contractors had no opportunity of competing with the firm for the carrying out of the work upon this system. I am assured by other contractors that whereas Messrs. Carter, Gummow, & Co. obtained a contract at £15,500, they would have been willing to carry out the job at £12,500 to £13,200.

Under the schedule prices of which I have spoken there is one item put down for brickwork and cement arches, 2,020 yards at £2 10s. a yard. That was substituted under the Monier system by sandstone and concrete, put down at £1 8s. per cubic yard. There was that difference in the prices for the 2,020 yards. On that item alone a concession of £1,650 was made to these contractors. Honorable members will see that when such concessions are allowed, other contractors must be quite within the mark in saying that if they had had the opportunity they could have carried out the job at a figure from £2,300 to £3,000 below that paid to this particular firm.

The same firm within the last eighteen months received a contract for sewerage works at North Shore. They received their contract under a schedule tender, and their sureties as usual were those of their own firm. No query is made as to whether they are in a good financial state or as to whether they can provide good disinterested sureties.

After they had received the first contract the member for the district, no doubt with the best intentions and with the object of finding work for the unemployed, recommended that a certain extension should be carried out. The Engineer-in-Chief reported that as a matter of urgency certain extensions to the contract should be carried out along various streets. How is it possible that the work could have been urgent seeing that the outlet into the ocean for the whole of the sewerage scheme has not even been taken in hand? Until the outlet had been completed, how could the urgency of constructing branch lines of sewerage arise? Without any contract tendering, without any preparation of plans, without an effort to save the country unnecessary expenditure, a contract of £35,000 was given to this firm without competition for this extension work. It is no wonder that the contractors of this city complain of this contract being given.

In connection with this contract, I wish to point out that the Engineer-in-Chief, upon the 22nd March, 1894, wrote this minute:

"There is no reason why this extension should not be gone on with at once. I cannot, however, see my way to recommend that it be carried out as an extension of the existing contract, which, at schedule rates, would amount to £16,307 17s. 8d., whereas the office estimate is £12,831 19s. 6d. The greater part of this difference lies in one item, 'excavations in shafts,' which in present contract, owing to their great depth, carries a very high price, namely, 78s. per cubic yard. This Messrs. Carter & Co. are prepared to reduce to 40s. per cubic yard, which would reduce the total cost to £13,700, or about £1,000 above the office estimate. I believe, however, if tenders were invited we could get the work done under the office estimate.—R.R.P.H., 22/3/94."

It was about this time that Mr. Hickson, junior, became a member of the firm. I find this minute by the Engineer-in-Chief on the 29th of the same month.—

"Referring to the Minister's intimation this morning, that he was prepared to let Messrs. Carter & Co. carry out this work as an extension of their present contract, provided they agreed to do so for the departmental estimate of £12,831 19s. 6d., no claims whatsoever to be made for extras, and all payments to be made at the allowed schedule rates.—

That means that they might be allowed as extras—

"I have had an interview with Mr. Carter, who is prepared, on the part of his firm, to comply with the Minister's decision. Submitted for formal approval.—R.R.P.H., 29/3/94."

With the exception of the arrangement made, as stated above, on contract 79a, at North Sydney, no concessions have been made to Messrs. Carter, Gummow, & Co. Contract No. 77 (Balmain), which was let by public tender, and for which they were lowest tenderers, cannot be regarded as such, as they are allowed to construct the works in accordance with an alternative tender submitted with, and at the same time as, the others, at a slight gain in price to the Department, and under conditions of the most stringent nature in case of failure.

The tenders were fairly close. (See papers laid on Table of the House.) Mr. Parkes is, therefore, mistaken in stating that the second tender was only 18½ per cent. below schedule; it was 25½ per cent., as against Carter & Co.'s 28½ per cent., besides which, 28½ per cent. is not ridiculously low: it is not an uncommon thing to have tenders 30 per cent. below schedule.

The tender, with plans for carrying out the work under the Monier system, was deposited with the Tender Board at the same time as all other tenders, and was simply an alternative one. After very careful examination by Mr. Darley and myself, the system was thought worthy of trial, under the severe conditions imposed, and the alternative proposal was recommended by the Board of Reference for acceptance.

The materials used in the Monier arches and sewer, substituted for brick and concrete, was not sandstone and concrete; it was 3 to 1 compo., and was estimated by the Department at from 80s. to 90s. per cubic yard, not at 28s. as stated.

Cash security for £4,000 was taken in this case, as required by the specification. There were no sureties.

Contract 79a, an extension of the preceding work to Jeffrey's-street, was, as before stated, given to Messrs. Carter & Co. on the representations of the member for the district; but I strongly urged that tenders should be invited for the work, as I considered that it might be done more cheaply.

The cost of the extension which was taken at the departmental estimate was £12,832, not £35,000 as stated.

As already pointed out, my son was never a partner, nor did he take office under Messrs. Carter & Co. between the 22nd and 29th March, 1894, when the change of front is said to have taken place, but had already been in the employ of the firm in Adelaide since May, 1893.

In my second minute, quoted by Mr. Parkes, it will be seen that I distinctly stated that I forwarded the paper, on an intimation from the Minister that he (the Minister) was prepared to let the work to Messrs. Carter & Co., and I carefully abstained from making any recommendation, merely forwarding the paper for formal approval.

This was on the 30th March, 1894. How sudden a change! It is not the Minister who has to do with this. The Minister is generally led by the head of the department, it does not matter whether it is the present or the last Minister. The heads of these departments ought to be above reproach. There ought to be the greatest possible check put upon them. When we see a rapid change like this in a minute in a few days, after a son of the gentlemen concerned has taken office under the contractors, then there is some suspicion. It is impossible to make definite charges, but the case looks so grave that it ought to be filtered out in this House.

Mr. YOUNG: Does the honorable gentleman assert that the engagement of young Mr. Hickson took place in the meantime—during those two or three days?

Mr. V. PARKES: I believe it was during that time.

Mr. YOUNG: Does the honorable member assert that?

Mr. V. PARKES: I believe it was.

These gentlemen have a contract at Johnstone's Bay for what they call stormwater channelling. This stormwater channelling is taken through a lot of mud flats. For four or five weeks the Government employed about forty or fifty of the unemployed to drain the water off this land for the contractors. The Government actually employed the unemployed for this purpose. I can bring plenty of evidence on oath that forty or fifty men were employed for four or five weeks draining the water off the land where these gentlemen had to carry out their contract. The effect of that was to put £280 or £300 into the pockets of the contractors.

I could cite other concessions given to these gentlemen, information as to which has been given to me not by one contractor, but by twelve or fourteen. Innumerable concessions have been given to them, and it would only be wearying the House to particularise them.

Mr. YOUNG: Let us have them all while the honorable member is about it!

Mr. V. PARKES: If an inquiry is made the House will find that there has been an undue amount of favouritism towards not only these contractors but many others.

To show the artifice with which questions are answered by the Engineer-in-Chief, on the 19th instant I asked these simple questions of the Minister:

"(7.) What connection has a Mr. Hickson with this firm or with the works? (8.) Is this Mr. Hickson a son of the present Engineer-in-Chief?"

This was the reply:

"(7.) He is engineer to the contractors. (8.) He is the son of the Engineer-in-Chief for Public Works; but the Balmain contract referred to is being carried out under the supervision of the President of the Water and Sewerage Board and Engineer-in-Chief for Sewerage Construction, Mr. Darley."

Now, Mr. Darley has only been appointed to his present position about two months, and during all the time that this contract was being carried out it was under the Engineer-in-Chief.

Mr. YOUNG: No!

Mr. V. PARKES: The Engineer-in-Chief was the chief designer of it, and the contract was not carried out under Mr. Darley. I made sure of that fact.

The Minister, in his reply, went on to say:

"In the case of the other contract referred to, namely, the sewerage works at North Sydney, which was carried out under the supervision of the Engineer-in-Chief for Public Works, I am informed that Mr. Hickson, junior, had no connection with that work, being at that time in South Australia."

But Mr. Hickson has been going backwards and forwards between

The sand-pump dredging at Rozelle Bay, carried out by the Department, flooded the land through which Messrs. Carter & Co. had to construct the Johnstone's Creek stormwater channel. As this would have given them a claim for compensation, a drain had to be cut to take the water off their works, and place the land in the same condition as when tenders were received, Messrs. Carter & Co. providing flood-gates at their own cost to keep the tidal waters out. The cost of the drain was about £70; it is, therefore, difficult to see how £280 to £300 can have been put into the contractors' pockets. I am quite satisfied that, by my prompt action in this case, I saved the Department a large sum which the contractors could have claimed for the flooding of their works.

In any case this drain would have had to be made later on, to form an outfall for Johnstone's Creek during the progress of the continuation of the present work.

It is difficult to say what is meant by "innumerable concessions" to these and other contractors, and the only cases I can think of are those of Messrs. Gilliver and Curtis, at Rookwood, and Messrs. Johnston, O'Rourke, and Gordon, at Rusheutter's Bay. The first of these had a contract for partly draining the Rookwood Necropolis, and this was extended so as to embrace the whole cemetery, at an additional cost of £5,747, at their schedule prices. The second case can scarcely be looked on as a concession, as the contract provided for the construction of a part or the whole sewer, at the discretion of the Minister. This contingency was provided for in the specification, in case the adjacent landowners were unwilling to allow the sewer to be carried through their land without compensation. When the consent of all interested had been obtained, I directed the contractors—with the approval of the Minister—to carry out the whole work. The value of the extension was £2,071.

This contract was never under my supervision. It has, ever since the work commenced, been under Mr. Darley or Mr. J. M. Smail, who was acting Engineer-in-Chief for Metropolitan Sewerage construction, during Mr. Darley's absence in New Zealand.

My son had no connection with any contract of Messrs. Carter & Co.'s in New South Wales, until last August, when he returned from South Australia. He was in the latter Colony from May, 1893, and did not go backwards and forwards between here

here and South Australia. That makes no difference as to his connection with the firm. He is looking after their work in South Australia, and looking after their work here; and such an answer as that is, on the face of it, simply a blind, and it shows that there is some reason why there should be a full inquiry into the circumstances attending this contract.

Mr. LYNE: Before the honorable gentleman sits down perhaps I might be allowed to ask him a question. He said that the firm in question had contracts to the amount of £35,000, and he only referred to one of £13,000. What other contracts made up the total of £35,000?

Mr. V. PARKES: As far as I am informed there was a contract of £13,000, another of £10,800, and another of £11,000, all let without tender.

and South Australia in the interest of the firm. During the whole of this time (two years and three months) he got one holiday to visit Sydney on purely private business.

He has never communicated—directly or indirectly—with me or the office in connection with Messrs. Carter, Gummow, & Co.'s works, the whole of the transactions with the office having been carried out either through Mr. Carter or Mr. Gummow.

The only contract let to Carter & Co. without tender is, as before stated, the extension of the North Shore Sewerage Works to Jeffrey's-street (Contract 79a) for £12,832.

I am quite satisfied to leave this matter now in the Minister's hands, and through him to accept the verdict of the public, knowing that I have never had, during the whole course of my professional life, any dealings with contractors which I would be afraid to expose to the most searching inquiry.

Any impartial person reading these replies, which I have made as brief as possible, can, I feel certain, only come to the conclusion that Mr. Parkes has been wilfully misled by some evil-minded person whose motives were as impure as their statements were false.

ROBT. HICKSON,  
Engineer-in-Chief for Public Works.

### Minute by The Under Secretary for Public Works.

Department of Public Works, Sydney, 19 December, 1895.

Carter, Gummow, & Co.'s Contracts.

It is, I think, proper for me, in submitting this to the Minister, not only as Under Secretary but as Chairman of the Board of Reference, to express the entire confidence which the Board have in Mr. Hickson as one of its members. Every matter relating to the contracts which are referred to the Board is most critically examined, and I have great pleasure in saying that Mr. Hickson, as well as every other member of the Board, shows the utmost desire to have every phase of the various questions which arise in connection with tenders thoroughly enquired into, and to this end they willingly give all facilities to the Board.

I fully agree with Mr. Hickson in saying that it is difficult to conceive of any practical method of applying further checks in connection with our tender system. I do not think there is any country in the world where such publicity is given to proceedings in regard to this very important matter.

J. BARLING.

May be laid on Table of the Assembly.—J.H.Y., 19/12/95.



1895.

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

CONTRACTS OF MESSRS. CARTER, GUMMOW, & CO.  
(RETURN RESPECTING.)

*Ordered by the Legislative Assembly to be printed, 22 October, 1895.*

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 10th October, 1895, That there be laid upon the Table of this House,—

“Copies of all papers and correspondence in connection with the contracts of Messrs. Carter, Gummow, & Co., at Marrickville, Balmain, North Sydney, Johnston’s Creek, and Stanmore, including the specification, schedule, &c., for original contracts, and for substituted ones, and all vouchers paid and details of same, and such other matter included in the transactions from commencement to the present date.”

(Mr. Parkes.)

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## Contract No. 69, Sydney Sewerage.

### No. 1.

The Engineer-in-Chief for Sewerage to The Under Secretary for Public Works.  
Eastern Main Branch Sewer, Western Suburbs Sewerage Works.—Contract No. 69, Sydney Sewerage Works.

Public Works Department, Sewerage Branch, 30 October, 1893.

HEREWITH is submitted for the approval of the Commissioner and Engineer-in-Chief, plans and specifications, in triplicate, for the above work.

Amount available, provided for in Vote, £830,000, for Western Suburbs Drainage, Loans Act, 53 Vic. No. 23. Estimated cost, £78,162 18s. 2d.

Plans and specifications to be exhibited at the Sewerage Office, Lincoln Inn Chambers, Elizabeth-street.

Tenders to close at 11 a.m., Wednesday, 15th November, 1893.

M. OHLFSEN BAGGÉ,  
Chief Assistant Engineer for Sewerage.

HEREWITH is forwarded for the approval of the Secretary for Public Works, and for insertion in the *Government Gazette* and local papers, an advertisement inviting tenders for the above.

The Under Secretary, B.C. ROBT. HICKSON,  
Commissioner and Engineer-in-Chief for Sewerage.

Engineer-in-Chief.—F.C.P., 30/10/93. Insert.—J.B., 30/10/93. Notice to *Gazette*, 30/10/93.  
Tenders for, 15/11/93.

### No. 2.

The Engineer-in-Chief for Sewerage to The Under Secretary for Public Works.

Department of Public Works, Roads and Bridges and Sewerage Branch,  
Sydney, 7 November, 1893.

#### *Minute Paper.*

*Subject*: Main Eastern Branch Sewer.

I FIND it will be quite impossible to be ready for inviting tenders for this work on the 15th instant. Specifications and plans on which tenders were to be invited are over two years old, and since that time considerable modifications and alterations in our sewerage plans have been suggested. The work is of too important a nature to rush through without full consideration. I therefore recommend that the time for the receipt of tenders be postponed till 13th December.

ROBT. HICKSON.

Extend time.—J.B., 7/11/93. Mr. Mitchell. Noted, *Gazette* and papers.—7/11/93. Approved.—W.J.L., 14/11/93. Roads.—D.C.M'L. (*pro* U.S.), B.C. 15/11/93.

#### PUBLIC WORKS DEPARTMENT.—SEWERAGE BRANCH.

Construction of Eastern Main Branch Sewer, Western Suburbs Sewerage.—Contract No. 69, Sydney Sewerage Works.

HEREWITH is submitted for the approval of the Commissioner and Engineer-in-Chief, plans and specifications, in triplicate, for the above work.

Amount available, provided for in vote, £830,000, for Western Suburbs Drainage, Loans Act, 53 Vic. No. 23. Estimated cost—£64,420 6s. 5d.

Plans and specifications to be exhibited at the Sewerage Office, Public Works Department.

Tenders to close at 11 a.m., Wednesday, 13th December, 1893.

The Commissioner and Engineer-in-Chief. M. OHLFSEN BAGGÉ,  
Chief Assistant Engineer for Sewerage.

HEREWITH is forwarded for the approval of the Secretary for Public Works, and for insertion in the *Government Gazette* and local papers, an advertisement inviting tenders for the above.

The Under Secretary, B.C. ROBT. HICKSON,  
Commissioner and Engineer-in-Chief for Sewerage.

Department of Public Works, Roads and Bridges Branch, Sydney, November, 1893.

TENDERS will be received up to 11 o'clock a.m. on Wednesday, 13th December, 1893, for the construction of Eastern Main Branch Sewer, Western Suburbs Sewerage Works, Contract No. 69, Sydney Sewerage.

Tenders to be addressed to the Sewerage Office, Sydney, where specifications, &c., may be seen.

## No. 3.

## Schedule of Tenders received by Tender Board.

Wednesday, 13 December, 1893.

LIST OF TENDERS received for construction of the Eastern Main Branch Sewer, Western Suburbs  
Drainage Works, from near Premier-street to near Emily-street. Cont. No., 69 S.S.

Number of tenders received ... ..	Eleven.
Estimated amount ... ..	£63,000.
Amount of lowest tender ... ..	£45,207 3s. 11d.
Name of lowest tenderer ... ..	Messrs. Carter, Gummow, & Co.
Vote ... ..	£830,000. 53 Vic. No. 23.

	Amount.	Deposit.	Nature.
1. Carter, Gummow, & Co. ... ..	£45,207 8 11	£460	Cheque.
2. John Ahearn ... ..	47,061 3 9	471	"
3. Kerle & Kerle ... ..	52,735 10 9	500	"
4. H. Mackenzie & Sons ... ..	53,505 2 7	600	"
5. Justin M'Sweeney ... ..	54,623 18 2	500	"
6. Holloway Bros.... ..	55,104 8 9	500	"
7. James F. Carson ... ..	57,239 0 9	600	"
8. Alex. Dean & Sons ... ..	58,165 10 8	500	"
9. Langtree & Owen ... ..	59,676 16 0	500	"
10. Parry & Farley ... ..	63,095 11 11	500	"
11. J. Stewart & Co. ... ..	68,171 6 9	500	"

ROBT. HICKSON,  
Vice President of Tender Board.

D. C. M'Lachlan, 13/12/93. Tenders herewith checked.—O.C., Accountant. Mr. Davis,  
Principal Assistant Engineer for Sewerage, B.C.

No. 1. CARTER, GUMMOW, & Co.'s TENDER.  
(Bound up with Bond.)

No. 2.—JOHN AHEARN'S TENDER.

(Add error in addition, 9d. Items 54 to 70 inclusive, for which a general rate is asked, would, at contractor's prices for each item, average about £15 18s. 0½d. per ton. Items 78 to 82 inclusive, for which a general rate is asked, would, at contractor's prices, average about £9 0s. 1'07d. per ton.)

Department of Public Works, Roads and Bridges and Sewerage Branch.

TENDER FORM.

In pursuance of advertisement in the *Government Gazette*, I, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Eastern Main Branch Sewer, Western Suburbs Sewerage, from Premier-street to Sebastopol-street and Branches (Contract No. 69), agreeably to the Plans, Specification, Schedule to Specification, and General Conditions, which have been inspected by me for or at the rates entered in the Schedule of Quantities and Prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this Tender; and I do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates or prices mentioned in the Schedule of Quantities and Prices annexed hereto, or if not in Schedule, at a price to be agreed upon at the time, and I hereby undertake that I will, within fourteen days from the date of notification of the acceptance of the said Tender, execute and deliver to the Minister for Public Works, a valid legal Contract with Her Majesty the Queen, embodying the terms and Conditions above mentioned, and to provide the security required by clause 29 of the said General Conditions; and I enclose herewith my cheque for the sum of £471 as a preliminary Deposit; and I agree that such sum shall be absolutely forfeited if I at any time within thirty days after the said Tender is opened withdraw same, or if, in the event of this Tender being accepted, I fail to complete the above-mentioned Contract within fourteen days thereafter; and further, that this Tender is made subject to the Conditions contained in the Tender Board Regulations, printed on the back hereof, and by which I agree to be bound.

JOHN AHEARN,  
Burwood.

Dated this 13th day of December, 1893.

TENDER BOARD REGULATIONS.

No Tender shall be received after eleven a.m. on the day named for the receipt of such Tender unless there are circumstances which, in the opinion of the Members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the Tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of Tenders received for each work and the name of the lowest Tenderer; but no Tender shall be accepted until the Head of the Branch, under whose directions the work is to be carried out, has reported upon the whole of the Tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the Tenders received, showing the work, the name of the Tenderer, and the amount of each Tender.

All envelopes containing Tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the Tender is submitted.

Every

Every Tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive ... ..	£5 0 0
For amounts exceeding £500 and not exceeding £1,000...	£10 0 0

For all sums over £1,000 one per cent. on the amount of Tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful Tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful Tenderer shall be returned to him on his executing the bond for the fulfilment of the Contract. When the Contract is for a less sum than £200 the deposit with Tender shall not be returnable until the service is satisfactorily completed.

Any Tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any Tenderer failing to take up his Tender, complete the bond, and proceed with the Contract, within the time specified, or withdrawing his Tender after it shall have been opened, whether such Tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a Tenderer shall fail to proceed with a Contract as aforesaid, fresh Tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another Tender in the same series to be accepted; but the Tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In the event of any Contract being tendered for at a Schedule of Rates, the approximate quantities as given of each item must be worked out and a total sum shown.

In submitting a Tender, the full Christian name of the Tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the Tender. The omission of this information will render the Tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any Tender.

The Board-room shall be open for the admission of the public while the Tenders are being opened and declared.

CONTRACT No. 69.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
	Excavations in open trenches, in more or less hard materials, and in hard rock, for sewers, branches, pipes, sub-ducts, &c., as specified in clause 3, as viz. :—				£ s. d.
1	Excavation in road surfaces, sand, soil, pipeclay, shale, soft rock, where in the opinion of the Engineer blasting is unnecessary .....	cubic yard	19,320	2/-	1,932 0 0
2	Excavation in hard shale or rock, where gadding and guttering only is permitted .....	"	1,165	15/-	873 15 0
3	Excavation in hard shale or rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	1,165	10/-	582 10 0
4	Excavation in hard shale or rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	1,165	11/-	640 15 0
	Excavation in tunnels in "more or less hard materials," for sewers, pipe sewers, sub-ducts, &c., as specified in clause 3, as viz. :—				
5	Less hard excavation in clay, loose, and jointy shale, &c., where in the opinion of the Engineer blasting is unnecessary .....	"	810	10/-	405 0 0
6	Excavation in hard sandstone or shale, where gadding and guttering only is permitted .....	"	1,140	18/-	1,026 0 0
7	Excavation in hard sandstone, shale, ironstone, &c., where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted ..	"	1,140	15/-	855 0 0
8	Excavations in hard sandstone, shale, ironstone, &c., where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted ..	"	1,140	16/-	912 0 0
	Excavation in tunnels in "solid rock" for sewers, pipe-sewers, sub-ducts, &c., as specified in clause 3, as viz. :—				
9	Excavation in hard rock, where gadding and guttering only is permitted .....	"	1,850	25/-	2,312 10 0
10	Excavation in hard rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	1,850	18/-	1,655 0 0
11	Excavation in hard rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted .....	"	1,850	19/-	1,757 10 0
	Excavation in "solid rock," in shafts, shaft chambers, and sumps, as specified in clause 3, as viz. :—				
12	Excavation in road surfaces, soil clay, pipeclay, shale, and soft rock only, where in the opinion of the Engineer blasting is unnecessary ..	"	130	10/-	65 0 0
13	Excavation in hard rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	445	15/-	333 15 0

No. of Item.	Description or Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
14	Excavation in hard rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.....	cubic yard	445	15/-	£ s. d. 333 15 0
15	Excavation in hard rock, where gadding and guttering only is permitted .....	"	445	20/-	445 0 0
16	Excavation in "more or less hard ground," in shafts, shaft chambers, and sumps, as specified in clause 3, as viz. :— Less hard excavation in road surfaces, soil, clay, pipeclay, loose and jointy shale, and soft rock, where in the opinion of the Engineer blasting is unnecessary .....	"	170	6/-	51 0 0
17	Excavation in hard sandstone or shale, where guttering and gadding only is permitted.....	"	115	20/-	115 0 0
18	Excavation in hard sandstone or shale, ironstone, &c., where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted .....	"	115	18/-	103 10 0
19	Excavation in hard sandstone or shale, ironstone, &c., where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	115	18/-	103 10 0
20	Filling in at sides, round and over all concrete and brickwork of sewers, shafts, chambers, pipes, embankments, and tunnels, as specified in clause 5.....	"	15,220	1/-	761 0 0
21	Timber ordered in writing to be left in excavations, as specified in clause 9, including all iron used in fixing same .....	cubic foot	9,000	2/-	300 0 0
22	Removing existing culverts crossing the Illawarra Road, as specified in clause 12, including masonry, pitching, and timber decking .....	cubic yard	244	10/-	122 0 0
23	Sub-duct in hard rock, with tile covers, as specified in clause 8..... Sub-duct, as specified in clause 8, in "more or less hard material," including dry or cement jointing for stoneware pipes :—	lineal yard	280	20/-	280 0 0
24	Of 6 in. internal diameter .....	"	640	6/-	192 0 0
25	Of 9 in. internal diameter .....	"	640	8/-	256 0 0
	Sub-duct in water-charged loose ground, as specified in clause 8, including hardwood boxes with packing in same, and dry or cement jointing for pipes of :—				
26	6 in. internal diameter .....	"	280	7/-	98 0 0
27	9 in. internal diameter .....	"	280	9/-	126 0 0
28	Hand-packed stone filling 4-in. gauge, as specified in clauses 8 and 10 .....	cubic yard	700	3/-	114 0 0
29	Bluestone metal, 2½-in. gauge, on road surfaces, as specified in clause 10 .....	"	190	12/6	118 15 0
30	Blinding 2 in. thick over metalled surfaces, as specified in clause 10.....	"	90	1/-	4 10 0
31	Sandstone concrete, in any situation, as specified in clause 13 .....	"	1,050	36/-	1,890 0 0
32	Bluestone concrete, in any situation, as specified in clause 13 .....	"	4,550	42/-	9,555 0 0
33	Brickwork in cement, in any situation, as specified in clause 15 .....	"	1,605	55/-	4,413 15 0
34	Cement facing, in any situation, as specified in clause 14 .....	square yard	11,600	2/6	1,450 0 0
35	Pyrmont sandstone, ashlar, in any situation, as specified in clause 16 .....	cubic foot	210	5/-	62 10 0
36	Squared bluestone pitchers, in any situation, as specified in clause 17 .....	square yard	12	15/-	9 0 0
37	Squared freestone pitchers, in any situation, 6 in. deep, as specified in clause 18.....	"	38	8/-	15 4 0
38	Supply and fix ordnance fencing complete, with ironwork, painting, and tarring, as specified in clause 11 .....	rod	7	50/-	17 10 0
	Providing, laying, and jointing glazed stoneware, plain, junction, and bend-pipes, in trenches, shafts, &c., as specified in clause 19, including providing and fixing discs, complete, as viz. :—				
39	9-in. diameter pipes in pipe-sewers and shafts .....	lineal yard	40	4/-	8 0 0
40	12-in. diameter pipes in pipe-sewers .....	"	64	5/-	16 0 0
41	16-in. diameter pipes in pipe-sewers .....	"	15	8/-	6 0 0
42	18-in. diameter pipes in pipe-sewers .....	"	5	12/-	3 0 0
	<b>SURPLUS MATERIALS.</b>				
	Removal of surplus materials from all excavations, as specified in clauses 51, 54, and 86 of the Schedule to Specification, including spreading, as viz. :—				
43	For the first half-mile of lead.....	cubic yard	20,420	3d.	765 15 0
44	For every further quarter of a mile of lead .....	"	30,000	3d.	375 0 0
	<b>GOVERNMENT PROPERTY.</b>				
45	Receiving and fixing ironwork, supplied by the Government, as specified in clauses 272 to 275 of the Schedule to Specification .....	ton	25	£6	150 0 0
	<b>IRONWORK.</b>				
	Manufacture, supply, and fix (except where otherwise specified) all wrought-iron, gun-metal, and cast-iron work, and including painting and tarring, complete, as specified in clauses 21 to 26 inclusive, as viz. :—				
	<b>PENSTOCKS.</b>				
46	Cast-iron frame and penstock, 6-ft. diameter opening, with lifting gear, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 20 and 3 .....	each	3	£300	900 0 0
47	Cast-iron frame and penstock, 3-ft. 9-in. diameter opening, with lifting gear, street-box, cover-plate, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 19 and 14.....	"	2	£180	360 0 0
48	Cast-iron frame and penstock of 2-ft. diameter opening, with 2-ft. diameter spigot and flanged bend, lifting gear, street-box, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 14 and 18 .....	"	1	£100	100 0 0

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
<b>GAS CHECKS.</b>					
49	Cast-iron frame with Muntz metal gas-check for sewer of 6 ft. 10 in. x 5 ft. 10 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 23 and 3 .....	each.	1	£ 100	£ 100 0 0
50	Cast-iron frame with Muntz metal gas-check for sewer of 6 ft. 8 in. x 5 ft. 8 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 24 and 3 .....	"	1	95	95 0 0
51	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 6 in. x 4 ft. 6 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 25 and 3 .....	"	1	90	90 0 0
52	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 2 in. x 4 ft. 2 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 26 and 3 .....	"	1	75	75 0 0
53	Cast-iron frame with Muntz metal gas check for sewer of 5 ft. 1 in. x 4 ft. 1 in., complete with all wrought-iron and gun-metal work, as shown on drawings Nos. 27 and 17 .....	"	1	70	70 0 0
<b>IRREGULAR CASTINGS, &amp;C.</b>					
54	Cast-iron flange and faucet pipe, 3 ft. 9 in. internal diameter, 8 ft. long in the body, as shown on drawings Nos. 14 and 16 .....	Tons. cwt. qr. lb.	2 2 3 4	£ 27	£ 27 0 0
55	Cast-iron pipe, 3 ft. 9 in. internal diameter, 8 ft. long over all, with two flange ends, one flange turned and drilled for 1½-in. diameter bolt-holes, as shown on drawings Nos. 14 and 16, weighing .....	"	2 0 0 18	30	30 0 0
56	Cast-iron flange and spigot pipe, 3 ft. 9 in. internal diameter, 9 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 16, weighing .....	"	1 16 3 13	30	30 0 0
57	Cast-iron pipe, 3 ft. 9 in. internal diameter, 10 ft. long over all, with spigot ends, as shown on drawing No. 16 .....	"	2 5 3 23	30	30 0 0
58	Cast-iron thimble, for 3-ft. 9-in. diameter syphon pipes, 18 in. long over all, as shown on drawing No. 16 .....	"	0 11 3 20	14	14 0 0
59	2—cast-iron flanged pipes, 3 ft. 6 in. internal diameter, 10 ft. long over all, one flange turned and drilled for 1½-in. diameter bolt-holes, as shown on drawings Nos. 17 and 18 .....	"	4 12 2 2	40	80 0 0
60	2—cast-iron flange and faucet pipes, 3 ft. 6 in. internal diameter, 12 ft. long in the body, as shown on drawings Nos. 17 and 18 .....	"	5 16 0 6	45	90 0 0
61	2—cast-iron flange and spigot pipes, 3 ft. 6 in. internal diameter, 10 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 18 .....	"	4 9 2 2	40	80 0 0
62	Cast-iron spigot pipe, 3 ft. 6 in. internal diameter, 10 ft. long over all, as shown on drawing No. 18 .....	"	2 2 3 25	25	25 0 0
63	Cast-iron spigot pipe, 3 ft. 6 in. internal diameter, 6 ft. 6 in. long over all, as shown on drawing No. 18 .....	"	1 7 3 20	18	18 0 0
64	Cast-iron spigot and faucet pipe, 3 ft. 6 in. internal diameter, 4 ft. 10 in. long in the body, as shown on drawing No. 18 .....	"	1 5 2 24	17	17 0 0
65	2—cast-iron thimbles for 3-ft. 6-in. diameter pipe-sewer, 18 in. long over all, as shown on drawing No. 18 .....	"	1 0 2 14	10	20 0 0
66	Cast-iron flange and faucet pipe, 2 ft. internal diameter, 10 ft. long over all, drawings Nos. 15 and 16 .....	"	0 19 0 4	15	15 0 0
67	2—cast-iron flange and spigot pipes, 2 ft. internal diameter, 10 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 16 .....	"	1 13 3 18	14	28 0 0
68	Cast-iron thimble for 2-ft. diameter scour-pipes, 15 in. long over all, as shown on drawing No. 16 .....	"	0 4 1 5	3	3 0 0
69	Cast iron flanged bend, 12 in. internal diameter, as shown on drawings Nos. 14 and 16 .....	"	0 14 1 0	18	18 0 0
70	Cast-iron flange and spigot bend, 16 in. internal diameter, as shown on drawings Nos. 3 and 10 .....	"	0 8 1 10	10	10 0 0
	Total, including placing on cement mortar bedding, where ordered, and fixed (except lead joints) in position in the works .....	ton.	33 12 3 12		
71	2—wrought-iron rolled girders for supporting lifting gear of penstocks at Premier-street shaft-chamber, 25 ft. long each, weighing per foot run 46 lb., as shown on drawings Nos. 3 and 20 .....	"	1 0 2 4	15	15 8 0
72	Platform for working penstocks in Premier-street shaft-chamber, consisting of two wrought-iron rolled girders, 25 ft. long each, weight per foot run 19 lb., with cast iron gratings and wrought-iron standard and railings, complete, as shown on drawings Nos. 2 and 22, weighing in all .....	cwt.	1 4 2 15	23/-	28 6 7
73	Cast-iron standards and wrought-iron tube-railing at top of shaft, and solid bar-railings across shaft at landings, complete, as shown on drawing No. 4 .....	"	0 4 1 11	45/-	9 15 8
74	Wrought-iron ladder in shaft, with supports, in four lengths, complete, as shown on drawing No. 4 .....	"	0 16 2 15	40/-	33 5 4
75	3—angle-iron bearers, with cast-iron perforated landing-plates in shaft, complete, as shown on drawing No. 4 .....	"	0 15 2 27	30/-	23 12 3
76	Wrought-iron hinged gratings, for outlet well of syphon, with cast-iron hinge-plates and wrought-iron channel-girders, complete, as shown on drawings Nos. 14 and 21 .....	"	0 4 1 20	70/-	15 10 0
77	Wrought-iron hinged gratings, for inlet well of syphon, with cast-iron hinge-plates and wrought-iron channel-girders, complete, as shown on drawings Nos. 14 and 21 .....	"	0 9 1 11	60/-	28 0 10

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
<b>CAST-IRON PIPES.</b>					
	Cast-iron straight, spigot and faucet pipes, 12 ft. long in the body, complete, as shown on drawings Nos. 16 and 18, as viz. :—		Tons cwt qr. lb.		£ s. d.
78	96—3-ft. 9-in. diameter syphon pipes .....		289 4 0 0	9/-	2,602 16 0
79	154—3-ft. 6-in. diameter duplicate sewer pipes .....		4 5 5 0 14	9/-	3,917 6 2
80	59—2-ft. diameter scour-pipes .....		63 16 3 20	9/-	574 12 4
81	74—screw bolts, 1½ in. diameter, with hexagon heads and nuts, for 3-ft. 6-in. and 3-ft. 9-in. diameters flange pipe-joints .....		0 2 0 23	35/-	3 17 2
82	15—screw bolts, 1 in. diameter, with hexagon heads and nuts, for 2-ft. diameter flange pipe-joints .....		0 0 1 26	35/-	0 16 11
	<b>Total for all straight pipes.....</b>	ton.	788 8 2 27		
<b>PIPE-LAYING.</b>					
	Laying and jointing (including providing lead and spun-yarn) the 3-ft. 9-in. diameter, the 3-ft. 6-in. diameter, and the 2-ft. diameter cast-iron pipes, and irregular castings in open trenches and shafts, as specified in clause 20, complete, as viz. :—				
83	3-ft. 9-in. diameter syphon pipes and short ends, &c. ....	lineal yard	396	20/-	396 0 0
84	3-ft. 6-in. diameter duplicate sewer-pipes, short ends, &c. ....	"	649	18/6	600 6 6
85	2-ft. diameter scour-pipes and short ends, &c. ....	"	246	6/-	73 16 0
<b>TRAPPED JUNCTIONS.</b>					
86	Flap-traps, providing, delivering, and building in, including providing and fixing discs .....	each	10	£5	50 0 0
<b>GENERAL.</b>					
87	Permanent puddle, where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 23, including spreading in 9-in. layers and ramming, complete .....	cubic yard	10	7/-	3 10 0
88	Special bluestone concrete, in any situation, as specified in clause 2 ..	"	10	60/-	30 0 0
89	Bluestone metal (clause 2), 1½-in. gauge, stacked .....	"	15	15/-	11 5 0
90	Sandstone metal (clause 2), 2-in. gauge, stacked .....	"	15	8/-	6 0 0
91	Bluestone metal (clause 2), 2½-in. gauge, stacked .....	"	15	14/-	10 10 0
92	Sharp, clean, washed sand (clause 2), stacked .....	"	15	5/-	3 15 0
93	Sawn hardwood, in scantlings or planks (clause 2) .....	cubic foot	100	8/-	15 0 0
94	Oregon timber, in scantlings or planks .....	"	100	2/6	12 10 0
95	Wrought-iron, in bolts, galvanized step-irons, screws, nails, spikes, straps, &c. (clause 2) .....	cwt.	27	40/-	40 0 0
96	Portland cement .....	cask	25	15/-	18 15 0
97	Artizan or mechanic, supplied by Contractor .....	day	Rate only		14/-
98	Quarryman or other skilled labourer, supplied by Contractor .....	"	"	11/-	
99	Ordinary labourer, supplied by Contractor .....	"	"	9/-	
100	Cart with one horse and driver, supplied by Contractor .....	"	"	15/-	
101	One additional horse, supplied by Contractor .....	"	"	6/-	
	<b>TOTAL .....</b>		£		47,061 3 0

The quantities are not guaranteed as correct, and are merely for the guidance of Tenderers, who must satisfy themselves as to their accuracy, which is not in any way guaranteed by the Government, and they are subject to omissions, deductions, or alterations.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in strict accordance with the Specification.

The above Schedule Prices include, in every case, continual maintenance of the works during the whole time of construction, the period of maintenance, and up to the day of their being formally taken over by the Engineer.

Item No. 45 to include the cost of conveying the Government property from the Contractor's Store or Field Office to the various sites of works along line of Main and Branch Sewers, at man-holes, gas-check, and shaft-chamber, &c.

Prices for items Nos. 89, 90, 91, 92, 93, 94, 95, and 96 are to be for materials in strict accordance with Specification, delivered on the works ready for use, and only the actual net quantities ordered and approved of shall be paid for. In case Contractor's prices are considered too high by the Engineer at the time such materials may be required, or if the Contractor fail to deliver such materials at the time required and ordered, then the Engineer shall have the power to supply the same from any other sources, and the Contractor shall have no claim for loss or compensation on account of the exercise of such power by the Engineer.

Prices for items Nos. 97, 98, 99, 100, and 101 are to be for such as are able-bodied and efficient. The Schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

SUMMARY

## SUMMARY of Weights of Wrought and Cast Ironwork, including all Gun-metal.

(The number of Items underneath correspond with those of the Schedule of the Quantities and Prices.)

No. of Item.	Description of Item.	Number required.	Weight of each Item.				Total weight.						
			Ts.	ct.	qr.	lb.	Ts.	ct.	qr.	lb.			
<b>PENSTOCKS.</b>													
46	Cast-iron frame and penstock, with 6-ft. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	3	6	5	1	22	18	16	1	10			
47	Cast-iron frame and penstock, with 3-ft. 9 in. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	2	3	7	0	4	6	14	0	8			
48	Cast-iron frame and penstock, with 2-ft. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	1	1	1	1	20	1	1	1	20			
Total weight .....										26 11 3 10			
<b>GAS-CHECKS.</b>													
49	Cast-iron frame, with muntz metal gas-check, for 6-ft. 10-in. by 5-ft. 10-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	1	1	1	26	1	1	1	26			
50	Cast-iron frame, with muntz metal gas-check, for 6-ft. 8-in. by 5-ft. 8-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0	19	2	17	0	19	2	17			
51	Cast-iron frame, with muntz metal gas-check, for 5-ft. 6-in. by 4-ft. 6-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0	14	0	26	0	14	0	26			
52	Cast-iron frame, with muntz metal gas-check, for 5-ft. 2-in. by 4-ft. 2-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0	13	0	3	0	13	0	3			
53	Cast-iron frame, with muntz metal gas-check for 5-ft. 1-in. by 4-ft. 1-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0	11	0	2	0	11	0	2			
Total weight .....										3 19 1 18			
<b>IRREGULAR CASTINGS, &amp;c.</b>													
54	Flange and faucet pipe, 8 ft. long, 3 ft. 9 in. internal diameter.....	1	2	2	3	4	2	2	3	4			
55	Flange pipe, 8 ft. long, 3 ft. 9 in. internal diameter, one flange turned and drilled, for 1½-in. diameter bolt-holes .....	1	2	0	0	18	2	0	0	18			
56	Flange and spigot pipe, 9 ft. long, 3 ft. 9 in. internal diameter, the flanges to be turned and drilled for 1½-in. diameter bolt-holes .....	1	1	16	3	13	1	16	3	13			
57	Spigot pipe, 10 ft. long, 3 ft. 9 in. internal diameter .....	1	2	5	3	23	2	5	3	23			
58	Cast-iron thimble for 3-ft. 9-in. diameter pipe, 18 in. long .....	1	0	11	3	20	0	11	3	20			
59	Flange pipe, 10 ft. long, 3 ft. 6 in. internal diameter, one flange turned and drilled, for 1½-in. diameter bolt-holes .....	2	2	6	1	1	4	12	2	2			
60	Flange and faucet pipe, 12 ft. long, 3 ft. 6 in. internal diameter .....	2	2	18	0	3	5	16	0	6			
61	Flange and spigot pipe, 10 ft. long, 3 ft. 6 in. internal diameter, the flange turned and drilled for 1½-in. diameter bolt-holes .....	2	2	4	3	1	4	9	2	2			
62	Spigot pipe, 10 ft. long, 3 ft. 6 in. internal diameter .....	1	2	2	3	25	2	2	3	25			
63	Spigot pipe, 6 ft. 6 in. long, 3 ft. 6 in. internal diameter .....	1	1	7	3	20	1	7	3	20			
64	Spigot and faucet pipe, 4 ft. 10 in. long, 3 ft. 6 in. internal diameter .....	1	1	5	2	24	1	5	2	24			
65	Cast-iron thimble for 3-ft. 6-in. diameter pipe, 18 in. long.....	2	0	10	1	7	1	0	2	14			
66	Flange and faucet pipe, 10 ft. long, 2 ft. internal diameter .....	1	0	19	0	4	0	19	0	4			
67	Flange and spigot pipe, 10 ft. long, 2 ft. internal diameter, the flange to be turned and drilled for 1½-in. diameter bolt-holes .....	2	0	16	3	23	1	13	3	18			
68	Cast-iron thimble for 2-ft. diameter pipe, 15 in. long .....	1	0	4	1	5	0	4	1	5			
69	Cast-iron flange bend, 12 in. internal diameter .....	4	0	3	2	7	0	14	1	0			
70	Cast-iron flange and spigot bend, 16 in. internal diameter .....	2	0	4	0	19	0	8	1	10			
Total weight .....										33 12 3 12			
71	Wrought-iron rolled girders, 13½ in. high, top and bottom flange 5½ in. wide, 25 ft. long, to be walled in at Premier-street shaft chamber .....	2	at 40 lb. per ft.				1 0 2 4						
72	Platform for working penstocks, Premier-street shaft, two wrought-iron rolled girders, 9 in. high, top and bottom flanges, 3 in. wide, 25 ft. long, weighing 19 lb. per lineal foot, with cast-iron gratings and wrought-iron standards and railings complete.....	...					1 4 2 15						
73	Cast-iron standards and wrought-iron tube-railing at top of shaft, and solid bar-railing across shaft at landings .....	...					0 4 1 11						
74	Wrought-iron ladder in shaft, with supports, in four lengths, complete .....	...					0 16 2 15						
75	Angle-iron bearers with cast-iron perforated landing plates in shaft in Premier-street, complete .....	3					0 15 2 27						
76	Wrought-iron hinged gratings on cast-iron hinge-plates and double wrought-iron channel girders, with cast-iron distance blocks for outlet well of syphon .....	...					0 4 1 20						
77	Wrought-iron hinged grating for inlet well of syphon on cast-iron hinge-plates and double wrought-iron, channel-iron girders with cast-iron distance blocks .....	...					0 9 1 11						
Total weight .....										4 15 2 19			
<b>CAST-IRON STRAIGHT SPIGOT AND FAUCET PIPES, 12 FT. LONG.</b>													
78	3-ft. 9-in. diameter syphon pipes .....	96	3	0	1	0	289	4	0	0			
79	3-ft. 6-in. diameter duplicate sewer-pipes.....	154	2	16	2	3	435	5	0	14			
80	2-ft. diameter scour-pipes .....	59	1	1	2	16	63	16	3	20			
Total weight of pipes .....										788 6 0 6			
81	Screw-bolts 1½ in. diameter, with hexagon heads and nuts, for 3-ft. 9-in. and 3-ft. 6-in. diameters, flange pipe-joints .....	74					0 2 0 23						
82	Screw-bolts 1 in. diameter, with hexagon heads and nuts, for 2-ft. diameter flange pipe-joints .....	15					0 0 1 26						
Total weight .....										0 2 2 21			

## No. 3.—KERLE &amp; KERLE'S TENDER.

(Items 78 to 82 inclusive, for which a general rate was asked, would, at contractor's prices for each item, average about £9 16s per ton.)

Department of Public Works, Roads and Bridges and Sewerage Branch.

## TENDER FORM.

In pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Eastern Main Branch Sewer, Western Suburbs Sewerage, from Premier-street to Sebastopol-street and Branches (Contract No. 69), agreeably to the Plans, Specification, Schedule to Specification, and General Conditions, which have been inspected by us for or at the rates entered in the Schedule of Quantities and Prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this Tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates or prices mentioned in the Schedule of Quantities and Prices annexed hereto, or if not in Schedule, at a price to be agreed upon at the time, and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said Tender, execute and deliver to the Minister for Public Works, a valid legal Contract with Her Majesty the Queen, embodying the terms and Conditions above mentioned, and to provide the security required by clause 29 of the said General Conditions; and we enclose herewith our cheque for the sum of £500 as a preliminary Deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said Tender is opened withdraw same, or if, in the event of this Tender being accepted, we fail to complete the above-mentioned Contract within fourteen days thereafter; and further, that this Tender is made subject to the Conditions contained in the Tender Board Regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 13th day of December, 1893.

WALTER KERLE,  
HARRY WOOD KERLE,  
11, Bond-street.

Witness,—G. PILE,  
11, Bond-street.

## TENDER BOARD REGULATIONS.

No Tender shall be received after eleven a.m. on the day named for the receipt of such Tender unless there are circumstances which, in the opinion of the Members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the Tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of Tenders received for each work and the name of the lowest Tenderer; but no Tender shall be accepted until the Head of the Branch, under whose directions the work is to be carried out, has reported upon the whole of the Tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the Tenders received, showing the work, the name of the Tenderer, and the amount of each Tender.

All envelopes containing Tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the Tender is submitted.

Every Tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive ... ..	£5 0 0
For amounts exceeding £500 and not exceeding £1,000...	£10 0 0

For all sums over £1,000 one per cent. on the amount of Tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful Tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful Tenderer shall be returned to him on his executing the bond for the fulfilment of the Contract. When the Contract is for a less sum than £200 the deposit with Tender shall not be returnable until the service is satisfactorily completed.

Any Tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any Tenderer failing to take up his Tender, complete the bond, and proceed with the Contract, within the time specified, or withdrawing his Tender after it shall have been opened, whether such Tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever

Whenever a Tenderer shall fail to proceed with a Contract as aforesaid, fresh Tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another Tender in the same series to be accepted; but the Tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In the event of any Contract being tendered for at a Schedule of Rates, the approximate quantities as given of each item must be worked out and a total sum shown.

In submitting a Tender, the full Christian name of the Tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the Tender. The omission of this information will render the Tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any Tender.

The Board-room shall be open for the admission of the public while the Tenders are being opened and declared.

CONTRACT NO. 69.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
	Excavations in open trenches, in more or less hard materials, and in hard rock, for sewers, branches, pipes, sub-ducts, &c., as specified in clause 3, as viz. :—				£ s. d.
1	Excavation in road surfaces, sand, soil, pipeclay, shale, soft rock, where in the opinion of the Engineer blasting is unnecessary .....	cubic yard	19,320	2/-	1,932 0 0
2	Excavation in hard shale or rock, where gadding and guttering only is permitted .....	"	1,165	10/-	582 10 0
3	Excavation in hard shale or rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter and such depths of bore-holes as shall be directed only are permitted .....	"	1,165	8/-	466 0 0
4	Excavation in hard shale or rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	1,165	8/-	466 0 0
5	Excavation in tunnels in "more or less hard materials," for sewers, pipe sewers, sub-ducts, &c. as specified in clause 3, as viz. :—				
5	Less hard excavation in clay, loose, and jointy shale, &c., where in the opinion of the Engineer blasting is unnecessary .....	"	810	7/-	283 10 0
6	Excavation in hard sandstone or shale, where gadding and guttering only is permitted .....	"	1,140	23/-	1,425 0 0
7	Excavation in hard sandstone, shale, ironstone, &c., where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted ..	"	1,140	23/-	1,311 0 0
8	Excavations in hard sandstone, shale, ironstone, &c., where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted ..	"	1,140	23/-	1,311 0 0
9	Excavation in tunnels in "solid rock" for sewers, pipe-sewers, sub-ducts, &c., as specified in clause 3, as viz. :—				
9	Excavation in hard rock, where gadding and guttering only is permitted .....	"	1,850	40/-	3,700 0 0
10	Excavation in hard rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	1,850	35/-	3,237 10 0
11	Excavation in hard rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	1,850	35/-	3,237 10 0
12	Excavation in "solid rock," in shafts, shaft chambers, and sumps, as specified in clause 3, as viz. :—				
12	Excavation in road surfaces, soil clay, pipeclay, shale, and soft rock only, where in the opinion of the Engineer blasting is unnecessary ..	"	130	4/-	26 0 0
13	Excavation in hard rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	445	20/-	415 0 0
14	Excavation in hard rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	445	20/-	415 0 0
15	Excavation in hard rock, where gadding and guttering only is permitted .....	"	445	23/-	511 15 0
16	Excavation in "more or less hard ground," in shafts, shaft chambers, and sumps, as specified in clause 3, as viz. :—				
16	Less hard excavation in road surfaces, soil, clay, pipeclay, loose and jointy shale, and soft rock, where in the opinion of the Engineer blasting is unnecessary .....	"	170	4/-	34 0 0
17	Excavation in hard sandstone or shale, where guttering and gadding only is permitted .....	"	115	3/-	17 5 0
18	Excavation in hard sandstone or shale, ironstone, &c., where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted .....	"	115	15/-	86 5 0
19	Excavation in hard sandstone or shale, ironstone, &c., where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	115	15/-	86 5 0

No. of Item.	Description or Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
20	Filling in at sides, round and over all concrete and brickwork of sewers, shafts, chambers, pipes, embankments, and tunnels, as specified in clause 5.....	cubic yard	15,220	2/-	£ 1,522 0 0
21	Timber ordered in writing to be left in excavations, as specified in clause 9, including all iron used in fixing same .....	cubic foot	9,000	-/1	37 10 0
22	Removing existing culverts crossing the Illawarra Road, as specified in clause 12, including masonry, pitching, and timber decking ...	cubic yard	244	1/-	12 4 0
23	Sub-duct in hard rock, with tile covers, as specified in clause 8.....	lineal yard	280	10/-	140 0 0
	Sub-duct, as specified in clause 8, in "more or less hard material," including dry or cement jointing for stoneware pipes :—				
24	Of 6 in. internal diameter .....	"	640	4/6	144 0 0
25	Of 9 in. internal diameter .....	"	640	5/-	160 0 0
	Sub-duct in water-charged loose ground, as specified in clause 8, including hardwood boxes with packing in same, and dry or cement jointing for pipes of :—				
26	6 in. internal diameter .....	"	280	7/-	98 0 0
27	9 in. internal diameter .....	"	280	9/-	126 0 0
28	Hand-packed stone filling 4-in. gauge, as specified in clauses 8 and 10	cubic yard	700	3/6	133 0 0
29	Bluestone metal, 2½-in. gauge, on road surfaces, as specified in clause 10	"	100	16/-	152 0 0
30	Blinding 2 in. thick over metalled surfaces, as specified in clause 10...	"	90	2/-	9 0 0
31	Sandstone concrete, in any situation, as specified in clause 13 .....	"	1,050	32/-	1,680 0 0
32	Bluestone concrete, in any situation, as specified in clause 13 .....	"	4,550	50/-	11,375 0 0
33	Brickwork in cement, in any situation, as specified in clause 15 .....	"	1,605	55/-	4,413 15 0
34	Cement facing, in any situation, as specified in clause 14 .....	square yard	11,605	3/-	1,740 0 0
35	Pyrmont sandstone, ashlar, in any situation, as specified in clause 16	cubic foot	210	3/-	81 10 0
36	Squared bluestone pitchers, in any situation, as specified in clause 17	square yard	12	60/-	36 0 0
37	Squared freestone pitchers, in any situation, 6 in. deep, as specified in clause 18.....	"	38	35/-	66 10 0
38	Supply and fix ordnance fencing complete, with ironwork, painting and tarring, as specified in clause 11 .....	rod	7	30/-	10 10 0
	Providing, laying, and jointing glazed stoneware, plain, junction, and bend-pipes, in trenches, shafts, &c., as specified in clause 19, including providing and fixing discs, complete, as viz. :—				
39	9-in. diameter pipes in pipe-sewers and shafts .....	lineal yard	40	5/-	10 0 0
40	12-in. diameter pipes in pipe-sewers .....	"	64	9/6	30 8 0
41	16-in. diameter pipes in pipe-sewers .....	"	15	15/-	11 5 0
42	18-in. diameter pipes in pipe-sewers .....	"	5	23/-	5 15 0
<b>SURPLUS MATERIALS.</b>					
	Removal of surplus materials from all excavations, as specified in clauses 51, 54, and 80 of the Schedule to Specification, including spreading, as viz. :—				
43	For the first half-mile of lead.....	cubic yard	20,420	-/3	255 5 0
44	For every further quarter of a mile of lead .....	"	30,000	-/1	125 0 0
<b>GOVERNMENT PROPERTY.</b>					
45	Receiving and fixing ironwork, supplied by the Government, as specified in clauses 272 to 275 of the Schedule to Specification ...	ton	25	40/-	50 0 0
<b>IRONWORK.</b>					
	Manufacture, supply, and fix (except where otherwise specified) all wrought-iron, gun-metal, and cast-iron work, and including painting and tarring, complete, as specified in clauses 21 to 26 inclusive, as viz. :—				
<b>PENSTOCKS.</b>					
46	Cast-iron frame and penstock, 6-ft. diameter opening, with lifting gear, wrought iron and gun-metal work, complete, as shown on drawings Nos. 20 and 3 .....	each	3	£220	660 0 0
47	Cast-iron frame and penstock, 3-ft. 9-in. diameter opening, with lifting gear, street-box, cover-plate, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 19 and 14 .....	"	2	£140	280 0 0
48	Cast-iron frame and penstock of 2-ft. diameter opening, with 2-ft. diameter spigot and flanged bend, lifting gear, street-box, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 14 and 18 .....	"	1	£95	95 0 0
<b>GAS CHECKS.</b>					
49	Cast-iron frame with Muntz metal gas-check for sewer of 6 ft. 10 in. x 5 ft. 10 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 23 and 3 .....	each	1	£80	80 0 0
50	Cast-iron frame with Muntz metal gas-check for sewer of 6 ft. 8 in. x 5 ft. 8 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 24 and 3 .....	"	1	£65	65 0 0
51	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 6 in. x 4 ft. 6 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 25 and 3 .....	"	1	£60	60 0 0

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
52	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 2 in. x 4 ft. 2 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 26 and 3	each	1	60	£ 60 0 0
53	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 1 in. x 4 ft. 1 in., complete with all wrought-iron and gun-metal work, as shown on drawings Nos. 27 and 17	"	1	50	£ 50 0 0
IRREGULAR CASTINGS, &C.					
54	Cast-iron flange and faucet pipe, 3 ft. 9 in. internal diameter, 8 ft. long in the body, as shown on drawings Nos. 14 and 16		Tons. cwt. qr. lb.	£	
55	Cast-iron pipe, 3 ft. 9 in. internal diameter, 8 ft. long over all, with two flange ends, one flange turned and drilled for 1½-in. diameter bolt-holes, as shown on drawings Nos. 14 and 16, weighing		2 2 3 4	15	
56	Cast-iron flange and spigot pipe, 3 ft. 9 in. internal diameter, 9 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 16, weighing		2 0 0 18	15	
57	Cast-iron pipe, 3 ft. 9 in. internal diameter, 10 ft. long over all, with spigot ends, as shown on drawing No. 16		1 16 3 13	15	
58	Cast-iron pipe, 3 ft. 9 in. internal diameter, 10 ft. long over all, with spigot ends, as shown on drawing No. 16		2 5 3 23	15	
59	Cast-iron thimble, for 3-ft. 9-in. diameter syphon pipes, 18 in. long over all, as shown on drawing No. 16		0 11 3 20	15	
60	2—cast-iron flanged pipes, 3 ft. 6 in. internal diameter, 10 ft. long over all, one flange turned and drilled for 1½-in. diameter bolt-holes, as shown on drawings Nos. 17 and 18		4 12 2 2	15	
61	2—cast-iron flange and faucet pipes, 3 ft. 6 in. internal diameter, 12 ft. long in the body, as shown on drawings Nos. 17 and 18		5 16 0 6	15	
62	2—cast-iron flange and spigot pipes, 3 ft. 6 in. internal diameter, 10 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 18		4 9 2 2	15	
63	Cast-iron spigot pipe, 3 ft. 6 in. internal diameter, 10 ft. long over all, as shown on drawing No. 18		2 2 3 25	15	
64	Cast-iron spigot pipe, 3 ft. 6 in. internal diameter, 6 ft. 6 in. long over all, as shown on drawing No. 18		1 7 3 20	15	
65	Cast-iron spigot and faucet pipe, 3 ft. 6 in. internal diameter, 4 ft. 10 in. long in the body, as shown on drawing No. 18		1 5 2 24	15	
66	2—cast-iron thimbles for 3-ft. 6-in. diameter pipe-sewer, 18 in. long over all, as shown on drawing No. 18		1 0 2 14	15	
67	Cast-iron flange and faucet pipe, 2 ft. internal diameter, 10 ft. long over all, drawings Nos. 15 and 16		0 19 0 4	15	
68	2—cast-iron flange and spigot pipes, 2 ft. internal diameter, 10 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 16		1 13 3 18	15	
69	Cast-iron thimble for 2-ft. diameter scour-pipes, 15 in. long over all, as shown on drawing No. 16		0 4 1 5	15	
70	Cast iron flanged bend, 12 in. internal diameter, as shown on drawings Nos. 14 and 16		0 14 1 0	15	
71	Cast-iron flange and spigot bend, 16 in. internal diameter, as shown on drawings Nos. 3 and 10		0 8 1 10	15	
	Total, including placing on cement mortar bedding, where ordered, and fixed (except lead joints) in position in the works	ton.	33 12 3 12	15	£ 504 12 10
72	2—wrought-iron rolled girders for supporting lifting gear of penstocks at Premier-street shaft-chamber, 25 ft. long each, weighing per foot run 46 lb., as shown on drawings Nos. 3 and 20	"	1 0 2 4	16	£ 16 8 7
73	Platform for working penstocks in Premier-street shaft-chamber, consisting of two wrought-iron rolled girders, 25 ft. long each, weight per foot run 19 lb., with cast iron gratings and wrought-iron standard and railings, complete, as shown on drawings Nos. 21 and 22, weighing in all	cwt.	1 4 2 15	25/-	£ 30 15 10
74	Cast-iron standards and wrought-iron tube-railing at top of shaft, and solid bar-railings across shaft at landings, complete, as shown on drawing No. 4	"	0 4 1 11	55/-	£ 11 19 1
75	Wrought-iron ladder in shaft, with supports, in four lengths, complete, as shown on drawing No. 4	"	0 16 2 15	55/-	£ 45 14 10
76	3—angle-iron bearers, with cast-iron perforated landing-plates in shaft, complete, as shown on drawing No. 4	"	0 15 2 27	30/-	£ 23 12 3
77	Wrought-iron hinged gratings, for outlet well of syphon, with cast-iron hinge-plates and wrought-iron channel-girders, complete, as shown on drawings Nos. 14 and 21	"	0 4 1 20	50/-	£ 11 1 5
78	Wrought-iron hinged gratings, for inlet well of syphon, with cast-iron hinge-plates and wrought-iron channel-girders, complete, as shown on drawings Nos. 14 and 21	"	0 9 1 11	50/-	£ 23 7 5
CAST-IRON PIPES.					
	Cast-iron straight, spigot and faucet pipes, 12 ft. long in the body, complete, as shown on drawings Nos. 16 and 18, as viz. :—				
78	96—3-ft. 9-in. diameter syphon pipes		289 4 0 0	9/15/-	£ 2,819 14 0

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
			Tons cwt. qr. lb.	£	£ s. d.
79	154—3-ft. 6-in. diameter duplicate sewer pipes .....		435 5 0 14	9/15/-	4,243 14 11
80	59—2-ft. diameter scour-pipes .....		63 16 8 20	11	702 6 3
81	74—screw bolts, 1½ in. diameter, with hexagon heads and nuts, for 3-ft. 6-in. and 3-ft. 9-in. diameters flange pipe-joints .....		0 2 0 23	50	5 10 3
82	15—screw bolts, 1 in. diameter, with hexagon heads and nuts, for 2-ft. diameter flange pipe-joints .....		0 0 1 26	50	1 4 1
	Total for all straight pipes.....	ton.	788 8 2 27		
PIPE-LAYING.					
	Laying and jointing (including providing lead and span-ways) the 3-ft. 9-in. diameter, the 3-ft. 6-in. diameter, and the 2-ft. diameter cast iron pipes, and irregular castings in open trenches and shafts, as specified in clause 20, complete, us viz.:-				
83	3-ft. 9-in. diameter syphon pipes and short ends, &c. ....	lineal yard	396	15/-	297 0 0
84	3-ft. 6-in. diameter duplicate sewer-pipes, short ends, &c. ....	"	649	13/-	421 17 0
85	2-ft. diameter scour-pipes and short ends, &c. ....	"	246	10/-	123 0 0
TRAPPED JUNCTIONS.					
86	Flap-traps, providing, delivering, and buidling in, including providing and fixing discs .....	each	10	25/-	12 10 0
GENERAL.					
87	Permanent puddle, where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 29, including spreading in 9-in. layers and ramming, complete .....	cubic yard	10	1/-	0 10 0
88	Special bluestone concrete, in any situation, as specified in clause 2 ...	"	10	50/-	25 0 0
89	Bluestone metal (clause 2), 1½-in. gauge, stacked .....	"	15	12/-	9 0 0
90	Sandstone metal (clause 2), 2-in. gauge, stacked .....	"	15	3/-	2 5 0
91	Bluestone metal (clause 2), 2¼-in. gauge, stacked .....	"	15	11/-	8 5 0
92	Sharp, clean, washed sand (clause 2), stacked .....	"	15	4/-	3 0 0
93	Sawn hardwood, in scantlings or planks (clause 2) .....	cubic foot	100	2/-	10 0 0
94	Oregon timber, in scantlings or planks .....	"	100	2,3	11 5 0
95	Wrought-iron, in bolts, galvanized step-irons, screws, nails, spikes, straps, &c. (clause 2) .....	cwt.	20	30/-	30 0 0
96	Portland cement .....	cask	25	11/-	13 15 0
97	Artizan or mechanic, supplied by Contractor .....	day	Rate only	15/-	
98	Quarryman or other skilled labourer, supplied by Contractor .....	"	"	11/-	
99	Ordinary labourer, supplied by Contractor .....	"	"	9/-	
100	Cart with one horse and driver, supplied by Contractor.....	"	"	12/-	
101	One additional horse, supplied by Contractor .....	"	"	5/-	
	TOTAL .....		.....£	...	52,735 10 9

The quantities are not guaranteed as correct, and are merely for the guidance of Tenderers, who must satisfy themselves as to their accuracy, which is not in any way guaranteed by the Government, and they are subject to omissions, deductions, or alterations.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in strict accordance with the Specification.

The above Schedule Prices include, in every case, continual maintenance of the works during the whole time of construction, the period of maintenance, and up to the day of their being formally taken over by the Engineer.

Item No. 45 to include the cost of conveying the Government property from the Contractor's Store or Field Office to the various sites of works along line of Main and Branch Sewers, at man-holes, gas-check, and shaft-chamber, &c.

Prices for items Nos. 89, 90, 91, 92, 93, 94, 95, and 96 are to be for materials in strict accordance with Specification, delivered on the works ready for use, and only the actual net quantities ordered and approved of shall be paid for. In case Contractor's prices are considered too high by the Engineer at the time such materials may be required, or if the Contractor fail to deliver such materials at the time required and ordered, then the Engineer shall have the power to supply the same from any other sources, and the Contractor shall have no claim for loss or compensation on account of the exercise of such power by the Engineer.

Prices for items Nos. 97, 98, 99, 100, and 101 are to be for such as are able-bodied and efficient. The Schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

## SUMMARY of Weights of Wrought and Cast Ironwork, including all Gun-metal.

(The number of Items underneath correspond with those of the Schedule of the Quantities and Prices.)

No. of Item.	Description of Item.	Number required.	Weight of each Item.	Total weight.
<b>PENSTOCKS.</b>				
			Ts. ct. qr. lb.	Ts. ct. qr. lb.
46	Cast-iron frame and penstock, with 6-ft. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	3	6 5 1 22	18 16 1 10
47	Cast-iron frame and penstock, with 3-ft. 9 in. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	2	3 7 0 4	6 14 0 8
48	Cast-iron frame and penstock, with 2-ft. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	1	1 1 1 20	1 1 1 20
	Total weight .....	...	.....	26 11 3 10
<b>GAS-CHECKS.</b>				
49	Cast-iron frame, with muntz metal gas-check, for 6-ft. 10-in. by 5-ft. 10-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	1 1 1 26	1 1 1 26
50	Cast-iron frame, with muntz metal gas-check, for 6-ft. 8-in. by 5-ft. 8-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 19 2 17	0 19 2 17
51	Cast-iron frame, with muntz metal gas-check, for 5-ft. 6-in. by 4-ft. 6-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 14 0 26	0 14 0 26
52	Cast-iron frame, with muntz metal gas-check, for 5-ft. 2-in. by 4-ft. 2-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 13 0 3	0 13 0 3
53	Cast-iron frame, with muntz metal gas-check, for 5-ft. 1-in. by 4-ft. 1-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 11 0 2	0 11 0 2
	Total weight .....	...	.....	3 19 1 18
<b>IRREGULAR CASTINGS, &amp;c.</b>				
54	Flange and faucet pipe, 8 ft. long, 3 ft. 9 in. internal diameter.....	1	2 2 3 4	2 2 3 4
55	Flange pipe, 8 ft. long, 3 ft. 9 in. internal diameter, one flange turned and drilled, for 1½ in. diameter bolt-holes.....	1	2 0 0 18	2 0 0 18
56	Flange and spigot pipe, 9 ft. long, 3 ft. 9 in. internal diameter, the flanges to be turned and drilled for 1½ in. diameter bolt-holes.....	1	1 16 3 13	1 16 3 13
57	Spigot pipe, 10 ft. long, 3 ft. 9 in. internal diameter .....	1	2 5 3 23	2 5 3 23
58	Cast-iron thimble for 3-ft. 9-in. diameter pipe, 18 in. long .....	1	0 11 3 20	0 11 3 20
59	Flange-pipe, 10 ft. long, 3 ft. 6 in. internal diameter, one flange turned and drilled, for 1½ in. diameter bolt-holes .....	2	2 6 1 1	4 12 2 2
60	Flange and faucet pipe, 12 ft. long, 3 ft. 6 in. internal diameter .....	2	2 18 0 8	5 16 0 6
61	Flange and spigot pipe, 10 ft. long, 3 ft. 6 in. internal diameter, the flange turned and drilled for 1½ in. diameter bolt-holes .....	2	2 4 3 1	4 9 2 2
62	Spigot pipe, 10 ft. long, 3 ft. 6 in. internal diameter .....	1	2 2 3 25	2 2 3 25
63	Spigot pipe, 6 ft. 6 in. long, 3 ft. 6 in. internal diameter.....	1	1 7 3 20	1 7 3 20
64	Spigot and faucet pipe, 4 ft. 10 in. long, 3 ft. 6 in. internal diameter .....	1	1 5 2 24	1 5 2 24
65	Cast-iron thimble for 3-ft. 6-in. diameter pipe, 18 in. long .....	2	0 10 1 7	1 0 2 14
66	Flange and faucet pipe, 10 ft. long, 2 ft. internal diameter .....	1	0 19 0 4	0 19 0 4
67	Flange and spigot pipe, 10 ft. long, 2 ft. internal diameter, the flange to be turned and drilled for 1½ in. diameter bolt-holes .....	2	0 16 3 23	1 13 3 18
68	Cast-iron thimble for 2-ft. diameter pipe, 15 in. long .....	1	0 4 1 5	0 4 1 5
69	Cast-iron flange bend, 12 in. internal diameter.....	4	0 3 2 7	0 14 1 0
70	Cast-iron flange and spigot bend, 16 in. internal diameter .....	2	0 4 0 19	0 8 1 0
	Total weight .....	...	.....	33 12 3 12
71	Wrought-iron rolled girders, 13½ in. high, top and bottom flange 5½ in. wide, 25 ft. long, to be walked in at Premier-street shaft chamber .....	2	at 46 lb. per ft.	1 0 2 4
72	Platform for working penstocks, Premier-street shaft, two wrought-iron rolled girders, 9 in. high, top and bottom flanges, 3 in. wide, 25 ft. long, weighing 19 lb. per lineal foot, with cast-iron gratings and wrought-iron standards and railings complete .....	...	.....	1 4 2 15
73	Cast-iron standards and wrought-iron tube-railing at top of shaft, and solid bar-railing across shaft at landings .....	...	.....	0 4 1 11
74	Wrought-iron ladder in shaft, with supports, in four lengths, complete .....	...	.....	0 16 2 15
75	Angle-iron bearers with cast-iron perforated landing plates in shaft in Premier-street, complete .....	3	.....	0 15 2 27
76	Wrought-iron hinged gratings on cast-iron hinge-plates and double wrought-iron channel girders, with cast-iron distance blocks for outlet well of syphon .....	...	.....	0 4 1 20
77	Wrought-iron hinged grating for inlet well of syphon on cast-iron hinge-plates and double wrought-iron, channel-iron girders with cast-iron distance blocks .....	...	.....	0 9 1 11
	Total weight .....	...	.....	4 15 2 19
<b>CAST-IRON STRAIGHT SPIGOT AND FAUCET PIPES, 12 FT. LONG.</b>				
78	3-ft. 9-in. diameter syphon pipes .....	96	3 0 1 0	289 4 0 0
79	3-ft. 6-in. diameter duplicate sewer-pipes.....	154	2 16 2 3	435 5 0 14
80	2-ft. diameter scour-pipes .....	59	1 1 2 16	63 16 3 20
	Total weight of pipes .....	...	.....	738 6 0 6
81	Screw-bolts 1½ in. diameter, with hexagon heads and nuts, for 3-ft. 9-in. and 3-ft. 6-in. diameters, flange pipe-joints .....	74	.....	0 2 0 23
82	Screw-bolts 1 in. diameter, with hexagon heads and nuts, for 2-ft. diameter flange pipe-joints .....	15	.....	0 0 1 26
	Total weight .....	...	.....	0 2 2 21

## No. 4.—H. MCKENZIE &amp; SONS' TENDER.

Item No.		Add.			Deduct.		
		£	s.	d.	£	s.	d.
10	.....				0	5	0
"	71	0	0	11			
"	72	0	0	9			
"	73	0	0	7			
"	74	0	0	6			
"	75	0	0	5			
"	76				0	3	6
"	77	0	0	6			
		<hr/>			0	8	6
"	82				17	19	1
		<hr/>			18	7	7
		<hr/>			0	3	8
		<hr/>					

Total amount to be deducted ..... £18 3 11

A general rate is asked for items 54 to 70 and 78 to 82, and the average rate, at the prices given by the contractor, would be in the first instance about £17 15s. 8½d. a ton, and in the latter about £10 0s. 11½d.

## Department of Public Works, Roads and Bridges and Sewerage Branch.

## TENDER FORM.

In pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Eastern Main Branch Sewer, Western Suburbs Sowerage, from Premier-street to Sebastopol-street and Branches (Contract No. 69), agreeably to the Plans, Specification, Schedule to Specification, and General Conditions, which have been inspected by us for or at the rates entered in the Schedule of Quantities and Prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this Tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates or prices mentioned in the Schedule of Quantities and Prices annexed hereto, or if not in Schedule, at a price to be agreed upon at the time, and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said Tender, execute and deliver to the Minister for Public Works, a valid legal Contract with Her Majesty the Queen, embodying the terms and Conditions above mentioned, and to provide the security required by clause 29 of the said General Conditions; and we enclose herewith our cheque for the sum of £600 as a preliminary Deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said Tender is opened withdraw same, or if, in the event of this Tender being accepted, we fail to complete the above-mentioned Contract within fourteen days thereafter; and further, that this Tender is made subject to the Conditions contained in the Tender Board Regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 13th day of December, 1893.

H. MCKENZIE & SONS,  
South Preston, Melbourne.

Witness,—JOHN MCGREGOR.

## TENDER BOARD REGULATIONS.

No Tender shall be received after eleven a.m. on the day named for the receipt of such Tender unless there are circumstances which, in the opinion of the Members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the Tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of Tenders received for each work and the name of the lowest Tenderer; but no Tender shall be accepted until the Head of the Branch, under whose directions the work is to be carried out, has reported upon the whole of the Tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the Tenders received, showing the work, the name of the Tenderer, and the amount of each Tender.

All envelopes containing Tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the Tender is submitted.

Every Tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive ... ..	£5 0 0
For amounts exceeding £500 and not exceeding £1,000...	£10 0 0

For all sums over £1,000 one per cent. on the amount of Tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful Tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful Tenderer shall be returned to him on his executing the bond for the fulfilment of the Contract. When the Contract is for a less sum than £200 the deposit with Tender shall not be returnable until the service is satisfactorily completed.

Any Tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In

In the event of any Tenderer failing to take up his Tender, complete the bond, and proceed with the Contract, within the time specified, or withdrawing his Tender after it shall have been opened, whether such Tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a Tenderer shall fail to proceed with a Contract as aforesaid, fresh Tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another Tender in the same series to be accepted; but the Tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In the event of any Contract being tendered for at a Schedule of Rates, the approximate quantities as given of each item must be worked out and a total sum shown.

In submitting a Tender, the full Christian name of the Tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the Tender. The omission of this information will render the Tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any Tender.

The Board-room shall be open for the admission of the public while the Tenders are being opened and declared.

CONTRACT No. 69.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
	Excavations in open trenches, in more or less hard materials, and in hard rock, for sewers, branches, pipes, sub-ducts, &c., as specified in clause 3, as viz. :—				£ s. d.
1	Excavation in road surfaces, sand, soil, pipeclay, shale, soft rock, where in the opinion of the Engineer blasting is unnecessary .....	cubic yard	19,320	3/6	3,381 0 0
2	Excavation in hard shale or rock, where gadding and guttering only is permitted .....	"	1,165	13/6	786 7 6
3	Excavation in hard shale or rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	1,165	12/-	619 0 0
4	Excavation in hard shale or rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	1,165	9/-	524 5 0
	Excavation in tunnels in "more or less hard materials," for sewers, pipe-sewers, sub-ducts, &c., as specified in clause 3, as viz. :—				
5	Less hard excavation in clay, loose, and jointy shale, &c., where in the opinion of the Engineer blasting is unnecessary .....	"	810	9/-	364 10 0
6	Excavation in hard sandstone or shale, where gadding and guttering only is permitted .....	"	1,140	22/6	1,282 10 0
7	Excavation in hard sandstone, shale, ironstone, &c., where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted.	"	1,140	18/-	1,026 0 0
8	Excavations in hard sandstone, shale, ironstone, &c., where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted .	"	1,140	13/6	769 10 0
	Excavation in tunnels in "solid rock" for sewers, pipe-sewers, sub ducts, &c., as specified in clause 3, as viz. :—				
9	Excavation in hard rock, where gadding and guttering only is permitted .....	"	1,850	27/-	2,497 10 0
10	Excavation in hard rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	1,850	22/6	2,081 10 0
11	Excavation in hard rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted.....	"	1,850	18/-	1,665 0 0
	Excavation in "solid rock," in shafts, shaft chambers, and sumps, as specified in clause 3, as viz. :—				
12	Excavation in road surfaces, soil clay, pipeclay, shale, and soft rock only, where in the opinion of the Engineer blasting is unnecessary .....	"	180	12/-	78 0 0
13	Excavation in hard rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	445	27/-	600 15 0
14	Excavation in hard rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	445	22/6	500 12 6
15	Excavation in hard rock, where gadding and guttering only is permitted .....	"	445	30/-	667 10 0
	Excavation in "more or less hard ground," in shafts, shaft chambers, and sumps, as specified in clause 3, as viz. :—				
16	Less hard excavation in road surfaces, soil, clay, pipeclay, loose and jointy shale, and soft rock, where in the opinion of the Engineer blasting is unnecessary .....	"	170	13/6	114 15 0
17	Excavation in hard sandstone or shale, where guttering and gadding only is permitted.....	"	115	27/-	155 5 0
18	Excavation in hard sandstone or shale, ironstone, &c., where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted .....	"	115	22/6	129 7 6
19	Excavation in hard sandstone or shale, ironstone, &c., where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	115	22/6	129 7 6

No. of Item.	Description or Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
20	Filling in at sides, round and over all concrete and brickwork of sewers, shafts, chambers, pipes, embankments, and tunnels, as specified in clause 5.....	cubic yard	15,220	1/6	£ 1,141 10 0
21	Timber ordered in writing to be left in excavations, as specified in clause 9, including all iron used in fixing same .....	cubic foot	9,000	2/6	1,125 0 0
22	Removing existing culverts crossing the Lllawarra Road, as specified in clause 12, including masonry, pitching, and timber decking .....	cubic yard	244	10/-	122 0 0
23	Sub-duct in hard rock, with tile covers, as specified in clause 8.....	lineal yard	280	15/-	210 0 0
	Sub-duct, as specified in clause 8, in "more or less hard material," including dry or cement jointing for stoneware pipes :—				
24	Of 6 in. internal diameter .....	"	640	9/-	288 0 0
25	Of 9 in. internal diameter .....	"	640	14/-	448 0 0
	Sub-duct in water-charged loose ground, as specified in clause 8, including hardwood boxes with packing in same, and dry or cement jointing for pipes of :—				
26	6 in. internal diameter .....	"	280	12/-	168 0 0
27	9 in. internal diameter .....	"	280	18/-	252 0 0
28	Hand-packed stone filling 4-in. gauge, as specified in clauses 8 and 10	cubic yard	760	5/-	190 0 0
29	Bluestone metal, 2½-in. gauge, on road surfaces, as specified in clause 10	"	190	14/-	133 0 0
30	Blinding 2 in. thick over metal surfaces, as specified in clause 10..	"	90	5/-	22 10 0
31	Sandstone concrete, in any situation, as specified in clause 13 .....	"	1,050	33/-	1,732 10 0
32	Bluestone concrete, in any situation, as specified in clause 13 .....	"	4,550	46/-	10,465 0 0
33	Brickwork in cement, in any situation, as specified in clause 15 .....	"	1,605	54/-	4,333 10 0
34	Cement facing, in any situation, as specified in clause 14 .....	square yard	11,600	3/-	1,740 0 0
35	Pyrmont sandstone, ashlar, in any situation, as specified in clause 16	cubic foot.	210	3/-	31 10 0
36	Squared bluestone pitchers, in any situation, as specified in clause 17	square yard.	12	20/-	12 0 0
37	Squared freestone pitchers, in any situation, 6 in. deep, as specified in clause 18 .....	"	38	10/-	19 0 0
38	Supply and fix ordnance fencing complete, with ironwork, painting, and tarring, as specified in clause 11 .....	rod .....	7	20/-	7 0 0
	Providing, laying, and jointing glazed stoneware, plain, junction, and bend-pipes, in trenches, shafts, &c., as specified in clause 19, including providing and fixing discs, complete, as viz. :—				
39	9-in. diameter pipes in pipe-sewers and shafts .....	lineal yard.	40	6/-	12 0 0
40	12-in. diameter pipes in pipe-sewers .....	"	64	10/-	32 0 0
41	16-in. diameter pipes in pipe-sewers .....	"	15	20/-	15 0 0
42	18-in. diameter pipes in pipe-sewers .....	"	5	25/-	6 5 0
<b>SURPLUS MATERIALS.</b>					
	Removal of surplus materials from all excavations, as specified in clauses 51, 54, and 86 of the Schedule to Specification, including spreading, as viz. :—				
43	For the first half-mile of lead .....	cubic yard.	20,420	1/3	1,276 5 0
44	For every further quarter of a mile of lead .....	"	30,000	-/3	375 0 0
<b>GOVERNMENT PROPERTY.</b>					
45	Receiving and fixing ironwork, supplied by the Government, as specified in clauses 272 to 275 of the Schedule to Specification .....	ton .....	25	£5	125 0 0
<b>IRONWORK.</b>					
	Manufacture, supply, and fix (except where otherwise specified) all wrought-iron, gun-metal, and cast-iron work, and including painting and tarring, complete, as specified in clauses 21 to 26 inclusive, as viz. :—				
<b>PENSTOCKS.</b>					
46	Cast-iron frame and penstock, 6-ft. diameter opening, with lifting gear, wrought iron and gun-metal work, complete, as shown on drawings Nos. 20 and 3 .....	each ..	3	£250	750 0 0
47	Cast-iron frame and penstock, 3-ft. 9-in. diameter opening, with lifting gear, street-box, cover-plate, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 19 and 14 .....	" ..	2	£140	280 0 0
48	Cast-iron frame and penstock of 2-ft. diameter opening, with 2-ft. diameter spigot and flanged bend, lifting gear, street-box, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 14 and 18 .....	" .....	1	£75	75 0 0
<b>GAS CHECKS.</b>					
49	Cast-iron frame with Muntz metal gas-check for sewer of 6 ft. 10 in. x 5 ft. 10 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 23 and 3 .....	each.	1	£100	100 0 0
50	Cast-iron frame with Muntz metal gas-check for sewer of 6 ft. 8 in. x 5 ft. 8 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 24 and 3 .....	" .....	1	£80	80 0 0
51	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 6 in. x 4 ft. 6 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 25 and 3 .....	" .....	1	£70	70 0 0

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
52	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 2 in. x 4 ft. 2 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 26 and 3 .....	each	1	67	67 0 0
53	Cast-iron frame with Muntz metal gas check for sewer of 5 ft. 1 in. x 4 ft. 1 in., complete with all wrought-iron and gun-metal work, as shown on drawings Nos. 27 and 17 .....	"	1	60	60 0 0
IRREGULAR CASTINGS, &c.					
54	Cast-iron flange and faucet pipe, 3 ft. 9 in. internal diameter, 8 ft. long in the body, as shown on drawings Nos. 14 and 16 .....		Tons. cwt. qr. lb.	18/-	33 10 0
55	Cast-iron pipe, 3 ft. 9 in. internal diameter, 8 ft. long over all, with two flange ends, one flange turned and drilled for 1½-in. diameter bolt-holes, as shown on drawings Nos. 14 and 16, weighing .....		2 2 3 4	20/-	40 3 2
56	Cast-iron flange and spigot pipe, 3 ft. 9 in. internal diameter, 9 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 16, weighing .....		1 16 3 13	20/-	36 17 3
57	Cast-iron pipe, 3 ft. 9 in. internal diameter, 10 ft. long over all, with spigot ends, as shown on drawing No. 16 .....		2 5 3 23	15/-	34 10 0
58	Cast-iron thimble, for 3-ft. 9-in. diameter syphon pipes, 18 in. long over all, as shown on drawing No. 16 .....		0 11 3 20	18/-	10 15 0
59	2—cast-iron flanged pipes, 3 ft. 6 in. internal diameter, 10 ft. long over all, one flange turned and drilled for 1½-in. diameter bolt-holes, as shown on drawings Nos. 17 and 18 .....		4 12 2 2	18/-	83 5 0
60	2—cast-iron flange and faucet pipes, 3 ft. 6 in. internal diameter, 12 ft. long in the body, as shown on drawings Nos. 17 and 18 .....		5 15 0 6	15/-	87 0 0
61	2—cast-iron flange and spigot pipes, 3 ft. 6 in. internal diameter, 10 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 18 .....		4 9 2 2	18/-	80 11 0
62	Cast-iron spigot pipe, 3 ft. 6 in. internal diameter, 10 ft. long over all, as shown on drawing No. 18 .....		2 2 3 25	18/-	38 14 0
63	Cast-iron spigot pipe, 3 ft. 6 in. internal diameter, 6 ft. 6 in. long over all, as shown on drawing No. 18 .....		1 7 3 20	18/-	25 3 0
64	Cast-iron spigot and faucet pipe, 3 ft. 6 in. internal diameter, 4 ft. 11 in. long in the body, as shown on drawing No. 18 .....		1 5 2 24	20/-	25 15 0
65	2—cast-iron thimbles for 3-ft. 6-in. diameter pipe-sewer, 18 in. long over all, as shown on drawing No. 18 .....		1 0 2 11	20/-	20 12 6
66	Cast-iron flange and faucet pipe 3 ft. internal diameter, 10 ft. long over all, drawings Nos. 15 and 16 .....		0 19 0 4	18/-	17 3 0
67	2—cast-iron flange and spigot pipes, 2 ft. internal diameter, 10 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 16 .....		1 13 3 18	18/-	30 12 0
68	Cast-iron thimble for 2-ft. diameter scour-pipes, 15 in. long over all, as shown on drawing No. 16 .....		0 4 1 5	20/-	4 6 0
69	Cast-iron flanged bend, 12 in. internal diameter, as shown on drawings Nos. 14 and 16 .....		0 14 1 0	20/-	14 5 0
70	Cast-iron flange and spigot bend, 16 in. internal diameter, as shown on drawings Nos. 3 and 10 .....		0 8 1 10	25/-	10 6 0
	Total, including placing on cement mortar bedding, where ordered, and fixed (except lead joints) in position in the works .....	ton.	33 12 3 12		
71	2—wrought-iron rolled girders for supporting lifting gear of penstocks at Premier-street shaft-chamber, 25 ft. long each, weighing per foot run 46 lb., as shown on drawings Nos. 3 and 20 .....	"	1 0 2 4	25/-	25 12 6
72	Platform for working penstocks in Premier-street shaft-chamber, consisting of two wrought-iron rolled girders, 25 ft. long each, weight per foot run 1½ lb., with cast iron gratings and wrought-iron standard and railings, complete, as shown on drawings Nos. 2 and 22, weighing in all .....	cwt.	1 4 2 15	25/-	30 15 0
73	Cast-iron standards and wrought-iron tube-railing at top of shaft, and solid bar-railings across shaft at landings, complete, as shown on drawing No. 4 .....	"	0 4 1 11	45/-	9 15 0
74	Wrought-iron ladder in shaft, with six ports, in four lengths, complete, as shown on drawing No. 4 .....	"	0 16 2 15	50/-	46 11 0
75	3—angle-iron bearers, with cast-iron perforated landing-plates in shaft, complete, as shown on drawing No. 4 .....	"	0 15 2 27	50/-	39 7 6
76	Wrought-iron hinged gratings, for outlet-well of syphon, with cast-iron hinge-plates and wrought-iron channel-girders, complete, as shown on drawings Nos. 14 and 21 .....	"	0 4 1 20	50/-	11 5 0
77	Wrought-iron hinged gratings, for inlet well of syphon, with cast-iron hinge-plates and wrought-iron channel-girders, complete, as shown on drawings Nos. 14 and 21 .....	"	0 9 1 11	50/-	23 6 0
CAST-IRON PIPES.					
78	Cast-iron straight, spigot and faucet pipes, 12 ft. long in the body, complete, as shown on drawings Nos. 16 and 18, as viz. :— 96—3-ft. 9-in. diameter syphon pipes .....		289 4 0 0	£ 10	2,892 0 0

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
			Tons cwt. qr. lb.	£	£ s. d.
79	154—3-ft. 6-in. diameter duplicate sewer pipes .....		435 5 0 14	10	4,352 11 6
80	59—2-ft. diameter scour-pipes .....		63 16 3 20	10/10/-	670 18 0
81	74—screw bolts, 1½ in. diameter, with hexagon heads and nuts, for 3-ft. 6-in. and 3-ft. 9-in. diameters flange pipe-joints .....		0 2 0 23	40/-	4 3 9
82	15—screw bolts, 1 in. diameter, with hexagon heads and nuts, for 2-ft. diameter flange pipe-joints .....		0 0 1 26	40/-	0 18 4
	Total for all straight pipes .....	ton.	788 8 2 27		
<b>PIPE-LAYING.</b>					
	Laying and jointing (including providing lead and span-yarn) the 3-ft. 9-in. diameter, the 3-ft. 6-in. diameter, and the 2-ft. diameter cast iron pipes, and irregular castings in open trenches and shafts, as specified in clause 20, complete, as viz.:—				
83	3-ft. 9-in. diameter syphon pipes and short ends, &c. ....	lineal yard	396	25/-	495 0 0
84	3-ft. 6-in. diameter duplicate sewer-pipes, short ends, &c. ....	"	649	22/-	713 18 0
85	2-ft. diameter scour-pipes and short ends, &c. ....	"	240	12/-	147 12 0
<b>TRAPPED JUNCTIONS.</b>					
86	Flap-traps, providing, delivering, and building in, including providing and fixing discs .....	each	10	£10	100 0 0
<b>GENERAL.</b>					
87	Permanent puddle, where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 23, including spreading in 9-in. layers and ramming, complete .....	cubic yard	10	4/-	2 0 0
88	Special bluestone concrete, in any situation, as specified in clause 2 ..	"	10	45/-	22 10 0
89	Bluestone metal (clause 2), 1½-in. gauge, stacked .....	"	15	13/-	9 15 0
90	Sandstone metal (clause 2), 2-in. gauge, stacked .....	"	15	5/-	3 15 0
91	Bluestone metal (clause 2), 2½-in. gauge, stacked .....	"	15	12/-	9 0 0
92	Sharp, clean, washed sand (clause 2), stacked .....	"	15	5/-	3 15 0
93	Sawn hardwood, in scantlings or planks (clause 2) .....	cubic foot	100	2/3	11 5 0
94	Oregon timber, in scantlings or planks .....	"	100	2/6	12 10 0
95	Wrought-iron, in bolts, galvanized step-irons, screws, nails, spikes, straps, &c. (clause 2) .....	cwt.	20	37/-	37 0 0
96	Portland cement .....	cask	25	12/-	15 0 0
97	Artizan or mechanic, supplied by Contractor .....	day	Rate only	14/-	
98	Quarryman or other skilled labourer, supplied by Contractor .....	"	"	10/-	
99	Ordinary labourer, supplied by Contractor .....	"	"	8/-	
100	Cart with one horse and driver, supplied by Contractor .....	"	"	12/-	
101	One additional horse, supplied by Contractor .....	"	"	6/-	
	TOTAL .....		£	...	53,523 6 6

The quantities are not guaranteed as correct, and are merely for the guidance of Tenderers, who must satisfy themselves as to their accuracy, which is not in any way guaranteed by the Government, and they are subject to omissions, deductions, or alterations.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in strict accordance with the Specification.

The above Schedule Prices include, in every case, continual maintenance of the works during the whole time of construction, the period of maintenance, and up to the day of their being formally taken over by the Engineer.

Item No. 45 to include the cost of conveying the Government property from the Contractor's Store or Field Office to the various sites of works along line of Main and Branch Sewers, at man-holes, gas-check, and shaft-chamber, &c.

Prices for items Nos. 89, 90, 91, 92, 93, 94, 95, and 96 are to be for materials in strict accordance with Specification, delivered on the works ready for use, and only the actual net quantities ordered and approved of shall be paid for. In case Contractor's prices are considered too high by the Engineer at the time such materials may be required, or if the Contractor fail to deliver such materials at the time required and ordered, then the Engineer shall have the power to supply the same from any other sources, and the Contractor shall have no claim for loss or compensation on account of the exercise of such power by the Engineer.

Prices for items Nos. 97, 98, 99, 100, and 101 are to be for such as are able-bodied and efficient. The Schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

**SUMMARY.**

## SUMMARY of Weights of Wrought and Cast Ironwork, including all Gun-metal.

(The number of Items underneath correspond with those of the Schedule of the Quantities and Prices.)

No. of Item.	Description of Item.	Number required.	Weight of each Item.	Total weight.
<b>PENSTOCKS.</b>				
			Ts. ct. qr. lb.	Ts. ct. qr. lb.
46	Cast-iron frame and penstock, with 6-ft. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	3	6 5 1 22	18 16 1 10
47	Cast-iron frame and penstock, with 3-ft. 9 in. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	2	3 7 0 4	6 14 0 8
48	Cast-iron frame and penstock, with 2-ft. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	1	1 1 1 20	1 1 1 20
	Total weight .....	...	.....	26 11 9 10
<b>GAS-CHECKS.</b>				
49	Cast-iron frame, with muntz metal gas-check, for 6-ft. 10-in. by 5-ft. 10-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	1 1 1 26	1 1 1 26
50	Cast-iron frame, with muntz metal gas-check, for 6-ft. 8-in. by 5-ft. 8-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 19 2 17	0 19 2 17
51	Cast-iron frame, with muntz metal gas-check, for 5-ft. 6-in. by 4-ft. 6-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 14 0 26	0 14 0 26
52	Cast-iron frame, with muntz metal gas-check, for 5-ft. 2-in. by 4-ft. 2-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 13 0 3	0 13 0 3
53	Cast-iron frame, with muntz metal gas-check for 5-ft. 1-in. by 4-ft. 1-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 11 0 2	0 11 0 2
	Total weight .....	...	.....	3 19 1 18
<b>IRREGULAR CASTINGS, &amp;c.</b>				
54	Flange and faucet pipe, 8 ft. long, 3 ft. 9 in. internal diameter.....	1	2 2 3 4	2 2 3 4
55	Flange pipe, 8 ft. long, 3 ft. 9 in. internal diameter, one flange turned and drilled, for 1½-in. diameter bolt-holes.....	1	2 0 0 18	2 0 0 18
56	Flange and spigot pipe, 9 ft. long, 3 ft. 9 in. internal diameter, the flanges to be turned and drilled for 1½-in. diameter bolt-holes.....	1	1 16 3 13	1 16 3 13
57	Spigot pipe, 10 ft. long, 3 ft. 9 in. internal diameter .....	1	2 5 3 23	2 5 3 23
58	Cast-iron thimble for 3-ft. 9-in. diameter pipe, 18 in. long .....	1	0 11 3 20	0 11 3 20
59	Flange-pipe, 10 ft. long, 3 ft. 6 in. internal diameter, one flange turned and drilled, for 1½-in. diameter bolt-holes .....	2	2 6 1 1	4 12 2 2
60	Flange and faucet pipe, 12 ft. long, 3 ft. 6 in. internal diameter .....	2	2 18 0 3	5 16 0 6
61	Flange and spigot pipe, 10 ft. long, 3 ft. 6 in. internal diameter, the flange turned and drilled for 1½-in. diameter bolt-holes .....	2	2 4 3 1	4 9 2 2
62	Spigot pipe, 10 ft. long, 3 ft. 6 in. internal diameter .....	1	2 2 3 25	2 2 3 25
63	Spigot pipe, 6 ft. 6 in. long, 3 ft. 6 in. internal diameter .....	1	1 7 3 20	1 7 3 20
64	Spigot and faucet pipe, 4 ft. 10 in. long, 3 ft. 6 in. internal diameter .....	1	1 5 2 24	1 5 2 24
65	Cast-iron thimble for 3-ft. 6-in. diameter pipe, 18 in. long.....	2	0 10 1 7	1 0 2 14
66	Flange and faucet pipe, 10 ft. long, 2 ft. internal diameter .....	1	0 19 0 4	0 19 0 4
67	Flange and spigot pipe, 10 ft. long, 2 ft. internal diameter, the flange to be turned and drilled for 1½-in. diameter bolt-holes .....	2	0 16 3 23	1 13 3 18
68	Cast-iron thimble for 2-ft. diameter pipe, 15 in. long .....	1	0 4 1 5	0 4 1 5
69	Cast-iron flange bend, 12 in. internal diameter.....	4	0 3 2 7	0 14 1 0
70	Cast-iron flange and spigot bend, 16 in. internal diameter .....	2	0 4 0 19	0 8 1 10
	Total weight .....	...	.....	33 12 3 12
71	Wrought-iron rolled girders, 13½ in. high, top and bottom flange 5½ in. wide, 25 ft. long, to be walled in at Premier-street shaft chamber .....	2	at 46 lb. per ft.	1 0 2 4
72	Platform for working penstocks, Premier-street shaft, two wrought-iron rolled girders, 9 in. high, top and bottom flanges, 3 in. wide, 25 ft. long, weighing 19 lb. per lineal foot, with cast-iron gratings and wrought-iron standards and railings complete.....	...	.....	1 4 2 15
73	Cast-iron standards and wrought-iron tube-railing at top of shaft, and solid bar-railing across shaft at landings .....	...	.....	0 4 1 11
74	Wrought-iron ladder in shaft, with supports, in four lengths, complete .....	...	.....	0 16 2 15
75	Angle-iron bearers with cast-iron perforated landing plates in shaft in Premier-street, complete .....	3	.....	0 15 2 27
76	Wrought-iron hinged gratings on cast-iron hinge-plates and double wrought-iron channel girders, with cast-iron distance blocks for outlet well of syphon .....	...	.....	0 4 1 20
77	Wrought-iron hinged grating for inlet well of syphon on cast-iron hinge-plates and double wrought-iron, channel-iron girders with cast-iron distance blocks .....	...	.....	0 9 1 11
	Total weight .....	...	.....	4 15 2 19
<b>CAST-IRON STRAIGHT SPIGOT AND FAUCET PIPES, 12 FT. LONG.</b>				
78	3-ft. 9-in. diameter syphon pipes .....	96	3 0 1 0	289 4 0 0
79	3-ft. 6-in. diameter duplicate sewer-pipes.....	154	2 16 2 3	435 5 0 14
80	2-ft. diameter scour-pipes .....	59	1 1 2 16	63 16 3 20
	Total weight of pipes.....	...	.....	788 6 0 6
81	Screw-bolts 1½ in. diameter, with hexagon heads and nuts, for 3-ft. 9-in. and 3-ft. 6-in. diameters, flange pipe-joints .....	74	.....	0 2 0 23
82	Screw-bolts 1 in. diameter, with hexagon heads and nuts, for 2-ft. diameter flange pipe-joints .....	15	.....	0 0 1 26
	Total weight .....	...	.....	0 2 2 21

## No. 5.—JUSTIN McSWEENEY'S TENDER.

Item No.		Add.		Deduct.	
		£	s. d.	£	s. d.
32	.....			0	10 0
54 to 70	.....			12	4 4
71	.....			0	10 1
75	.....	0	15 0		
		0	15 0	13	4 5

Department of Public Works, Roads and Bridges and Sewerage Branch.

## TENDER FORM.

In pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Eastern Main Branch Sewer, Western Suburbs Sewerage, from Premier-street to Sebastopol-street and Branches (Contract No. 69), agreeably to the Plans, Specification, Schedule to Specification, and General Conditions, which have been inspected by us for or at the rates entered in the Schedule of Quantities and Prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this Tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates or prices mentioned in the Schedule of Quantities and Prices annexed hereto, or if not in Schedule, at a price to be agreed upon at the time, and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said Tender, execute and deliver to the Minister for Public Works, a valid legal Contract with Her Majesty the Queen, embodying the terms and Conditions above mentioned, and to provide the security required by clause 29 of the said General Conditions; and we enclose herewith our cheque for the sum of £ as a preliminary Deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said Tender is opened withdraw same, or if, in the event of this Tender being accepted, we fail to complete the above-mentioned Contract within fourteen days thereafter; and further, that this Tender is made subject to the Conditions contained in the Tender Board Regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 13th day of December, 1893.

JUSTIN McSWEENEY.  
J. P. McMANUS,  
Randwick.

## TENDER BOARD REGULATIONS.

No Tender shall be received after eleven a.m. on the day named for the receipt of such Tender unless there are circumstances which, in the opinion of the Members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the Tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of Tenders received for each work and the name of the lowest Tenderer; but no Tender shall be accepted until the Head of the Branch, under whose directions the work is to be carried out, has reported upon the whole of the Tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the Tenders received, showing the work, the name of the Tenderer, and the amount of each Tender.

All envelopes containing Tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the Tender is submitted.

Every Tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive ... ..	£5 0 0
For amounts exceeding £500 and not exceeding £1,000...	£10 0 0

For all sums over £1,000 one per cent. on the amount of Tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful Tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful Tenderer shall be returned to him on his executing the bond for the fulfilment of the Contract. When the Contract is for a less sum than £200 the deposit with Tender shall not be returnable until the service is satisfactorily completed.

Any Tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any Tenderer failing to take up his Tender, complete the bond, and proceed with the Contract, within the time specified, or withdrawing his Tender after it shall have been opened, whether such Tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a Tenderer shall fail to proceed with a Contract as aforesaid, fresh Tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another Tender in the same series to be accepted; but the Tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In the event of any Contract being tendered for at a Schedule of Rates, the approximate quantities as given of each item must be worked out and a total sum shown.

In submitting a Tender, the full Christian name of the Tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the Tender. The omission of this information will render the Tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any Tender.

The Board-room shall be open for the admission of the public while the Tenders are being opened and declared.

CONTRACT No. 69.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
	Excavations in open trenches, in more or less hard materials, and in hard rock, for sewers, branches, pipes, sub-ducts, &c., as specified in clause 3, as viz. :—				£ s. d.
1	Excavation in road surfaces, sand, soil, pipeclay, shale, soft rock, where in the opinion of the Engineer blasting is unnecessary .....	cubic yard	19,320	3/9	2,022 10 0
2	Excavation in hard shale or rock, where gadding and guttering only is permitted .....	"	1,165	4/-	233 0 0
3	Excavation in hard shale or rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	1,165	5/-	2 1 5 0
4	Excavation in hard shale or rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	1,165	5/-	2 1 5 0
	Excavation in tunnels in "more or less hard materials," for sewers, pipe sewers, sub-ducts, &c., as specified in clause 3, as viz. :—				
5	Less hard excavation in clay, loose, and jointy shale, &c., where in the opinion of the Engineer blasting is unnecessary .....	"	810	20/-	6 0 0 0
6	Excavation in hard sandstone or shale, where gadding and guttering only is permitted .....	"	1,140	37/6	2,137 10 0
7	Excavation in hard sandstone, shale, ironstone, &c., where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	1,140	32/6	1,552 10 0
8	Excavations in hard sandstone, shale, ironstone, &c., where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted ..	"	1,140	32/6	1,552 10 0
	Excavation in tunnels in "solid rock" for sewers, pipe-sewers, sub-ducts, &c., as specified in clause 3, as viz. :—				
9	Excavation in hard rock, where gadding and guttering only is permitted .....	"	1,850	45/-	4,162 10 0
10	Excavation in hard rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	1,850	35/-	3,237 10 0
11	Excavation in hard rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted.....	"	1,850	35/-	3,237 10 0
	Excavation in "solid rock," in shafts, shaft chambers, and sumps, as specified in clause 3, as viz. :—				
12	Excavation in road surfaces, soil clay, pipeclay, shale, and soft rock only, where in the opinion of the Engineer blasting is unnecessary .....	"	120	12/-	78 0 0
13	Excavation in hard rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	445	23/-	511 15 0
14	Excavation in hard rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	445	22/-	4 9 10 0
15	Excavation in hard rock, where gadding and guttering only is permitted .....	"	445	34/-	756 10 0
	Excavation in "more or less hard ground," in shafts, shaft chambers, and sumps, as specified in clause 3, as viz. :—				
16	Less hard excavation in road surfaces, soil, clay, pipeclay, loose and jointy shale, and soft rock, where in the opinion of the Engineer blasting is unnecessary .....	"	170	12/-	102 0 0
17	Excavation in hard sandstone or shale, where guttering and gadding only is permitted .....	"	115	26/6	152 7 6
18	Excavation in hard sandstone or shale, ironstone, &c., where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted .....	"	115	23/-	132 5 0
19	Excavation in hard sandstone or shale, ironstone, &c., where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	115	22/-	126 10 0

No. of Item.	Description or Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
20	Filling in at sides, round and over all concrete and brickwork of sewers, shafts, chambers, pipes, embankments, and tunnels, as specified in clause 5.....	cubic yard	15,220	1/6	£ s. d. 1,141 10 0
21	Timber ordered in writing to be left in excavations, as specified in clause 9, including all iron used in fixing same .....	cubic foot	9,000	-/3	112 10 0
22	Removing existing culverts crossing the Illawarra Road, as specified in clause 12, including masonry, pitching, and timber decking .....	cubic yard	244	5/-	61 0 0
23	Sub-duct in hard rock, with tile covers, as specified in clause 8.....	lineal yard	280	3/-	42 0 0
	Sub-duct, as specified in clause 8, in "more or less hard material," including dry or cement jointing for stoneware pipes :—				
24	Of 6 in. internal diameter .....	"	610	5/-	160 0 0
25	Of 9 in. internal diameter .....	"	640	6/-	192 0 0
	Sub-duct in water-charged loose ground, as specified in clause 8, including hardwood boxes with packing in same, and dry or cement jointing for pipes of :—				
26	6 in. internal diameter .....	"	280	6/-	84 0 0
27	9 in. internal diameter .....	"	280	8/-	122 0 0
28	Hand-packed stone filling 4-in. gauge, as specified in clauses 8 and 10 .....	cubic yard.	760	4/-	152 0 0
29	Bluestone metal, 2½-in. gauge, on road surfaces, as specified in clause 10 .....	"	190	15/-	142 10 0
30	Blinding 2 in. thick over metal surfaces, as specified in clause 10.....	"	90	20/-	90 0 0
31	Sandstone concrete, in any situation, as specified in clause 13 .....	"	1,050	33/-	1,732 10 0
32	Bluestone concrete, in any situation, as specified in clause 13 .....	"	4,550	38/-	8,645 10 0
33	Brickwork in cement, in any situation, as specified in clause 15 .....	"	1,605	49/-	3,932 5 0
34	Cement facing, in any situation, as specified in clause 14 .....	square yard	11,600	1/6	870 0 0
35	Pyrmont sandstone, ashlar, in any situation, as specified in clause 16 .....	cubic foot.	210	4/-	42 0 0
36	Squared bluestone pitchers, in any situation, as specified in clause 17 .....	square yard	12	45/-	27 0 0
37	Squared freestone pitchers, in any situation, 6 in. deep, as specified in clause 18.....	"	38	10/-	19 0 0
38	Supply and fix ordnance fencing complete, with ironwork, painting, and tarring, as specified in clause 11 .....	rod ...	7	20/-	7 0 0
	Providing, laying, and jointing glazed stoneware, plate, junction, and bend-pipes, in trenches, shafts, &c., as specified in clause 19, including providing and fixing discs, complete, as viz. :—				
39	9-in. diameter pipes in pipe-sewers and shafts .....	lineal yard.	40	5/-	10 0 0
40	12-in. diameter pipes in pipe-sewers .....	"	64	6/3	20 0 0
41	16-in. diameter pipes in pipe-sewers .....	"	15	10/-	7 10 0
42	18-in. diameter pipes in pipe-sewers .....	"	5	12/6	3 2 6
<b>SURPLUS MATERIALS.</b>					
	Removal of surplus materials from all excavations, as specified in clauses 51, 54, and 86 of the Schedule to Specification, including spreading, as viz. :—				
43	For the first half-mile of lead.....	cubic yard.	20,420	-/9	765 15 0
44	For every further quarter of a mile of lead .....	"	30,000	-/4½	562 10 0
<b>GOVERNMENT PROPERTY.</b>					
45	Receiving and fixing ironwork, supplied by the Government, as specified in clauses 272 to 275 of the Schedule to Specification .....	ton ...	25	£3	75 0 0
<b>IRONWORK.</b>					
	Manufacture, supply, and fix (except where otherwise specified) all wrought-iron, gun-metal, and cast-iron work, and including painting and tarring, complete, as specified in clauses 21 to 26 inclusive, as viz. :—				
<b>PENSTOCKS.</b>					
46	Cast-iron frame and penstock, 6-ft. diameter opening, with lifting gear, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 20 and 3 .....	each ...	3	£270	810 0 0
47	Cast-iron frame and penstock, 3-ft. 9-in. diameter opening, with lifting gear, street-box, cover-plate, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 19 and 14.....	"	2	£170	340 0 0
48	Cast-iron frame and penstock of 2-ft. diameter opening, with 2-ft. diameter spigot and flanged bend, lifting gear, street-box, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 14 and 18 .....	"	1	£63	63 0 0
<b>GAS CHECKS.</b>					
49	Cast-iron frame with Muntz metal gas-check for sewer of 6 ft. 10 in. x 5 ft. 10 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 23 and 3.....	each.	1	£100	100 0 0
50	Cast-iron frame with Muntz metal gas-check for sewer of 6 ft. 8 in. x 5 ft. 8 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 24 and 3 .....	"	1	£75	75 0 0
51	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 6 in. x 4 ft. 6 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 25 and 3 .....	"	1	£75	75 0 0

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
52	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 2 in x 4 ft. 2 in., with all wrought-iron and gun metal work, complete, as shown on drawings Nos. 26 and 3 .....	each	1	55	55 0 0
53	Cast-iron frame with Muntz metal gas check for sewer of 5 ft. 1 in x 4 ft. 1 in., complete with all wrought-iron and gun-metal work, as shown on drawings Nos. 27 and 17 .....	"	1	55	55 0 0
IRREGULAR CASTINGS, &C.					
54	Cast-iron flange and faucet pipe, 3 ft. 9 in. internal diameter, 8 ft. long in the body, as shown on drawings Nos. 14 and 16 .....		Tons. cwt. qr. lb.	...	.....
55	Cast-iron pipe, 3 ft. 9 in. internal diameter, 8 ft. long over all, with two flange ends, one flange turned and drilled for 1½-in. diameter bolt-holes, as shown on drawings Nos. 14 and 16, weighing .....		2 0 0 18	...	.....
56	Cast-iron flange and spigot pipe, 3 ft. 9 in. internal diameter, 9 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 16, weighing .....		1 16 3 13	...	.....
57	Cast-iron pipe, 3 ft. 9 in. internal diameter, 10 ft. long over all, with spigot ends, as shown on drawing No. 16 .....		2 5 3 23	...	.....
58	Cast-iron thimble, for 3-ft. 9-in. diameter syphon pipes, 18 in. long over all, as shown on drawing No. 16 .....		0 11 3 20	...	.....
59	2—cast-iron flanged pipes, 3 ft. 6 in. internal diameter, 10 ft. long over all, one flange turned and drilled for 1½-in. diameter bolt-holes, as shown on drawings Nos. 17 and 18 .....		4 12 2 2	...	.....
60	2—cast-iron flange and faucet pipes, 3 ft. 6 in. internal diameter, 12 ft. long in the body, as shown on drawings Nos. 17 and 18 .....		5 16 0 6	...	.....
61	2—cast-iron flange and spigot pipes, 3 ft. 6 in. internal diameter, 10 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 18 .....		4 9 2 2	...	.....
62	Cast-iron spigot pipe, 3 ft. 6 in. internal diameter, 10 ft. long over all, as shown on drawing No. 18 .....		2 2 3 25	...	.....
63	Cast-iron spigot pipe, 3 ft. 6 in. internal diameter, 6 ft. 6 in. long over all, as shown on drawing No. 18 .....		1 7 3 20	...	.....
64	Cast-iron spigot and faucet pipe, 3 ft. 6 in. internal diameter, 4 ft. 10 in. long in the body, as shown on drawing No. 18 .....		1 5 2 24	...	.....
65	2—cast-iron thimbles for 3-ft. 6-in. diameter pipe-sewer, 18 in. long over all, as shown on drawing No. 18 .....		1 0 2 14	...	.....
66	Cast-iron flange and faucet pipe, 2 ft. internal diameter, 10 ft. long over all, drawings Nos. 15 and 16 .....		0 19 0 4	...	.....
67	2—cast-iron flange and spigot pipes, 2 ft. internal diameter, 10 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 16 .....		1 13 3 18	...	.....
68	Cast-iron thimble for 2-ft. diameter scour-pipes, 15 in. long over all, as shown on drawing No. 16 .....		0 4 1 5	...	.....
69	Cast iron flanged bend, 12 in. internal diameter, as shown on drawings Nos. 14 and 16 .....		0 14 1 0	...	.....
70	Cast-iron flange and spigot bend, 16 in. internal diameter, as shown on drawings Nos. 3 and 10 .....		0 8 1 10	...	.....
	Total, including placing on cement mortar bedding, where ordered, and fixed (except lead joints) in position in the works ..	ton.	33 12 3 12	£20	672 17 2
71	2—wrought-iron rolled girders for supporting lifting gear of penstocks at Premier-street shaft-chamber, 25 ft. long each, weighing per foot run 46 lb., as shown on drawings Nos. 3 and 20 .....	"	1 0 2 4	£20	20 10 8
72	Platform for working penstocks in Premier-street shaft-chamber, consisting of two wrought-iron rolled girders, 25 ft. long each weight per foot run 19 lb., with cast iron gratings and wrought-iron standard and railings, complete, as shown on drawings Nos. 2 and 22, weighing in all .....	cwt.	1 4 2 15	30/-	36 19 0
73	Cast-iron standards and wrought-iron tube-railing at top of shaft, and solid bar-railings across shaft at landings, complete, as shown on drawing No. 4 .....	"	0 4 1 11	45/-	9 15 8
74	Wrought-iron ladder in shaft, with supports, in four lengths, complete, as shown on drawing No. 4 .....	"	0 16 2 15	40/-	33 5 4
75	3—angle-iron bearers, with cast-iron perforated landing-plates in shaft, complete, as shown on drawing No. 4 .....	"	0 15 2 27	25/-	19 13 5
76	Wrought-iron hinged gratings, for outlet well of syphon, with cast-iron hinge-plates and wrought-iron channel-girders, complete, as shown on drawings Nos. 14 and 21 .....	"	0 4 1 20	60/-	13 5 8
77	Wrought-iron hinged gratings, for inlet well of syphon, with cast-iron hinge-plates and wrought-iron channel-girders, complete, as shown on drawings Nos. 14 and 21 .....	"	0 9 1 11	60/-	28 0 10
CAST-IRON PIPES.					
	Cast-iron straight, spigot and faucet pipes, 12 ft. long in the body, complete, as shown on drawings Nos. 16 and 18, as viz. :—			£	
78	96—3-ft. 9-in. diameter syphon pipes .....		280 4 0 0	...	.....

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
			Tons cwt. qr. lb.	£	£ s. d.
79	154—3-ft. 6-in. diameter duplicate sewer pipes .....		435 5 0 14		
80	59—2-ft. diameter scour-pipes .....		63 16 3 20		
81	74—screw bolts, 1½ in. diameter, with hexagon heads and nuts, for 3-ft. 6-in. and 3-ft. 9-in. diameters flange pipe-joints .....		0 2 0 23		
82	15—screw bolts, 1 in. diameter, with hexagon heads and nuts, for 2-ft. diameter flange pipe-joints .....		0 0 1 26		
	Total for all straight pipes.....	ton.	788 8 2 27	£10	7,884 7 4
<b>PIPE-LAYING.</b>					
	Laying and jointing (including providing lead and spun-yarn) the 3-ft. 9-in. diameter, the 3-ft. 6-in. diameter, and the 2-ft. diameter cast-iron pipes, and irregular castings in open trenches and shafts, as specified in clause 20, complete, as viz.:-				
83	3-ft. 9-in. diameter syphon pipes and short ends, &c. ....	lineal yard	306	18/6	366 6 0
84	3-ft. 6-in. diameter duplicate sewer-pipes, short ends, &c. ....	"	619	16/6	535 8 6
85	2-ft. diameter scour-pipes and short ends, &c. ....	"	246	13/-	159 18 0
<b>TRAPPED JUNCTIONS.</b>					
86	Flap-traps, providing, delivering, and building in, including providing and fixing discs .....	each	10	30/-	15 0 0
<b>GENERAL.</b>					
87	Permanent puddle, where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 29, including spreading in 9-in. layers and ramming, complete .....	cubic yard	10	12/-	6 0 0
88	Special blue-lone concrete, in any situation, as specified in clause 2 ...	"	10	60/-	30 0 0
89	Bluestone metal (clause 2), 1½-in. gauge, stacked .....	"	15	15/-	11 5 0
90	Sandstone metal (clause 2), 2-in. gauge, stacked .....	"	15	8/-	6 0 0
91	Bluestone metal (clause 2), 2½-in. gauge, stacked .....	"	15	14/-	10 10 0
92	Sharp, clean, washed sand (clause 2), stacked .....	"	15	12/-	9 0 0
93	Sawn hardwood, in scantlings or planks (clause 2) .....	cubic foot	100	3/-	16 0 0
94	Oregon timber, in scantlings or planks .....	"	100	4/-	20 0 0
95	Wrought-iron, in bolts, galvanized step-irons, screws, nails, spikes, straps, &c. (clause 2) .....	cwt.	20	56/-	56 0 0
96	Portland cement .....	cask	25	15/-	18 15 0
97	Artizan or mechanic, supplied by Contractor .....	day	Rate only	12/-	
98	Quarryman or other skilled labourer, supplied by Contractor .....	"	"	10/-	
99	Ordinary labourer, supplied by Contractor .....	"	"	9/-	
100	Cart with one horse and driver, supplied by Contractor.....	"	"	13/-	
101	One additional horse, supplied by Contractor .....	"	"	18/-	
	TOTAL .....		.....£	...	54,636 7 7

The quantities are not guaranteed as correct, and are merely for the guidance of Tenderers, who must satisfy themselves as to their accuracy, which is not in any way guaranteed by the Government, and they are subject to omissions, deductions, or alterations.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in strict accordance with the Specification.

The above Schedule Prices include, in every case, continual maintenance of the works during the whole time of construction, the period of maintenance, and up to the day of their being formally taken over by the Engineer.

Item No. 45 to include the cost of conveying the Government property from the Contractor's Store or Field Office to the various sites of works along line of Main and Branch Sewers, at man-holes, gas-check, and shaft-chamber, &c.

Prices for items Nos. 89, 90, 91, 92, 93, 94, 95, and 96 are to be for materials in strict accordance with Specification, delivered on the works ready for use, and only the actual net quantities ordered and approved of shall be paid for. In case Contractor's prices are considered too high by the Engineer at the time such materials may be required, or if the Contractor fail to deliver such materials at the time required and ordered, then the Engineer shall have the power to supply the same from any other sources, and the Contractor shall have no claim for loss or compensation on account of the exercise of such power by the Engineer.

Prices for items Nos. 97, 98, 99, 100, and 101 are to be for such as are able-bodied and efficient. The Schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

## SUMMARY of Weights of Wrought and Cast Ironwork, including all Gun-metal.

(The number of Items underneath correspond with those of the Schedule of the Quantities and Prices.)

No. of Item.	Description of Item.	Number required.	Weight of each Item.	Total weight.
<b>PENSTOCKS.</b>				
46	Cast-iron frame and penstock, with 6-ft. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	3	Ts. ct. qr. lb. 6 5 1 22	Ts. ct. qr. lb. 18 16 1 10
47	Cast-iron frame and penstock, with 3-ft. 9 in. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	2	3 7 0 4	6 14 0 8
48	Cast-iron frame and penstock, with 2-ft. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	1	1 1 1 20	1 1 1 20
	Total weight .....	...	.....	26 11 3 10
<b>GAS-CHECKS.</b>				
49	Cast-iron frame, with muntz metal gas-check, for 6-ft. 10-in. by 5-ft. 10-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	1 1 1 26	1 1 1 26
50	Cast-iron frame, with muntz metal gas-check, for 6-ft. 8-in. by 5-ft. 8-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 19 2 17	0 19 2 17
51	Cast-iron frame, with muntz metal gas-check, for 5-ft. 6-in. by 4-ft. 6-in. sewer with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 14 0 26	0 14 0 26
52	Cast-iron frame, with muntz metal gas-check, for 5-ft. 2-in. by 4-ft. 2-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 13 0 3	0 13 0 3
53	Cast-iron frame, with muntz metal gas-check, for 5-ft. 1-in. by 4-ft. 1-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 11 0 2	0 11 0 2
	Total weight .....	...	.....	3 19 1 18
<b>IRREGULAR CASTINGS, &amp;c.</b>				
54	Flange and faucet pipe, 8 ft. long, 3 ft. 9 in. internal diameter.....	1	2 2 3 4	2 2 3 4
55	Flange pipe, 3 ft. long, 3 ft. 9 in. internal diameter, one flange turned and drilled, for 1½-in. diameter bolt-holes .....	1	2 0 0 18	2 0 0 18
56	Flange and spigot pipe, 9 ft. long, 3 ft. 9 in. internal diameter, the flanges to be turned and drilled for 1½-in. diameter bolt-holes.....	1	1 16 3 13	1 16 3 13
57	Spigot pipe, 10 ft. long, 3 ft. 9 in. internal diameter .....	1	2 5 3 23	2 5 3 23
58	Cast-iron thimble for 3-ft. 9-in. diameter pipe, 18 in. long .....	1	0 11 3 20	0 11 3 20
59	Flange-pipe, 10 ft. long, 3 ft. 6 in. internal diameter, one flange turned and drilled, for 1½-in. diameter bolt-holes .....	2	2 6 1 1	4 12 2 2
60	Flange and faucet pipe, 12 ft. long, 3 ft. 6 in. internal diameter .....	2	2 18 0 3	5 16 0 6
61	Flange and spigot pipe, 10 ft. long, 3 ft. 6 in. internal diameter, the flange to be turned and drilled for 1½-in. diameter bolt-holes .....	2	2 4 3 1	4 9 2 2
62	Spigot pipe, 10 ft. long, 3 ft. 6 in. internal diameter .....	1	2 2 3 25	2 2 3 25
63	Spigot pipe, 6 ft. 6 in. long, 3 ft. 6 in. internal diameter.....	1	1 7 3 20	1 7 3 20
64	Spigot and faucet pipe, 4 ft. 10 in. long, 3 ft. 6 in. internal diameter .....	1	1 5 2 24	1 5 2 24
65	Cast-iron thimble for 3-ft. 6-in. diameter pipe, 18 in. long.....	2	0 10 1 7	1 0 2 14
66	Flange and faucet pipe, 10 ft. long, 2 ft. internal diameter .....	1	0 19 0 4	0 19 0 4
67	Flange and spigot pipe, 10 ft. long, 2 ft. internal diameter, the flange to be turned and drilled for 1½-in. diameter bolt-holes .....	2	0 16 3 23	1 13 3 18
68	Cast-iron thimble for 2-ft. diameter pipe, 15 in. long .....	1	0 4 1 5	0 4 1 5
69	Cast-iron flange bend, 12 in. internal diameter.....	4	0 3 2 7	0 14 1 0
70	Cast-iron flange and spigot bend, 16 in. internal diameter .....	2	0 4 0 19	0 8 1 10
	Total weight .....	...	.....	33 12 3 12
71	Wrought-iron rolled girders, 13½ in. high, top and bottom flange 5½ in. wide, 25 ft. long, to be walled in at Premier-street shaft chamber .....	2	at 46 lb. per ft.	1 0 2 4
72	Platform for working penstocks, Premier-street shaft, two wrought-iron rolled girders, 9 in. high, top and bottom flanges, 3 in. wide, 25 ft. long, weighing 19 lb per lineal foot, with cast-iron gratings and wrought-iron standards and railings complete .....	...	.....	1 4 2 15
73	Cast-iron standards and wrought-iron tube-railing at top of shaft, and solid bar-railing across shaft at landings .....	...	.....	0 4 1 11
74	Wrought-iron ladder in shaft, with supports, in four lengths, complete .....	...	.....	0 16 2 15
75	Angle-iron bearers with cast-iron perforated landing plates in shaft in Premier-street, complete .....	3	.....	0 15 2 27
76	Wrought-iron hinged gratings on cast-iron hinge-plates and double wrought-iron channel girders, with cast-iron distance blocks for outlet well of syphon .....	...	.....	0 4 1 20
77	Wrought-iron hinged grating for inlet well of syphon on cast-iron hinge-plates and double wrought-iron, channel-iron girders with cast-iron distance blocks .....	...	.....	0 9 1 11
	Total weight .....	...	.....	4 15 2 19
<b>CAST-IRON STRAIGHT SPIGOT AND FAUCET PIPES, 12 FT. LONG.</b>				
78	3-ft. 9-in. diameter syphon pipes .....	96	3 0 1 0	290 4 0 0
79	3-ft. 6-in. diameter duplicate sewer-pipes.....	154	2 16 2 3	435 5 0 14
80	2-ft. diameter scour-pipes .....	59	1 1 2 16	63 16 3 20
	Total weight of pipes.....	...	.....	738 0 0 6
81	Screw-bolts 1½ in. diameter, with hexagon heads and nuts, for 3-ft. 9-in. and 3-ft. 6-in. diameters, flange pipe-joints .....	74	.....	0 2 0 23
82	Screw-bolts 1 in. diameter, with hexagon heads and nuts, for 2-ft. diameter flange pipe-joints .....	15	.....	0 0 1 26
	Total weight .....	...	.....	0 2 2 21

## No. 6.—HOLLOWAY BROTHERS' TENDER.

Item No.	Add.			Deduct.		
	£	s.	d.	£	s.	d.
10 .....	231	5	0	.....		
" 11 .....	231	5	0	.....		
" 16 .....	100	0	0	.....		
" 18 .....	.....			10	0	0
" 34 .....	.....			0	13	6
" 43 .....	1	0	0	.....		
" 54-70 .....	.....			0	0	8
" 76 .....	0	3	5	.....		
	563	13	5	10	14	2
	10	14	2			
	£552	19	3			

Department of Public Works, Roads and Bridges and Sewerage Branch.

## TENDER FORM.

In pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Eastern Main Branch Sewer, Western Suburbs Sewerage, from Premier-street to Sebastopol-street and Branches (Contract No. 69), agreeably to the Plans, Specification, Schedule to Specification, and General Conditions, which have been inspected by us for or at the rates entered in the Schedule of Quantities and Prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this Tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates or prices mentioned in the Schedule of Quantities and Prices annexed hereto, or if not in Schedule, at a price to be agreed upon at the time, and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said Tender, execute and deliver to the Minister for Public Works, a valid legal Contract with Her Majesty the Queen, embodying the terms and Conditions above mentioned, and to provide the security required by clause 29 of the said General Conditions; and we enclose herewith our cheque for the sum of £500 as a preliminary Deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said Tender is opened withdraw same, or if, in the event of this Tender being accepted, we fail to complete the above-mentioned Contract within fourteen days thereafter; and further, that this Tender is made subject to the Conditions contained in the Tender Board Regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 12th day of December, 1893.

RICHARD HOLLOWAY,  
WILLIAM HOLLOWAY,  
Goulburn.

## TENDER BOARD REGULATIONS.

No Tender shall be received after eleven a.m. on the day named for the receipt of such Tender unless there are circumstances which, in the opinion of the Members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the Tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of Tenders received for each work and the name of the lowest Tenderer; but no Tender shall be accepted until the Head of the Branch, under whose directions the work is to be carried out, has reported upon the whole of the Tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the Tenders received, showing the work, the name of the Tenderer, and the amount of each Tender.

All envelopes containing Tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the Tender is submitted.

Every Tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz.:—

For amounts up to £500 inclusive ... ..	£5	0	0
For amounts exceeding £500 and not exceeding £1,000...	£10	0	0

For all sums over £1,000 one per cent. on the amount of Tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful Tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful Tenderer shall be returned to him on his executing the bond for the fulfilment of the Contract. When the Contract is for a less sum than £200 the deposit with Tender shall not be returnable until the service is satisfactorily completed.

Any Tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In

In the event of any Tenderer failing to take up his Tender, complete the bond, and proceed with the Contract, within the time specified, or withdrawing his Tender after it shall have been opened, whether such Tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a Tenderer shall fail to proceed with a Contract as aforesaid, fresh Tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another Tender in the same series to be accepted; but the Tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In the event of any Contract being tendered for at a Schedule of Rates, the approximate quantities as given of each item must be worked out and a total sum shown.

In submitting a Tender, the full Christian name of the Tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the Tender. The omission of this information will render the Tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any Tender.

The Board-room shall be open for the admission of the public while the Tenders are being opened and declared.

CONTRACT No. 69.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
	Excavations in open trenches, in more or less hard materials, and in hard rock, for sewers, branches, pipes, sub-ducts, &c., as specified in clause 3, as viz. :—				£ s. d.
1	Excavation in road surfaces, sand, soil, pipeclay, shale, soft rock, where in the opinion of the Engineer blasting is unnecessary .....	cubic yard	19,320	1/6	1,449 0 0
2	Excavation in hard shale or rock, where gadding and guttering only is permitted .....	"	1,165	15/-	873 15 0
3	Excavation in hard shale or rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter and such depth of bore-holes as shall be directed only are permitted .....	"	1,165	13/6	786 7 6
4	Excavation in hard shale or rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	1,165	12/6	728 2 6
	Excavation in tunnels in "more or less hard materials," for sewers, pipe sewers, sub-ducts, &c., as specified in clause 3, as viz. :—				
5	Less hard excavation in clay, loose, and jointy shale, &c., where in the opinion of the Engineer blasting is unnecessary .....	"	810	20/-	810 0 0
6	Excavation in hard sandstone or shale, where gadding and guttering only is permitted .....	"	1,140	25/-	1,425 0 0
7	Excavation in hard sandstone, shale, ironstone, &c., where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted .....	"	1,140	22/6	1,232 10 0
8	Excavations in hard sandstone, shale, ironstone, &c., where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted .....	"	1,140	20/-	1,140 0 0
	Excavation in tunnels in "solid rock" for sewers, pipe-sewers, sub-ducts, &c., as specified in clause 3, as viz. :—				
9	Excavation in hard rock, where gadding and guttering only is permitted .....	"	1,850	30/-	2,775 0 0
10	Excavation in hard rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	1,950	27/6	2,312 10 0
11	Excavation in hard rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	1,850	27/-	2,081 5 0
	Excavation in "solid rock," in shafts, shaft chambers, and sumps, as specified in clause 3, as viz. :—				
12	Excavation in road surfaces, soil, clay, pipeclay, shale, and soft rock only, where in the opinion of the Engineer blasting is unnecessary .....	"	130	30/-	195 0 0
13	Excavation in hard rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	445	30/-	667 10 0
14	Excavation in hard rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	415	27/6	611 17 6
15	Excavation in hard rock, where gadding and guttering only is permitted .....	"	445	40/-	890 0 0
	Excavation in "more or less hard ground," in shafts, shaft chambers, and sumps, as specified in clause 3, as viz. :—				
16	Less hard excavation in road surfaces, soil, clay, pipeclay, loose and jointy shale, and soft rock, where in the opinion of the Engineer blasting is unnecessary .....	"	170	30/-	155 0 0
17	Excavation in hard sandstone or shale, where guttering and gadding only is permitted .....	"	115	40/-	230 0 0
18	Excavation in hard sandstone or shale, ironstone, &c., where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted .....	"	115	35/-	211 5 0
19	Excavation in hard sandstone or shale, ironstone, &c., where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	115	30/-	172 10 0

No. of Item.	Description or Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
20	Filling in at sides, round and over all concrete and brickwork of sewers, shafts, chambers, pipes, embankments, and tunnels, as specified in clause 5.....	cubic yard	15,220	1/-	£ 761 0 0
21	Timber ordered in writing to be left in excavations, as specified in clause 9, including all iron used in fixing same .....	cubic foot	9,000	5/-	2,250 0 0
22	Removing existing culverts crossing the Illawarra Road, as specified in clause 12, including masonry, pitching, and timber decking ...	cubic yard	244	10/-	122 0 0
23	Sub-duct in hard rock, with tile covers, as specified in clause 8 .....	lineal yard	280	10/-	140 0 0
	Sub-duct, as specified in clause 8, in "more or less hard material," including dry or cement jointing for stoneware pipes:—				
24	Of 6 in. internal diameter .....	"	640	5/-	160 0 0
25	Of 9 in. internal diameter .....	"	640	6/-	192 0 0
	Sub-duct in water-charged loose ground, as specified in clause 8, including hardwood boxes with packing in same, and dry or cement jointing for pipes of:—				
26	6 in. internal diameter .....	"	280	7/6	105 0 0
27	9 in. internal diameter .....	"	280	10/-	140 0 0
28	Hand-packed stone filling 4-in. gauge, as specified in clauses 9 and 10	cubic yard	760	5/-	190 0 0
29	Bluestone metal, 2½-in. gauge, on road surfaces, as specified in clause 10	"	190	16/-	152 0 0
30	Blinding 2 in. thick over metal surfaces, as specified in clause 10 .	"	90	10/-	45 0 0
31	Sandstone concrete, in any situation, as specified in clause 13 .....	"	1,050	37/6	1,968 15 0
32	Bluestone concrete, in any situation, as specified in clause 13 .....	"	4,550	42/6	9,668 15 0
33	Brickwork in cement, in any situation, as specified in clause 15 .....	"	1,665	55/-	4,413 15 0
34	Cement facing, in any situation, as specified in clause 14 .....	square yard	11,600	1/6	870 13 6
35	Pyrmont sandstone, ashlar, in any situation, as specified in clause 10	cubic foot	210	4/-	42 0 0
36	Squared bluestone pitchers, in any situation, as specified in clause 17	square yard	12	30/-	18 0 0
37	Squared freestone pitchers, in any situation, 6 in. deep, as specified in clause 18 .....	"	38	20/-	38 0 0
38	Supply and fix ordnance fencing complete, with ironwork, painting and tarring, as specified in clause 11 .....	rod ..	7	£3	21 0 0
	Providing, laying, and jointing glazed stoneware, plain, junction, and bend-pipes, in trenches, shafts, &c., as specified in clause 19, including providing and fixing discs, complete, as viz.:—				
39	9-in. diameter pipes in pipe-sewers and shafts .....	lineal yard.	40	5/-	10 0 0
40	12-in. diameter pipes in pipe-sewers .....	"	64	7/6	24 0 0
41	16-in. diameter pipes in pipe-sewers .....	"	15	15/-	11 5 0
42	18-in. diameter pipes in pipe-sewers .....	"	5	20/-	6 0 0
<b>SURPLUS MATERIALS.</b>					
	Removal of surplus materials from all excavations, as specified in clauses 51, 54, and 86 of the Schedule to Specification, including spreading, as viz.:—				
43	For the first half-mile of lead .....	cubic yard.	20,420	1/-	1,020 0 0
44	For every further quarter of a mile of lead .....	"	30,000	2/6	750 0 0
<b>GOVERNMENT PROPERTY.</b>					
45	Receiving and fixing ironwork, supplied by the Government, as specified in clauses 272 to 275 of the Schedule to Specification ...	ton ...	25	£5	125 0 0
<b>IRONWORK.</b>					
	Manufacture, supply, and fix (except where otherwise specified) all wrought-iron, gun-metal, and cast-iron work, and including painting and tarring, complete, as specified in clauses 21 to 26 inclusive, as viz.:—				
<b>PENSTOCKS.</b>					
46	Cast-iron frame and penstock, 6-ft. diameter opening, with lifting gear, wrought iron and gun-metal work, complete, as shown on drawings Nos. 20 and 3 .....	each ...	3	£217	651 0 0
47	Cast-iron frame and penstock, 3-ft. 9-in. diameter opening, with lifting gear, street-box, cover-plate, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 19 and 14 .....	" ...	2	£137	274 0 0
48	Cast-iron frame and penstock of 2-ft. diameter opening, with 2-ft. diameter spigot and flanged bend, lifting gear, street-box, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 14 and 18 .....	" ...	1	...	85 0 0
<b>GAS CHECKS.</b>					
49	Cast-iron frame with Muntz metal gas-check for sewer of 6 ft. 10 in. x 5 ft. 10 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 23 and 3 .....	each.	1	...	75 0 0
50	Cast-iron frame with Muntz metal gas-check for sewer of 6 ft. 8 in. x 5 ft. 8 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 24 and 3 .....	" ...	1	...	61 0 0
51	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 6 in. x 4 ft. 6 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 25 and 3 .....	" ...	1	...	57 0 0

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
				£	£ s. d.
52	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 2 in. x 4 ft. 2 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 26 and 3 .....	each	1	...	54 0 0
53	Cast-iron frame with Muntz metal gas check for sewer of 5 ft. 1 in. x 4 ft. 1 in., complete with all wrought-iron and gun-metal work, as shown on drawings Nos. 27 and 17 .....	"	1	...	53 0 0
IRREGULAR CASTINGS, &c.					
54	Cast-iron flange and faucet pipe, 3 ft. 9 in. internal diameter, 8 ft. long in the body, as shown on drawings Nos. 14 and 16 .....		Tons. cwt. qr. lb.	2 2 3 4	...
55	Cast-iron pipe, 3 ft. 9 in. internal diameter, 8 ft. long over all, with two flange ends, one flange turned and drilled for 1½-in. diameter bolt-holes, as shown on drawings Nos. 14 and 16, weighing .....		2 0 0 13	...	.....
56	Cast-iron flange and spigot pipe, 3 ft. 9 in. internal diameter, 9 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 16, weighing .....		1 15 3 13	...	.....
57	Cast-iron pipe, 3 ft. 9 in. internal diameter, 10 ft. long over all, with spigot ends, as shown on drawing No. 16 .....		2 5 3 23	...	.....
58	Cast-iron thimble, for 3-ft. 9-in. diameter syphon pipes, 18 in. long over all, as shown on drawing No. 16 .....		0 11 3 20	...	.....
59	2—cast-iron flanged pipes, 3 ft. 6 in. internal diameter, 10 ft. long over all, one flange turned and drilled for 1½-in. diameter bolt-holes, as shown on drawings Nos. 17 and 18 .....		4 12 2 2	...	.....
60	2—cast-iron flange and faucet pipes, 3 ft. 6 in. internal diameter, 12 ft. long in the body, as shown on drawings Nos. 17 and 18 .....		5 15 0 6	...	.....
61	2—cast-iron flange and spigot pipes, 3 ft. 6 in. internal diameter, 10 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 18 .....		4 9 2 2	...	.....
62	Cast-iron spigot pipe, 3 ft. 6 in. internal diameter, 10 ft. long over all, as shown on drawing No. 18 .....		2 2 3 25	...	.....
63	Cast-iron spigot pipe, 3 ft. 6 in. internal diameter, 6 ft. 6 in. long over all, as shown on drawing No. 18 .....		1 7 3 20	...	.....
64	Cast-iron spigot and faucet pipe, 3 ft. 6 in. internal diameter, 4 ft. 10 in. long in the body, as shown on drawing No. 18 .....		1 5 2 24	...	.....
65	2—cast-iron thimbles for 3-ft. 6-in. diameter pipe-sewer, 18 in. long over all, as shown on drawing No. 18 .....		1 0 2 11	...	.....
66	Cast-iron flange and faucet pipe, 2 ft. internal diameter, 10 ft. long over all, drawings Nos. 15 and 16 .....		0 10 0 4	...	.....
67	2—cast-iron flange and spigot pipes, 2 ft. internal diameter, 10 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 16 .....		1 13 3 18	...	.....
68	Cast-iron thimble for 2-ft. diameter scour-pipes, 15 in. long over all, as shown on drawing No. 16 .....		0 4 1 5	...	.....
69	Cast iron flanged bend, 12 in. internal diameter, as shown on drawings Nos. 14 and 16 .....		0 14 1 0	...	.....
70	Cast-iron flange and spigot bend, 16 in. internal diameter, as shown on drawings Nos. 3 and 10 .....		0 8 1 10	...	.....
	Total, including placing on cement mortar bedding, where ordered, and fixed (except lead joints) in position in the works ..	ton.	33 12 3 14	£15	501 13 0
71	2—wrought-iron rolled girders for supporting lifting gear of penstocks at Premier-street shaft-chamber, 25 ft. long each, weighing per foot run 46 lb., as shown on drawings Nos. 3 and 20 .....	"	1 0 2 4	£15	15 8 0
72	Platform for working pen-stocks in Premier-street shaft-chamber, consisting of two wrought-iron rolled girders, 25 ft. long each, weight per foot run 19 lb., with cast iron gratings and wrought-iron standard and railings, complete, as shown on drawings Nos. 7 and 22, weighing in all .....	cwt.	1 4 2 15	20/-	21 12 6
73	Cast-iron standards and wrought-iron tube-railing at top of shaft, and solid bar-railings across shaft at landings, complete, as shown on drawing No. 4 .....	"	0 4 1 11	55/-	11 10 0
74	Wrought-iron ladder in shaft, with supports, in four lengths, complete, as shown on drawing No. 4 .....	"	0 16 2 15	50/-	41 11 6
75	3—angle-iron bearers, with cast-iron perforated landing-plates in shaft, complete, as shown on drawing No. 4 .....	"	0 15 2 27	20/-	15 15 0
76	Wrought-iron hinged gratings, for outlet well of syphon, with cast iron hinge plates and wrought-iron channel-girders, complete, as shown on drawings Nos. 11 and 21 .....	"	0 4 1 20	50/-	10 18 0
77	Wrought-iron hinged gratings, for inlet well of syphon, with cast-iron hinge-plates and wrought-iron channel-girders, complete, as shown on drawings Nos. 14 and 21 .....	"	0 9 1 11	40/-	18 11 0
CAST IRON PIPES.					
	Cast-iron straight, spigot and faucet pipes, 12 ft. long in the body, complete, as shown on drawings Nos. 16 and 18, as viz. :—			£	
78	36—3-ft. 9-in. diameter syphon pipes .....		250 4 0 0	..	.....

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
			Tons cwt. qr. lb.	£	£ s. d.
79	154—3-ft. 6-in. diameter duplicate sewer pipes .....		435 5 0 14		
80	59—2-ft. diameter scour-pipes .....		63 16 3 20		
81	74—screw bolts, 1½ in. diameter, with hexagon heads and nuts, for 3-ft. 6-in. and 3-ft. 9-in. diameters flange pipe-joints .....		0 2 0 23		
82	15—screw bolts, 1 in. diameter, with hexagon heads and nuts, for 2-ft. diameter flange pipe-joints .....		0 0 1 26		
	Total for all straight pipes.....	ton.	788 8 2 27	£10	7,884 7 6
<b>PIPE-LAYING.</b>					
	Laying and jointing (including providing lead and spun-yarn) the 3-ft. 9-in. diameter, the 3-ft. 6-in. diameter, and the 2-ft. diameter cast-iron pipes, and irregular castings in open trenches and shafts, as specified in clause 20, complete, as viz.:				
83	3-ft. 9-in. diameter syphon pipes and short ends, &c. ....	lineal yard	396	45/-	891 0 0
84	3-ft. 6-in. diameter duplicate sewer-pipes, short ends, &c. ....	"	619	40/-	1,298 0 0
85	2-ft. diameter scour-pipes and short ends, &c. ....	"	246	20/-	246 0 0
<b>TRAPPED JUNCTIONS.</b>					
86	Flap-traps, providing, delivering, and building in, including providing and fixing discs .....	each	10	£5	50 0 0
<b>GENERAL.</b>					
87	Permanent puddle, where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 29, including spreading in 9-in. layers and ramming, complete .....	cubic yard	10	20/-	10 0 0
88	Special bluestone concrete, in any situation, as specified in clause 2 ...	"	10	60/-	30 0 0
89	Bluestone metal (clause 2), 1½-in. gauge, stacked .....	"	15	18/-	13 10 0
90	Sandstone metal (clause 2), 2-in. gauge, stacked .....	"	15	16/-	12 0 0
91	Bluestone metal (clause 2), 2½-in. gauge, stacked .....	"	15	15/-	11 5 0
92	Sharp, clean, washed sand (clause 2), stacked .....	"	15	10/-	7 10 0
93	Sawn hardwood, in scantlings or planks (clause 2) .....	cubic foot	100	5/6	27 10 0
94	Oregon timber, in scantlings or planks .....	"	100	5/6	27 10 0
95	Wrought-iron, in bolts, galvanized step-irons, screws, nails, spikes, straps, &c. (clause 2) .....	cwt.	20	35/-	35 0 0
96	Portland cement .....	cnsk	25	14/-	17 10 0
97	Artizan or mechanic, supplied by Contractor .....	day	Rate only	11/-	
98	Quarryman or other skilled labourer, supplied by Contractor .....	"	"	10/-	
99	Ordinary labourer, supplied by Contractor .....	"	"	8/-	
100	Cart with one horse and driver, supplied by Contractor.....	"	"	14/-	
101	One additional horse, supplied by Contractor .....	"	"	18/-	
	TOTAL .....			£ ...	55,752 9 6

The quantities are not guaranteed as correct, and are merely for the guidance of Tenderers, who must satisfy themselves as to their accuracy, which is not in any way guaranteed by the Government, and they are subject to omissions, deductions, or alterations.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in strict accordance with the Specification.

The above Schedule Prices include, in every case, continual maintenance of the works during the whole time of construction, the period of maintenance, and up to the day of their being formally taken over by the Engineer.

Item No. 45 to include the cost of conveying the Government property from the Contractor's Store or Field Office to the various sites of works along line of Main and Branch Sewers, at man-holes, gas-check, and shaft-chamber, &c.

Prices for items Nos. 89, 90, 91, 92, 93, 94, 95, and 96 are to be for materials in strict accordance with Specification, delivered on the works ready for use, and only the actual net quantities ordered and approved of shall be paid for. In case Contractor's prices are considered too high by the Engineer at the time such materials may be required, or if the Contractor fail to deliver such materials at the time required and ordered, then the Engineer shall have the power to supply the same from any other sources, and the Contractor shall have no claim for loss or compensation on account of the exercise of such power by the Engineer.

Prices for items Nos. 97, 98, 99, 100, and 101 are to be for such as are able-bodied and efficient. The Schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

## SUMMARY of Weights of Wrought and Cast Ironwork, including all Gun-metal.

(The number of Items underneath correspond with those of the Schedule of the Quantities and Prices.)

No. of Item.	Description of Item.	Number required.	Weight of each Item.	Total weight.
<b>PENSTOCKS.</b>				
			Ts. ct. qr. lb.	Ts. ct. qr. lb.
46	Cast-iron frame and penstock, with 6-ft. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	3	6 5 1 22	18 16 1 10
47	Cast-iron frame and penstock, with 3-ft. 9 in. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	2	3 7 0 4	6 14 0 8
48	Cast-iron frame and penstock, with 2-ft. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	1	1 1 1 20	1 1 1 20
	Total weight .....	...	.....	26 11 3 10
<b>GAS-CHECKS.</b>				
49	Cast-iron frame, with muntz metal gas-check, for 6-ft. 10-in. by 5-ft. 10-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	1 1 1 26	1 1 1 26
50	Cast-iron frame, with muntz metal gas-check, for 6-ft. 8-in. by 5-ft. 8-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 19 2 17	0 19 2 17
51	Cast-iron frame, with muntz metal gas-check, for 5-ft. 6-in. by 4-ft. 6-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 14 0 26	0 14 0 26
52	Cast-iron frame, with muntz metal gas-check, for 5-ft. 2-in. by 4-ft. 2-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 13 0 3	0 13 0 3
53	Cast-iron frame, with muntz metal gas-check, for 5-ft. 1-in. by 4-ft. 1-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 11 0 2	0 11 0 2
	Total weight .....	...	.....	3 19 1 18
<b>IRREGULAR CASTINGS, &amp;c.</b>				
54	Flange and faucet pipe, 8 ft. long, 3 ft. 9 in. internal diameter.....	1	2 2 3 4	2 2 3 4
55	Flange pipe, 8 ft. long, 3 ft. 9 in. internal diameter, one flange turned and drilled, for 1½ in. diameter bolt-holes .....	1	2 0 0 18	2 0 0 18
56	Flange and spigot pipe, 9 ft. long, 3 ft. 9 in. internal diameter, the flanges to be turned and drilled for 1½ in. diameter bolt-holes.....	1	1 16 3 13	1 16 3 13
57	Spigot pipe, 10 ft. long, 3 ft. 9 in. internal diameter .....	1	2 5 3 23	2 5 3 23
58	Cast-iron thimble for 3-ft. 9-in. diameter pipe, 18 in. long .....	1	0 11 3 20	0 11 3 20
59	Flange-pipe, 10 ft. long, 3 ft. 6 in. internal diameter, one flange turned and drilled, for 1½ in. diameter bolt-holes .....	2	2 6 1 1	4 12 2 2
60	Flange and faucet pipe, 12 ft. long, 3 ft. 6 in. internal diameter .....	2	2 18 0 3	5 16 0 6
61	Flange and spigot pipe, 10 ft. long, 3 ft. 6 in. internal diameter, the flange turned and drilled for 1½ in. diameter bolt-holes .....	2	2 4 3 1	4 9 2 2
62	Spigot pipe, 10 ft. long, 3 ft. 6 in. internal diameter .....	1	2 2 3 25	2 2 3 25
63	Spigot pipe, 6 ft. 6 in. long, 3 ft. 6 in. internal diameter.....	1	1 7 3 20	1 7 3 20
64	Spigot and faucet pipe, 4 ft. 10 in. long, 3 ft. 6 in. internal diameter .....	1	1 5 2 24	1 5 2 24
65	Cast-iron thimble for 3-ft. 6-in. diameter pipe, 18 in. long.....	2	0 10 1 7	1 0 2 14
66	Flange and faucet pipe, 10 ft. long, 2 ft. internal diameter .....	1	0 19 0 4	0 19 0 4
67	Flange and spigot pipe, 10 ft. long, 2 ft. internal diameter, the flange to be turned and drilled for 1½ in. diameter bolt-holes .....	2	0 16 3 23	1 13 3 18
68	Cast-iron thimble for 2-ft. diameter pipe, 16 in. long .....	1	0 4 1 5	0 4 1 5
69	Cast-iron flange bend, 12 in. internal diameter .....	4	0 3 2 7	0 14 1 0
70	Cast-iron flange and spigot bend, 16 in. internal diameter .....	2	0 4 0 19	0 8 1 10
	Total weight .....	...	.....	33 12 3 12
71	Wrought-iron rolled girders, 13½ in. high, top and bottom flange 5½ in. wide, 25 ft. long, to be walled in at Premier-street shaft chamber .....	2	at 46 lb. per ft.	1 0 2 4
72	Platform for working penstocks, Premier-street shaft, two wrought-iron rolled girders, 9 in. high, top and bottom flanges, 3 in. wide, 25 ft. long, weighing 19 lb. per lineal foot, with cast-iron gratings and wrought-iron standards and railings complete.....	...	.....	1 4 2 15
73	Cast-iron standards and wrought-iron tube-railing at top of shaft, and solid bar-railing across shaft at landings .....	...	.....	0 4 1 11
74	Wrought-iron ladder in shaft, with supports, in four lengths, complete .....	...	.....	0 16 2 15
75	Angle-iron bearers with cast-iron perforated landing plates in shaft in Premier-street, complete .....	3	.....	0 15 2 27
76	Wrought-iron hinged gratings on cast-iron hinge-plates and double wrought-iron channel girders, with cast-iron distance blocks for outlet well of syphon .....	...	.....	0 4 1 20
77	Wrought-iron hinged grating for inlet well of syphon on cast-iron hinge-plates and double wrought-iron, channel-iron girders with cast-iron distance blocks .....	...	.....	0 9 1 11
	Total weight .....	...	.....	4 15 2 19
<b>CAST-IRON STRAIGHT SPIGOT AND FAUCET PIPES, 12 FT. LONG.</b>				
78	3-ft. 9-in. diameter syphon pipes .....	96	3 0 1 0	289 4 0 0
79	3-ft. 6-in. diameter duplicate sewer-pipes.....	154	2 16 2 3	435 5 0 14
80	2-ft. diameter scour-pipes .....	69	1 1 2 16	63 16 3 20
	Total weight of pipes .....	...	.....	788 6 0 6
81	Screw-bolts 1½ in. diameter, with hexagon heads and nuts, for 3-ft. 9-in. and 3-ft. 6-in. diameters, flange pipe-joints .....	74	.....	0 2 0 23
82	Screw-bolts 1 in. diameter, with hexagon heads and nuts, for 2-ft. diameter flange pipe-joints .....	15	.....	0 0 1 26
	Total weight .....	...	.....	0 2 2 21

## No. 7.—JAMES F. CARSON'S TENDER.

Items 54 to 70, inclusive, for which a general rate is asked, would, at contractor's prices for each item, average about £14 18s. 6½d. per ton. Items 78 to 82, inclusive, for which a general rate is asked, would, at contractor's prices for each item, average about £9 0s. 0½d. per ton.

Department of Public Works, Roads and Bridges and Sewerage Branch.

## TENDER FORM.

In pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Eastern Main Branch Sewer, Western Suburbs Sewerage, from Premier-street to Sebastopol-street and Branches (Contract No. 69), agreeably to the Plans, Specification, Schedule to Specification, and General Conditions, which have been inspected by us for or at the rates entered in the Schedule of Quantities and Prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this Tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates or prices mentioned in the Schedule of Quantities and Prices annexed hereto, or if not in Schedule, at a price to be agreed upon at the time, and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said Tender, execute and deliver to the Minister for Public Works, a valid legal Contract with Her Majesty the Queen, embodying the terms and Conditions above mentioned, and to provide the security required by clause 29 of the said General Conditions; and we enclose herewith our cheque for the sum of £600 as a preliminary Deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said Tender is opened withdraw same, or if, in the event of this Tender being accepted, we fail to complete the above-mentioned Contract within fourteen days thereafter; and further, that this Tender is made subject to the Conditions contained in the Tender Board Regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 13th day of December, 1893.

JAMES FREDERICK CARSON,  
Arnccliffe.

Witness,—JNO. J. ROONIE.

## TENDER BOARD REGULATIONS.

No Tender shall be received after eleven a.m. on the day named for the receipt of such Tender unless there are circumstances which, in the opinion of the Members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the Tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of Tenders received for each work and the name of the lowest Tenderer; but no Tender shall be accepted until the Head of the Branch, under whose directions the work is to be carried out, has reported upon the whole of the Tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the Tenders received, showing the work, the name of the Tenderer, and the amount of each Tender.

All envelopes containing Tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the Tender is submitted.

Every Tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive...	... ..	£5 0 0
For amounts exceeding £500 and not exceeding £1,000...	... ..	£10 0 0

For all sums over £1,000 one per cent. on the amount of Tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful Tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful Tenderer shall be returned to him on his executing the bond for the fulfilment of the Contract. When the Contract is for a less sum than £200 the deposit with Tender shall not be returnable until the service is satisfactorily completed.

Any Tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any Tenderer failing to take up his Tender, complete the bond, and proceed with the Contract, within the time specified, or withdrawing his Tender after it shall have been opened, whether such Tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever

Whenever a Tenderer shall fail to proceed with a Contract as aforesaid, fresh Tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another Tender in the same series to be accepted; but the Tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In the event of any Contract being tendered for at a Schedule of Rates, the approximate quantities as given of each item must be worked out and a total sum shown.

In submitting a Tender, the full Christian name of the Tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the Tender. The omission of this information will render the Tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any Tender.

The Board-room shall be open for the admission of the public while the Tenders are being opened and declared.

CONTRACT No. 69.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
	Excavations in open trenches, in more or less hard materials, and in hard rock, for sewers, branches, pipes, sub-ducts, &c., as specified in clause 3, as viz. :—				£ s. d.
1	Excavation in road surfaces, sand, soil, pipeclay, shale, soft rock, where in the opinion of the Engineer blasting is unnecessary ...	cubic yard	19,320	3/-	2,808 0 0
2	Excavation in hard shale or rock, where gadding and guttering only is permitted .....	"	1,165	10/-	582 10 0
3	Excavation in hard shale or rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	1,165	7/6	436 17 6
4	Excavation in hard shale or rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	1,165	5/-	291 5 0
	Excavation in tunnels in "more or less hard materials," for sewers, pipe sewers, sub-ducts, &c., as specified in clause 3, as viz. :—				
5	Less hard excavation in clay, loose, and jointy shale, &c., where in the opinion of the Engineer blasting is unnecessary .....	"	810	10/-	405 0 0
6	Excavation in hard sandstone or shale, where gadding and guttering only is permitted .....	"	1,140	25/-	1,425 0 0
7	Excavation in hard sandstone, shale, ironstone, &c., where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted ..	"	1,140	20/-	1,110 0 0
8	Excavations in hard sandstone, shale, ironstone, &c., where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted ..	"	1,140	15/-	855 0 0
	Excavation in tunnels in "solid rock" for sewers, pipe-sewers, sub-ducts, &c., as specified in clause 3, as viz. :—				
9	Excavation in hard rock, where gadding and guttering only is permitted .....	"	1,820	60/-	5,550 0 0
10	Excavation in hard rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	1,850	50/-	4,025 0 0
11	Excavation in hard rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted.....	"	1,820	40/-	3,700 0 0
	Excavation in "solid rock," in shafts, shaft chambers, and sumps, as specified in clause 3, as viz. :—				
12	Excavation in road surfaces, soil clay, pipeclay, shale, and soft rock only, where in the opinion of the Engineer blasting is unnecessary	"	130	10/-	65 0 0
13	Excavation in hard rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	445	40/-	890 0 0
14	Excavation in hard rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	445	30/-	667 10 0
15	Excavation in hard rock, where gadding and guttering only is permitted .....	"	445	45/-	1,001 5 0
	Excavation in "more or less hard ground," in shafts, shaft chambers, and sumps, as specified in clause 3, as viz. :—				
16	Less hard excavation in road surfaces, soil, clay, pipeclay, loose and jointy shale, and soft rock, where in the opinion of the Engineer blasting is unnecessary .....	"	170	10/-	85 0 0
17	Excavation in hard sandstone or shale, where guttering and gadding only is permitted .....	"	115	30/-	172 10 0
18	Excavation in hard sandstone or shale, ironstone, &c., where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted .....	"	115	25/-	143 15 0
19	Excavation in hard sandstone or shale, ironstone, &c., where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	115	20/-	115 0 0

No. of Item.	Description or Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
20	Filling in at sides, round and over all concrete and brickwork of sewers, shafts, chambers, pipes, embankments, and tunnels, as specified in clause 5.....	cubic yard	15,220	2/-	£ 1,522 0 0
21	Timber ordered in writing to be left in excavations, as specified in clause 9, including all iron used in fixing same .....	cubic foot	9,000	2/6	1,125 0 0
22	Removing existing culverts crossing the Illawarra Road, as specified in clause 12, including masonry, pitching, and timber decking ...	cubic yard	211	2/-	24 8 0
23	Sub-duct in hard rock, with tile covers, as specified in clause 8.....	lineal yard	280	6/-	64 0 0
	Sub-duct, as specified in clause 8, in "more or less hard material," including dry or cement jointing for stoneware pipes :—				
24	Of 6 in. internal diameter .....	"	640	7/6	240 0 0
25	Of 9 in. internal diameter .....	"	640	7/6	240 0 0
	Sub-duct in water-charged loose ground, as specified in clause 8, including hardwood boxes with packing in same, and dry or cement jointing for pipes of :—				
26	6 in. internal diameter .....	"	280	10/-	140 0 0
27	9 in. internal diameter .....	"	280	12/6	175 0 0
28	Hand-packed stone filling 4-in. gauge, as specified in clauses 8 and 10	cubic yard	760	5/-	190 0 0
29	Bluestone metal, 2½-in. gauge, on road surfaces, as specified in clause 10	"	190	15/-	137 10 0
30	Blinding 2 in. thick over metal surfaces, as specified in clause 10 .	"	90	7/6	33 15 0
31	Sandstone concrete, in any situation, as specified in clause 13 .....	"	1,050	40/-	2,100 0 0
32	Bluestone concrete, in any situation, as specified in clause 13 .....	"	4,550	45/-	10,237 10 0
33	Brickwork in cement, in any situation, as specified in clause 15 .....	"	1,065	50/-	4,012 0 0
34	Cement facing, in any situation, as specified in clause 14 .....	square yard	11,640	1/6	870 0 0
35	Pyramont sandstone, ashlar, in any situation, as specified in clause 16	cubic foot.	210	4/-	42 0 0
36	Squared bluestone pitchers, in any situation, as specified in clause 17	square yard	12	25/-	12 0 0
37	Squared freestone pitchers, in any situation, 6 in. deep, as specified in clause 18 .....	"	38	15/-	28 10 0
38	Supply and fix ordnance fencing complete, with ironwork, painting and tarring, as specified in clause 11 .....	rod ...	7	20/-	7 0 0
	Providing, laying, and jointing glazed stoneware, plain, junction, and bend-pipes, in trenches, shafts, &c., as specified in clause 19, including providing and fixing discs, complete, as viz. :—				
39	9-in. diameter pipes in pipe-sewers and shafts .....	lineal yard	40	3/-	6 0 0
40	12-in. diameter pipes in pipe-sewers .....	"	64	4/6	14 8 0
41	16-in. diameter pipes in pipe-sewers .....	"	15	9/-	6 15 0
42	18-in. diameter pipes in pipe-sewers .....	"	5	12/-	3 0 0
<b>SURPLUS MATERIALS.</b>					
	Removal of surplus materials from all excavations, as specified in clauses 51, 54, and 86 of the Schedule to Specification, including spreading, as viz. :—				
43	For the first half-mile of lead .....	cubic yard.	20,420	-/6	510 10 0
44	For every further quarter of a mile of lead .....	"	30,000	-/4	500 0 0
<b>GOVERNMENT PROPERTY.</b>					
45	Receiving and fixing ironwork, supplied by the Government, as specified in clauses 272 to 275 of the Schedule to Specification ...	ton	25	£10	250 0 0
<b>IRONWORK.</b>					
	Manufacture, supply, and fix (except where otherwise specified) all wrought-iron, gun-metal, and cast-iron work, and including painting and tarring, complete, as specified in clauses 21 to 26 inclusive, as viz. :—				
<b>PENSTOCKS.</b>					
46	Cast-iron frame and penstock, 6-ft. diameter opening, with lifting gear, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 20 and 3 .....	each ...	3	£250	750 0 0
47	Cast-iron frame and penstock, 3-ft. 9-in. diameter opening, with lifting gear, street-box, cover-plate, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 19 and 14 .....	" ...	2	£150	300 0 0
48	Cast-iron frame and penstock of 2-ft. diameter opening, with 2-ft. diameter spigot and flanged bend, lifting gear, street-box, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 14 and 18 .....	" ...	1	£90	90 0 0
<b>GAS CHECKS.</b>					
49	Cast-iron frame with Muntz metal gas-check for sewer of 6 ft. 10 in. x 5 ft. 10 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 23 and 3 .....	each.	1	£75	75 0 0
50	Cast-iron frame with Muntz metal gas-check for sewer of 6 ft. 8 in. x 5 ft. 8 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 24 and 3 .....	" ...	1	£70	70 0 0
51	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 6 in. x 4 ft. 6 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 25 and 3 .....	" ...	1	£63	63 0 0

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
52	Cast-iron frame with Muntz metal gas check for sewer of 5 ft 2 in. x 4 ft. 2 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 25 and 3 .....	each	1	62	62 0 0
53	Cast-iron frame with Muntz metal gas check for sewer of 5 ft. 1 in. x 4 ft. 1 in., complete with all wrought-iron and gun-metal work, as shown on drawings Nos. 27 and 17 .....	"	1	60	60 0 0
IRREGULAR CASTINGS, &c.					
54	Cast-iron flange and faucet pipe, 3 ft. 9 in. internal diameter, 8 ft long in the body, as shown on drawings Nos. 14 and 16 .....		Tons. cwt. qr. lb.	25	25 0 0
55	Cast-iron pipe, 3 ft. 9 in. internal diameter, 8 ft. long over all, with two flange ends, one flange turned and drilled for 1½-in. diameter bolt-holes, as shown on drawings Nos. 14 and 16, weighing .....		2 2 3 4	30	30 0 0
56	Cast-iron flange and spigot pipe, 3 ft. 9 in. internal diameter, 9 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 16, weighing .....		2 0 0 18	30	30 0 0
57	Cast-iron pipe, 3 ft. 9 in. internal diameter, 10 ft long over all, with spigot ends, as shown on drawing No. 16 .....		1 16 3 13	30	30 0 0
58	Cast-iron thimble, for 3-ft. 9-in. diameter syphon pipes, 18 in. long over all, as shown on drawing No. 16 .....		2 5 3 23	30	30 0 0
59	2—cast-iron flanged pipes, 3 ft 6 in. internal diameter, 10 ft. long over all, one flange turned and drilled for 1½-in diameter bolt-holes, as shown on drawings Nos. 17 and 18 .....		0 11 3 20	12	12 0 0
60	2—cast-iron flange and faucet pipes, 3 ft. 6 in. internal diameter, 11 ft. long in the body, as shown on drawings Nos 17 and 18 .....		4 12 2 2	35	70 0 0
61	2—cast-iron flange and spigot pipes, 3 ft. 6 in. internal diameter, 10 ft. long over all, the flange to be turned and drilled for 1½-in diameter bolt-holes, as shown on drawing No. 18 .....		5 16 0 6	37/10	75 0 0
62	Cast-iron spigot pipe, 3 ft. 6 in. internal diameter, 10 ft. long over all, as shown on drawing No. 18 .....		4 9 2 2	35	70 0 0
63	Cast-iron spigot pipe, 3 ft. 6 in. internal diameter, 6 ft. 6 in. long over all, as shown on drawing No. 18 .....		2 2 3 25	27	27 0 0
64	Cast-iron spigot and faucet pipe, 3 ft. 6 in. internal diameter, 4 ft 11 in. long in the body, as shown on drawing No. 18 .....		1 7 3 20	20	20 0 0
65	2—cast-iron thimbles for 3 ft. 6-in. diameter pipe-sewer, 18 in. long over all, as shown on drawing No. 18 .....		1 5 2 24	18	18 0 0
66	Cast-iron flange and faucet pipe 2 ft. internal diameter, 10 ft. long over all, drawings Nos. 15 and 16 .....		1 0 2 14	10/10	21 0 0
67	2—cast-iron flange and spigot pipes, 2 ft. internal diameter, 10 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 15 .....		0 19 0 4	15	15 0 0
68	Cast-iron thimble for 2-ft. diameter scour-pipes, 15 in. long over all, as shown on drawing No. 16 .....		1 13 3 18	15	30 0 0
69	Cast iron flanged bend, 12 in. internal diameter, as shown on drawings Nos. 14 and 16 .....		0 4 1 5	4	4 0 0
70	Cast-iron flange and spigot bend, 16 in. internal diameter, as shown on drawings Nos 3 and 10 .....		0 14 1 0	15	15 0 0
	Total, including placing on cement mortar bedding, where ordered, and fixed (except lead joints) in position in the works .....	ton.	0 8 1 10	10	10 0 0
71	2—wrought-iron rolled girders for supporting lifting gear of penstocks at Premier-street shaft-chamber, 25 ft long each, weighing per foot run 46 lb., as shown on drawings Nos 3 and 20 .....	"	33 12 3 12	...	
72	Platform for working penstocks in Premier-street shaft-chamber, consisting of two wrought-iron rolled girders, 25 ft. long each, weight per foot run 19 lb., with cast iron gratings and wrought-iron standard and railings, complete, as shown on drawings Nos. 2 and 22, weighing in all .....	"	1 0 2 4	14	14 7 6
73	Cast-iron standards and wrought-iron tube-railing at top of shaft, and solid bar-railings across shaft at landings, complete, as shown on drawing No. 4 .....	cwt.	1 4 2 15	18	22 3 6
74	Wrought-iron ladder in shaft, with run ports, in four lengths, complete, as shown on drawing No. 4 .....	"	0 4 1 11	38	8 5 3
75	3—angle-iron bearers, with cast-iron perforated landing-plates in shaft, complete, as shown on drawing No. 4 .....	"	0 16 2 15	30	24 19 0
76	Wrought-iron hinged gratings, for outlet well of syphon, with cast-iron hinge-plates and wrought-iron channel-girders, complete, as shown on drawings Nos. 14 and 21 .....	"	0 15 2 27	54	42 10 0
77	Wrought-iron hinged gratings, for inlet well of syphon, with cast-iron hinge-plates and wrought-iron channel-girders, complete, as shown on drawings Nos. 14 and 21 .....	"	0 4 1 20	56	12 8 0
		"	0 9 1 11	56	26 3 6
CAST-IRON PIPES.					
	Cast-iron straight, spigot and faucet pipes, 12 ft. long in the body, complete, as shown on drawings Nos. 16 and 18, as viz. :—				
78	96—3-ft. 9-in. diameter syphon pipes .....		289 4 0 0	9	2,602 16 0

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
			Tons cwt. qr. lb.	£	£ s. d.
79	154—3-ft. 6-in. diameter duplicate sewer pipes .....		435 5 0 14	9	3,917 6 3
80	59—2-ft. diameter scour-pipes .....		63 16 3 20	9	574 12 7
81	74—screw bolts, 1½ in. diameter, with hexagon heads and nuts, for 3-ft. 6-in. and 3-ft. 9-in. diameters flange pipe-joints .....		0 2 0 23	30	3 6 2
82	15—screw bolts, 1 in. diameter, with hexagon heads and nuts, for 2-ft. diameter flange pipe-joints .....		0 0 1 26	30	0 14 6
	Total for all straight pipes.....	ton.	788 8 2 27		
<b>PIPE-LAYING.</b>					
Laying and jointing (including providing lead and spun-yarn) the 3-ft. 9-in. diameter, the 3-ft. 6-in. diameter, and the 2-ft. diameter cast-iron pipes, and irregular castings in open trenches and shafts, as specified in clause 20, complete, as viz.:					
83	3-ft. 9-in. diameter syphon pipes and short ends, &c. ....	lineal yard	396	5/-	99 0 0
84	3-ft. 6-in. diameter duplicate sewer-pipes, short ends, &c. ....	"	649	5/-	162 5 0
85	2-ft. diameter scour-pipes and short ends, &c. ....	"	246	5/-	61 10 0
<b>TRAPPED JUNCTIONS.</b>					
86	Flap-traps, providing, delivering, and building in, including providing and fixing discs .....	each	10	30/-	15 0 0
<b>GENERAL.</b>					
87	Permanent puddle, where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 23, including spreading in 9-in. layers and ramming, complete .....	cubic yard	10	10/-	5 0 0
88	Special bluestone concrete, in any situation, as specified in clause 2 ..	"	10	45/-	22 10 0
89	Bluestone metal (clause 2), 1½-in. gauge, stacked .....	"	15	15/-	11 5 0
90	Sandstone metal (clause 2), 2-in. gauge, stacked .....	"	15	5/-	3 15 0
91	Bluestone metal (clause 2), 2½-in. gauge, stacked .....	"	15	14/-	10 10 0
92	Sharp, clean, washed sand (clause 2), stacked .....	"	15	5/-	3 15 0
93	Sawn hardwood, in scantlings or planks (clause 2) .....	cubic foot	100	1/-	5 0 0
94	Oregon timber, in scantlings or planks .....	"	100	1/-	5 0 0
95	Wrought-iron, in bolts, galvanized step-irons, screws, nails, spikes, straps, &c. (clause 2) .....	cwt.	27	40/-	40 0 0
96	Portland cement .....	cask	25	10/-	12 10 0
97	Artizan or mechanic, supplied by Contractor .....	day	Rate only	15/-	
98	Quarryman or other skilled labourer, supplied by Contractor .....	"	"	12/6	
99	Ordinary labourer, supplied by Contractor .....	"	"	9/-	
100	Cart with one horse and driver, supplied by Contractor .....	"	"	12/6	
101	One additional horse, supplied by Contractor .....	"	"	7/6	
	TOTAL .....			£	57,239 0 0

The quantities are not guaranteed as correct, and are merely for the guidance of Tenderers, who must satisfy themselves as to their accuracy, which is not in any way guaranteed by the Government, and they are subject to omissions, deductions, or alterations.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in strict accordance with the Specification.

The above Schedule Prices include, in every case, continual maintenance of the works during the whole time of construction, the period of maintenance, and up to the day of their being formally taken over by the Engineer.

Item No. 45 to include the cost of conveying the Government property from the Contractor's Store or Field Office to the various sites of works along line of Main and Branch Sewers, at man-holes, gas-check, and shaft-chamber, &c.

Prices for items Nos. 89, 90, 91, 92, 93, 94, 95, and 96 are to be for materials in strict accordance with Specification, delivered on the works ready for use, and only the actual net quantities ordered and approved of shall be paid for. In case Contractor's prices are considered too high by the Engineer at the time such materials may be required, or if the Contractor fail to deliver such materials at the time required and ordered, then the Engineer shall have the power to supply the same from any other sources, and the Contractor shall have no claim for loss or compensation on account of the exercise of such power by the Engineer.

Prices for items Nos. 97, 98, 99, 100, and 101 are to be for such as are able-bodied and efficient. The Schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

SUMMARY

## SUMMARY of Weights of Wrought and Cast Ironwork, including all Gun-metal.

(The number of Items underneath correspond with those of the Schedule of the Quantities and Prices.)

No. of Item.	Description of Item.	Number required.	Weight of each Item.	Total weight.
<b>PENSTOCKS.</b>				
			Ts. ct. qr. lb.	Ts. ct. qr. lb.
46	Cast-iron frame and penstock, with 6-ft. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	3	6 5 1 22	18 16 1 10
47	Cast-iron frame and penstock, with 3-ft. 9 in. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	2	3 7 0 4	6 14 0 8
48	Cast-iron frame and penstock, with 2-ft. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	1	1 1 1 20	1 1 1 20
	Total weight .....	...	.....	26 11 3 10
<b>GAS-CHECKS.</b>				
49	Cast-iron frame, with muntz metal gas-check, for 6-ft. 10-in. by 5-ft. 10-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	1 1 1 26	1 1 1 26
50	Cast-iron frame, with muntz metal gas-check, for 6-ft. 8-in. by 5-ft. 8-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 19 2 17	0 19 2 17
51	Cast-iron frame, with muntz metal gas-check, for 5-ft. 6-in. by 4-ft. 6-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 14 0 26	0 14 0 26
52	Cast-iron frame, with muntz metal gas-check, for 5-ft. 2-in. by 4-ft. 2-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 13 0 3	0 13 0 3
53	Cast-iron frame, with muntz metal gas-check, for 5-ft. 1-in. by 4-ft. 1-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 11 0 2	0 11 0 2
	Total weight .....	...	.....	3 19 1 18
<b>IRREGULAR CASTINGS, &amp;c.</b>				
54	Flange and faucet pipe, 8 ft. long, 3 ft. 9 in. internal diameter.....	1	2 2 3 4	2 2 3 4
55	Flange pipe, 8 ft. long, 3 ft. 9 in. internal diameter, one flange turned and drilled, for 1½-in. diameter bolt-holes.....	1	2 0 0 18	2 0 0 18
56	Flange and spigot pipe, 9 ft. long, 3 ft. 9 in. internal diameter, the flanges to be turned and drilled for 1½-in. diameter bolt-holes.....	1	1 16 3 13	1 16 3 13
57	Spigot pipe, 10 ft. long, 3 ft. 9 in. internal diameter .....	1	2 5 3 23	2 5 3 23
58	Cast-iron thimble for 3-ft. 9-in. diameter pipe, 18 in. long .....	1	0 11 3 20	0 11 3 20
59	Flange pipe, 10 ft. long, 3 ft. 6 in. internal diameter, one flange turned and drilled, for 1½-in. diameter bolt-holes .....	2	2 6 1 1	4 12 2 2
60	Flange and faucet pipe, 12 ft. long, 3 ft. 6 in. internal diameter .....	2	2 18 0 3	5 16 0 6
61	Flange and spigot pipe, 10 ft. long, 3 ft. 6 in. internal diameter, the flange turned and drilled for 1½-in. diameter bolt-holes .....	2	2 4 3 1	4 9 2 2
62	Spigot pipe, 10 ft. long, 3 ft. 6 in. internal diameter .....	1	2 2 3 25	2 2 3 25
63	Spigot pipe, 6 ft. 6 in. long, 3 ft. 6 in. internal diameter.....	1	1 7 3 20	1 7 3 20
64	Spigot and faucet pipe, 4 ft. 10 in. long, 3 ft. 6 in. internal diameter .....	1	1 5 2 24	1 5 2 24
65	Cast-iron thimble for 3-ft. 6-in. diameter pipe, 18 in. long .....	2	0 10 1 7	1 0 2 14
66	Flange and faucet pipe, 10 ft. long, 2 ft. internal diameter .....	1	0 19 0 4	0 19 0 4
67	Flange and spigot pipe, 10 ft. long, 2 ft. internal diameter, the flange to be turned and drilled for 1½-in. diameter bolt-holes .....	2	0 16 3 23	1 13 3 18
68	Cast-iron thimble for 2-ft. diameter pipe, 15 in. long .....	1	0 4 1 5	0 4 1 5
69	Cast-iron flange bend, 12 in. internal diameter.....	4	0 3 2 7	0 14 1 0
70	Cast-iron flange and spigot bend, 16 in. internal diameter.....	2	0 4 0 19	0 8 1 10
	Total weight .....	...	.....	33 12 3 12
71	Wrought-iron rolled girders, 13½ in. high, top and bottom flange 5½ in. wide, 25 ft. long, to be walled in at Premier-street shaft chamber .....	2	at 40 lb. per ft.	1 0 2 4
72	Platform for working penstocks, Premier-street shaft, two wrought-iron rolled girders, 9 in. high, top and bottom flanges, 3 in. wide, 25 ft. long, weighing 19 lb. per lineal foot, with cast-iron gratings and wrought-iron standards and railings complete.....	...	.....	1 4 2 15
73	Cast-iron standards and wrought-iron tube-railing at top of shaft, and solid bar-railing across shaft at landings .....	...	.....	0 4 1 11
74	Wrought-iron ladder in shaft, with supports, in four lengths, complete .....	...	.....	0 16 2 15
75	Angle-iron bearers with cast-iron perforated landing plates in shaft in Premier-street, complete .....	3	.....	0 15 2 27
76	Wrought-iron hinged gratings on cast-iron hinge-plates and double wrought-iron channel girders, with cast-iron distance blocks for outlet well of syphon .....	...	.....	0 4 1 20
77	Wrought-iron hinged grating for inlet well of syphon on cast-iron hinge-plates and double wrought-iron, channel-iron girders with cast-iron distance blocks .....	...	.....	0 9 1 11
	Total weight .....	...	.....	4 15 2 19
<b>CAST-IRON STRAIGHT SPIGOT AND FAUCET PIPES, 12 FT. LONG.</b>				
78	3-ft. 9-in. diameter syphon pipes .....	96	3 0 1 0	289 4 0 0
79	3-ft. 6-in. diameter duplicate sewer-pipes.....	154	2 16 2 3	435 5 0 14
80	2-ft. diameter scour-pipes .....	59	1 1 2 16	63 16 3 20
	Total weight of pipes.....	...	.....	788 6 0 6
81	Screw-bolts 1½ in. diameter, with hexagon heads and nuts, for 3-ft. 9-in. and 3-ft. 6-in. diameters, flange pipe-joints .....	74	.....	0 2 0 23
82	Screw-bolts 1 in. diameter, with hexagon heads and nuts, for 2-ft. diameter flange pipe-joints .....	15	.....	0 0 1 26
	Total weight .....	...	.....	0 2 2 21

## No. 8.—ALEX. DEAN &amp; SONS' TENDER.

Item No.	Deduct.			Add.		
	£	s.	d.	£	s.	d.
97 .....	0	12	0	.....	.....	.....
" 98 .....	0	10	0	.....	.....	.....
" 99 .....	0	8	6	.....	.....	.....
" 100 .....	0	13	0	.....	.....	.....
" 101 .....	0	6	0	.....	.....	.....
	£2 9 6					

Items 54 to 70, inclusive, for which a general rate was asked, would, at contractor's prices for each item, average £16 19s. 0d. a ton, and items 78 to 82, £10 5s. 4d. a ton.

## Department of Public Works, Roads and Bridges and Sewerage Branch.

## TENDER FORM.

In pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Eastern Main Branch Sewer, Western Suburbs Sewerage, from Premier-street to Sebastopol-street and Branches (Contract No. 69), agreeably to the Plans, Specification, Schedule to Specification, and General Conditions, which have been inspected by us for or at the rates entered in the Schedule of Quantities and Prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this Tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates or prices mentioned in the Schedule of Quantities and Prices annexed hereto, or if not in Schedule, at a price to be agreed upon at the time, and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said Tender, execute and deliver to the Minister for Public Works, a valid legal Contract with Her Majesty the Queen, embodying the terms and Conditions above mentioned, and to provide the security required by clause 29 of the said General Conditions; and we enclose herewith our cheque for the sum of £500 as a preliminary Deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said Tender is opened withdraw same, or if, in the event of this Tender being accepted, we fail to complete the above-mentioned Contract within fourteen days thereafter; and further, that this Tender is made subject to the Conditions contained in the Tender Board Regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 13th day of December, 1893.

ALEX. DEAN,  
JOHN ADAM DEAN,  
JAMES MORRISON DEAN,  
32 Castlereagh-street.

Witness,—GEO. CLARK.

## TENDER BOARD REGULATIONS.

No Tender shall be received after eleven a.m. on the day named for the receipt of such Tender unless there are circumstances which, in the opinion of the Members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the Tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of Tenders received for each work and the name of the lowest Tenderer; but no Tender shall be accepted until the Head of the Branch, under whose directions the work is to be carried out, has reported upon the whole of the Tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the Tenders received, showing the work, the name of the Tenderer, and the amount of each Tender.

All envelopes containing Tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the Tender is submitted.

Every Tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive ... ..	£5 0 0
For amounts exceeding £500 and not exceeding £1,000...	£10 0 0

For all sums over £1,000 one per cent. on the amount of Tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful Tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful Tenderer shall be returned to him on his executing the bond for the fulfilment of the Contract. When the Contract is for a less sum than £200 the deposit with Tender shall not be returnable until the service is satisfactorily completed.

Any Tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any Tenderer failing to take up his Tender, complete the bond, and proceed with the Contract, within the time specified, or withdrawing his Tender after it shall have been opened, whether such Tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever

Whenever a Tenderer shall fail to proceed with a Contract as aforesaid, fresh Tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another Tender in the same series to be accepted; but the Tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In the event of any Contract being tendered for at a Schedule of Rates, the approximate quantities as given of each item must be worked out and a total sum shown.

In submitting a Tender, the full Christian name of the Tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the Tender. The omission of this information will render the Tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any Tender.

The Board-room shall be open for the admission of the public while the Tenders are being opened and declared.

CONTRACT No. 69.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
	Excavations in open trenches, in more or less hard materials, and in hard rock, for sewers, branches, pipes, sub-ducts, &c., as specified in clause 3, as viz. :—				£ s. d.
1	Excavation in road surfaces, sand, soil, pipeclay, shale, soft rock, where in the opinion of the Engineer blasting is unnecessary	cubic yard	19,320	3/-	2,898 0 0
2	Excavation in hard shale or rock, where gadding and guttering only is permitted	"	1,165	12/-	699 0 0
3	Excavation in hard shale or rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted	"	1,165	10/-	582 10 0
4	Excavation in hard shale or rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted	"	1,165	9/-	524 5 0
	Excavation in tunnels in "more or less hard materials," for sewers, pipe-sewers, sub-ducts, &c., as specified in clause 3, as viz. :—				
5	Less hard excavation in clay, loose, and jointy shale, &c., where in the opinion of the Engineer blasting is unnecessary	"	810	16/-	648 0 0
6	Excavation in hard sandstone or shale, where gadding and guttering only is permitted	"	1,140	20/-	1,140 0 0
7	Excavation in hard sandstone, shale, ironstone, &c., where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted	"	1,140	18/-	1,026 0 0
8	Excavations in hard sandstone, shale, ironstone, &c., where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted	"	1,140	18/-	1,026 0 0
	Excavation in tunnels in "solid rock" for sewers, pipe-sewers, sub-ducts, &c., as specified in clause 3, as viz. :—				
9	Excavation in hard rock, where gadding and guttering only is permitted	"	1,850	30/-	2,775 0 0
10	Excavation in hard rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted	"	1,850	25/-	2,312 10 0
11	Excavation in hard rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted	"	1,850	25/-	2,312 10 0
	Excavation in "solid rock," in shafts, shaft chambers, and sumps, as specified in clause 3, as viz. :—				
12	Excavation in road surfaces, soil, clay, pipeclay, shale, and soft rock only, where in the opinion of the Engineer blasting is unnecessary	"	130	12/-	78 0 0
13	Excavation in hard rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted	"	445	20/-	445 0 0
14	Excavation in hard rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted	"	445	20/-	445 0 0
15	Excavation in hard rock, where gadding and guttering only is permitted	"	445	30/-	667 10 0
	Excavation in "more or less hard ground," in shafts, shaft chambers, and sumps, as specified in clause 3, as viz. :—				
16	Less hard excavation in road surfaces, soil, clay, pipeclay, loose and jointy shale, and soft rock, where in the opinion of the Engineer blasting is unnecessary	"	170	12/-	102 0 0
17	Excavation in hard sandstone or shale, where guttering and gadding only is permitted	"	115	20/-	115 0 0
18	Excavation in hard sandstone or shale, ironstone, &c., where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted	"	115	20/-	115 0 0
19	Excavation in hard sandstone or shale, ironstone, &c., where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted	"	115	20/-	115 0 0

No. of Item.	Description or Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
20	Filling in at sides, round and over all concrete and brickwork of sewers, shafts, chambers, pipes, embankments, and tunnels, as specified in clause 5.	cubic yard	15,220	1/3	£ 951 5 0
21	Timber ordered in writing to be left in excavations, as specified in clause 9, including all iron used in fixing same	cubic foot	9,000	6/-	2,700 0 0
22	Removing existing culverts crossing the Illawarra Road, as specified in clause 12, including masonry, pitching, and timber decking	cubic yard	244	20/-	244 0 0
23	Sub-duct in hard rock, with tile covers, as specified in clause 8.	lineal yard	280	20/-	280 0 0
	Sub-duct, as specified in clause 8, in "more or less hard material," including dry or cement jointing for stoneware pipes:—				
24	Of 6 in. internal diameter	"	640	10/-	320 0 0
25	Of 9 in. internal diameter	"	640	15/-	480 0 0
	Sub-duct in water-charged loose ground, as specified in clause 8, including hardwood boxes with packing in same, and dry or cement jointing for pipes of:—				
26	6 in. internal diameter	"	280	18/-	252 0 0
27	9 in. internal diameter	"	280	20/-	280 0 0
28	Hand-packed stone filling 4-in. gauge, as specified in clauses 8 and 10	cubic yard	760	10/-	380 0 0
29	Bluestone metal, 2½-in. gauge, on road surfaces, as specified in clause 10	"	190	18/-	171 0 0
30	Blinding 2 in. thick over metallated surfaces, as specified in clause 10	"	90	6/-	27 0 0
31	Sandstone concrete, in any situation, as specified in clause 13	"	1,050	35/-	1,837 10 0
32	Bluestone concrete, in any situation, as specified in clause 13	"	4,550	50/-	11,375 0 0
33	Brickwork in cement, in any situation, as specified in clause 15	"	1,605	58/-	4,654 10 0
34	Cement facing, in any situation, as specified in clause 14	square yard	11,600	2/-	1,160 0 0
35	Pyramont sandstone, ashlar, in any situation, as specified in clause 16	cubic foot	210	4/-	42 0 0
36	Squared bluestone pitchers, in any situation, as specified in clause 17	square yard	12	80/-	18 0 0
37	Squared freestone pitchers, in any situation, 6 in. deep, as specified in clause 18	"	38	15/-	28 10 0
38	Supply and fix ordnance fencing complete, with ironwork, painting and tarring, as specified in clause 11	rod	7	£3	21 0 0
	Providing, laying, and jointing glazed stoneware, plain, junction, and bend-pipes, in trenches, shafts, &c., as specified in clause 19, including providing and fixing discs, complete, as viz.:—				
39	9-in. diameter pipes in pipe-sewers and shafts	lineal yard	40	5/-	10 0 0
40	12-in. diameter pipes in pipe-sewers	"	64	7/6	24 0 0
41	16-in. diameter pipes in pipe-sewers	"	15	10/-	7 10 0
42	18-in. diameter pipes in pipe-sewers	"	5	15/-	3 16 0
<b>SURPLUS MATERIALS.</b>					
	Removal of surplus materials from all excavations, as specified in clauses 51, 54, and 86 of the Schedule to Specification, including spreading, as viz.:—				
43	For the first half-mile of lead	cubic yard	20,420	1/3	1,276 5 0
44	For every further quarter of a mile of lead	"	30,000	1/-	1,500 0 0
<b>GOVERNMENT PROPERTY.</b>					
45	Receiving and fixing ironwork, supplied by the Government, as specified in clauses 272 to 275 of the Schedule to Specification	ton	25	£4	100 0 0
<b>IRONWORK.</b>					
	Manufacture, supply, and fix (except where otherwise specified) all wrought-iron, gun-metal, and cast-iron work, and including painting and tarring, complete, as specified in clauses 21 to 26 inclusive, as viz.:—				
<b>PENSTOCKS.</b>					
46	Cast-iron frame and penstock, 6-ft. diameter opening, with lifting gear, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 20 and 3	each	3	£253	759 0 0
47	Cast-iron frame and penstock, 3-ft. 9-in. diameter opening, with lifting gear, street-box, cover-plate, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 19 and 14	"	2	£165	330 0 0
48	Cast-iron frame and penstock of 2-ft. diameter opening, with 2-ft. diameter spigot and flanged bend, lifting gear, street-box, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 14 and 18	"	1	107/16/-	107 16 0
<b>GAS CHECKS.</b>					
49	Cast-iron frame with Muntz metal gas-check for sewer of 6 ft. 10 in. x 5 ft. 10 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 23 and 3	each	1	£99	99 0 0
50	Cast-iron frame with Muntz metal gas-check for sewer of 6 ft. 8 in. x 5 ft. 8 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 24 and 3	"	1	83/12/-	83 12 0
51	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 6 in. x 4 ft. 6 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 25 and 3	"	1	£77	77 0 0

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
				£	£ s. d.
52	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 2 in. x 4 ft. 2 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 26 and 3 .....	each	1	73/14/-	73 14 0
53	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 1 in. x 4 ft. 1 in., complete with all wrought-iron and gun-metal work, as shown on drawings Nos. 27 and 17 .....	"	1	66	66 0 0
IRREGULAR CASTINGS, &c.					
54	Cast-iron flange and faucet pipe, 3 ft. 9 in. internal diameter, 8 ft. long in the body, as shown on drawings Nos. 14 and 16 .....		Tons. cwt. qr. lb. 2 2 3 4	...	88 10 0
55	Cast-iron pipe, 3 ft. 9 in. internal diameter, 8 ft. long over all, with two flange ends, one flange turned and drilled for 1½-in. diameter bolt-holes, as shown on drawings Nos. 14 and 16, weighing .....		2 0 0 18	...	85 4 0
56	Cast-iron flange and spigot pipe, 3 ft. 9 in. internal diameter, 9 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 16, weighing .....		1 16 3 13	...	83 0 0
57	Cast-iron pipe, 3 ft. 9 in. internal diameter, 10 ft. long over all, with spigot ends, as shown on drawing No. 16 .....		2 5 3 23	...	89 12 0
58	Cast-iron thimble, for 3-ft. 9-in. diameter syphon pipes, 18 in. long over all, as shown on drawing No. 16 .....		0 11 3 20	...	11 11 0
59	2—cast-iron flanged pipes, 3 ft. 6 in. internal diameter, 10 ft. long over all, one flange turned and drilled for 1½-in. diameter bolt-holes, as shown on drawings Nos. 17 and 18 .....		4 12 2 2	38/10/-	77 0 0
60	2—cast-iron flange and faucet pipes, 3 ft. 6 in. internal diameter, 12 ft. long in the body, as shown on drawings Nos. 17 and 18 .....		5 16 0 6	45/2/-	90 4 0
61	2—cast-iron flange and spigot pipes, 3 ft. 6 in. internal diameter, 10 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 18 .....		4 9 2 2	36/6/-	72 12 0
62	Cast-iron spigot pipe, 3 ft. 6 in. internal diameter, 10 ft. long over all, as shown on drawing No. 18 .....		2 2 3 25	...	33 0 0
63	Cast-iron spigot pipe, 3 ft. 6 in. internal diameter, 6 ft. 6 in. long over all, as shown on drawing No. 18 .....		1 7 3 20	...	23 2 0
64	Cast-iron spigot and faucet pipe, 3 ft. 6 in. internal diameter, 4 ft. 10 in. long in the body, as shown on drawing No. 18 .....		1 5 2 24	...	22 0 0
65	2—cast-iron thimbles for 3-ft. 6-in. diameter pipe-sewer, 18 in. long over all, as shown on drawing No. 18 .....		1 0 2 14	9/18/-	19 16 0
66	Cast-iron flange and faucet pipe, 2 ft. internal diameter, 10 ft. long over all, drawings Nos. 15 and 16 .....		0 19 0 4	...	17 1 0
67	2—cast-iron flange and spigot pipes, 2 ft. internal diameter, 10 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 16 .....		1 13 3 18	14/17/-	29 14 0
68	Cast-iron thimble for 2-ft. diameter scour-pipes, 15 in. long over all, as shown on drawing No. 16 .....		0 4 1 5	...	5 10 0
69	Cast-iron flanged bend, 12 in. internal diameter, as shown on drawings Nos. 14 and 16 .....		0 14 1 0	...	14 17 0
70	Cast-iron flange and spigot bend, 16 in. internal diameter, as shown on drawings Nos. 3 and 10 .....		0 8 1 10	...	11 11 0
	Total, including placing on cement mortar bedding, where ordered, and fixed (except lead joints) in position in the works ..	ton.	33 12 3 12	...	
71	2—wrought-iron rolled girders for supporting lifting gear of penstocks at Premier-street shaft-chamber, 25 ft. long each, weighing per foot run 46 lb., as shown on drawings Nos. 3 and 20 .....	"	1 0 2 4	15/2/6	15 10 8
72	Platform for working penstocks in Premier-street shaft-chamber, consisting of two wrought-iron rolled girders, 25 ft. long each, weight per foot run 19 lb., with cast-iron gratings and wrought-iron standard and railings, complete, as shown on drawings Nos. 2 and 22, weighing in all .....	cwt.	1 4 2 15	24/6/-	30 3 6
73	Cast-iron standards and wrought-iron tube-railing at top of shaft, and solid bar-railings across shaft at landings, complete, as shown on drawing No. 4 .....	"	0 4 1 11	66/-	14 7 0
74	Wrought-iron ladder in shaft, with supports, in four lengths, complete, as shown on drawing No. 4 .....	"	0 16 2 15	60/6	50 6 5
75	3—angle-iron bearers, with cast-iron perforated landing-plates in shaft, complete, as shown on drawing No. 4 .....	"	0 15 2 27	25/6	20 1 5
76	Wrought-iron hinged gratings, for outlet well of syphon, with cast-iron hinge-plates and wrought-iron channel-girders, complete, as shown on drawings Nos. 14 and 21 .....	"	0 4 1 20	52/-	11 10 3
77	Wrought-iron hinged gratings, for inlet well of syphon, with cast-iron hinge-plates and wrought-iron channel-girders, complete, as shown on drawings Nos. 14 and 21 .....	"	0 9 1 11	44/-	20 11 4
CAST-IRON PIPES.					
	Cast-iron straight, spigot and faucet pipes, 12 ft. long in the body, complete, as shown on drawings Nos. 16 and 18, as viz. :—				
78	96—3-ft. 9-in. diameter syphon pipes .....		289 4 0 0	10/3/6	2,942 12 2

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
			Tons cwt. qr. lb.	£	£ s. d.
79	154—3-ft. 6-in. diameter duplicate sewer pipes .....	.....	435 5 0 14	10/3/6	4,428 18 5
80	59—2-ft. diameter scour-pipes .....	.....	63 16 3 20	11/11/-	737 8 6
81	74—screw bolts, 1½ in diameter, with hexagon heads and nuts, for 3-ft. 6-in. and 3-ft. 9-in. diameters flange pipe-joints .....	.....	0 2 0 23	...	6 12 0
82	16—screw bolts, 1 in. diameter, with hexagon heads and nuts, for 2-ft. diameter flange pipe-joints .....	.....	0 0 1 26	...	1 3 0
	Total for all straight pipes .....	ton.	788 8 2 27		
	<b>PIPE-LAYING.</b>				
	Laying and jointing (including providing lead and spun yarn) the 3-ft. 9-in. diameter, the 3-ft. 6-in. diameter, and the 2-ft. diameter cast-iron pipes, and irregular castings in open trenches and shafts, as specified in clause 20, complete, as viz:—				
83	3-ft. 9-in. diameter syphon pipes and short ends, &c. ....	lineal yard	396	20/-	396 0 0
84	3-ft. 6-in. diameter duplicate sewer-pipes, short ends, &c. ....	"	649	20/-	649 0 0
85	2-ft. diameter scour-pipes and short ends, &c. ....	"	246	20/-	246 0 0
	<b>TRAPPED JUNCTIONS.</b>				
86	Flap-traps, providing, delivering, and building in, including providing and fixing discs .....	each	10	5/-	50 0 0
	<b>GENERAL.</b>				
87	Permanent puddle, where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 29, including spreading in 9-in. layers and ramming, complete .....	cubic yard	10	10/-	5 0 0
88	Special bluestone concrete, in any situation, as specified in clause 2 ...	"	10	70/-	35 0 0
89	Bluestone metal (clause 2), 1½-in. gauge, stacked .....	"	15	17/-	12 15 0
90	Sandstone metal (clause 2), 2-in. gauge, stacked .....	"	15	11/-	8 5 0
91	Bluestone metal (clause 2), 2½-in. gauge, stacked .....	"	15	16/-	12 0 0
92	Sharp, clean, washed sand (clause 2), stacked .....	"	15	10/-	7 10 0
93	Sawn hardwood, in scantlings or planks (clause 2) .....	cubic foot	100	6/-	30 0 0
94	Oregon timber, in scantlings or planks .....	"	100	7/-	35 0 0
95	Wrought-iron, in bolts, galvanized step-irons, screws, nails, spikes, straps, &c. (clause 2) .....	cwt.	20	40/-	40 0 0
96	Portland cement .....	cask	25	16/-	20 0 0
97	Artizan or mechanic, supplied by Contractor .....	day	Rate only	...	0 12 0
98	Quarryman or other skilled labourer, supplied by Contractor .....	"	"	...	0 10 0
99	Ordinary labourer, supplied by Contractor .....	"	"	...	0 8 6
100	Cart with one horse and driver, supplied by Contractor .....	"	"	...	0 13 0
101	One additional horse, supplied by Contractor .....	"	"	...	0 6 0
	TOTAL .....	.....	.....	£	53,168 0 2

The quantities are not guaranteed as correct, and are merely for the guidance of Tenderers, who must satisfy themselves as to their accuracy, which is not in any way guaranteed by the Government, and they are subject to omissions, deductions, or alterations.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in strict accordance with the Specification.

The above Schedule Prices include, in every case, continual maintenance of the works during the whole time of construction, the period of maintenance, and up to the day of their being formally taken over by the Engineer.

Item No. 45 to include the cost of conveying the Government property from the Contractor's Store or Field Office to the various sites of works along line of Main and Branch Sewers, at man-holes, gas-check, and shaft-chamber, &c.

Prices for items Nos. 89, 90, 91, 92, 93, 94, 95, and 96 are to be for materials in strict accordance with Specification, delivered on the works ready for use, and only the actual net quantities ordered and approved of shall be paid for. In case Contractor's prices are considered too high by the Engineer at the time such materials may be required, or if the Contractor fail to deliver such materials at the time required and ordered, then the Engineer shall have the power to supply the same from any other sources, and the Contractor shall have no claim for loss or compensation on account of the exercise of such power by the Engineer.

Prices for items Nos. 97, 98, 99, 100, and 101 are to be for such as are able-bodied and efficient. The Schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

## SUMMARY of Weights of Wrought and Cast Ironwork, including all Gun-metal.

(The number of Items underneath correspond with those of the Schedule of the Quantities and Prices.)

No. of Item.	Description of Item.	Number required.	Weight of each Item.	Total weight.
<b>PENSTOCKS.</b>				
46	Cast-iron frame and penstock, with 6-ft. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	3	Ts. ct. qr. lb. 6 5 1 22	Ts. ct. qr. lb. 18 16 1 10
47	Cast-iron frame and penstock, with 3-ft. 9-in. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	2	3 7 0 4	6 14 0 8
48	Cast-iron frame and penstock, with 2-ft. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	1	1 1 1 20	1 1 1 20
	Total weight .....	...	.....	26 11 3 10
<b>GAS-CHECKS.</b>				
49	Cast-iron frame, with muntz metal gas-check, for 6-ft. 10-in. by 5-ft. 10-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	1 1 1 26	1 1 1 26
50	Cast-iron frame, with muntz metal gas-check, for 6-ft. 8-in. by 5-ft. 8-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 19 2 17	0 19 2 17
51	Cast-iron frame, with muntz metal gas-check, for 5-ft. 6-in. by 4-ft. 6-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 14 0 26	0 14 0 26
52	Cast-iron frame, with muntz metal gas-check, for 5-ft. 2-in. by 4-ft. 2-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 13 0 3	0 13 0 3
53	Cast-iron frame, with muntz metal gas-check, for 5-ft. 1-in. by 4-ft. 1-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 11 0 2	0 11 0 2
	Total weight .....	...	.....	3 19 1 18
<b>IRREGULAR CASTINGS, &amp;c.</b>				
54	Flange and faucet pipe, 8 ft. long, 3 ft. 9 in. internal diameter.....	1	2 2 3 4	2 2 3 4
55	Flange pipe, 8 ft. long, 3 ft. 9 in. internal diameter, one flange turned and drilled for 1½-in. diameter bolt-holes .....	1	2 0 0 18	2 0 0 18
56	Flange and spigot pipe, 9 ft. long, 3 ft. 9 in. internal diameter, the flanges to be turned and drilled for 1½-in. diameter bolt-holes.....	1	1 16 3 13	1 16 3 13
57	Spigot pipe, 10 ft. long, 3 ft. 9 in. internal diameter .....	1	2 5 3 23	2 5 3 23
58	Cast-iron thimble for 3-ft. 9-in. diameter pipe, 18 in. long .....	1	0 11 3 20	0 11 3 20
59	Flange-pipe, 10 ft. long, 3 ft. 6 in. internal diameter, one flange turned and drilled, for 1½-in. diameter bolt-holes .....	2	2 6 1 1	4 12 2 2
60	Flange and faucet pipe, 12 ft. long, 3 ft. 6 in. internal diameter .....	2	2 18 0 3	5 16 0 6
61	Flange and spigot pipe, 10 ft. long, 3 ft. 6 in. internal diameter, the flange turned and drilled for 1½-in. diameter bolt-holes .....	2	2 4 3 1	4 9 2 2
62	Spigot pipe, 10 ft. long, 3 ft. 6 in. internal diameter .....	1	2 2 3 25	2 2 3 25
63	Spigot pipe, 6 ft. 6 in. long, 3 ft. 6 in. internal diameter.....	1	1 7 3 20	1 7 3 20
64	Spigot and faucet pipe, 4 ft. 10 in. long, 3 ft. 6 in. internal diameter .....	1	1 5 2 24	1 5 2 24
65	Cast-iron thimble for 3-ft. 6-in. diameter pipe, 18 in. long.....	2	0 10 1 7	1 0 2 14
66	Flange and faucet pipe, 10 ft. long, 2 ft. internal diameter .....	1	0 19 0 4	0 19 0 4
67	Flange and spigot pipe, 10 ft. long, 2 ft. internal diameter, the flange to be turned and drilled for 1½-in. diameter bolt-holes .....	2	0 16 3 23	1 13 3 18
68	Cast-iron thimble for 2-ft. diameter pipe, 15 in. long .....	1	0 4 1 5	0 4 1 5
69	Cast-iron flange bend, 12 in. internal diameter .....	4	0 3 2 7	0 14 1 0
70	Cast-iron flange and spigot bend, 16 in. internal diameter .....	2	0 4 0 10	0 8 1 10
	Total weight .....	...	.....	33 12 3 12
71	Wrought-iron rolled girders, 13½ in. high, top and bottom flange 5½ in. wide, 25 ft. long, to be walled in at Premier-street shaft chamber .....	2	at 40 lb. per ft.	1 0 2 4
72	Platform for working penstocks, Premier-street shaft, two wrought-iron rolled girders, 9 in. high, top and bottom flanges, 3 in. wide, 25 ft. long, weighing 19 lb. per lineal foot, with cast-iron gratings and wrought-iron standards and railings complete.....	...	.....	1 4 2 15
73	Cast-iron standards and wrought-iron tube-railing at top of shaft, and solid bar-railing across shaft at landings .....	...	.....	0 4 1 11
74	Wrought-iron ladder in shaft, with supports, in four lengths, complete .....	...	.....	0 16 2 15
75	Angle-iron bearers with cast-iron perforated landing plates in shaft in Premier-street, complete .....	3	.....	0 15 2 27
76	Wrought-iron hinged gratings on cast-iron hinge-plates and double wrought-iron channel girders, with cast-iron distance blocks for outlet well of syphon .....	...	.....	0 4 1 20
77	Wrought-iron hinged grating for inlet well of syphon on cast-iron hinge-plates and double wrought-iron, channel-iron girders with cast-iron distance blocks .....	...	.....	0 9 1 11
	Total weight .....	...	.....	4 15 2 19
<b>CAST-IRON STRAIGHT SPIGOT AND FAUCET PIPES, 12 FT. LONG</b>				
78	3-ft. 9-in. diameter syphon pipes .....	96	3 0 1 0	289 4 0 0
79	3-ft. 6-in. diameter duplicate sewer-pipes.....	154	2 16 2 3	435 5 0 14
80	2-ft. diameter scour-pipes .....	59	1 1 2 16	63 16 3 20
	Total weight of pipes.....	...	.....	788 6 0 6
81	Screw-bolts 1½ in. diameter, with hexagon heads and nuts, for 3-ft. 9-in. and 3-ft. 6-in. diameters, flange pipe-joints .....	74	.....	0 2 0 23
82	Screw-bolts 1 in. diameter, with hexagon heads and nuts, for 2-ft. diameter flange pipe-joints .....	15	.....	0 0 1 26
	Total weight .....	...	.....	0 2 2 21

## No. 9.—LANGTREE &amp; OWEN'S TENDER.

	Deduct.			Add.		
	£	s.	d.	£	s.	d.
Item No. 79.....				0	4	7
"   80.....	0	1	9			
"   81.....	0	1	3			
Addition .....				0	0	6
	0	3	0	0	5	1

Items 54 to 70, inclusive, for which a general rate is asked, would, at tenderer's price for each item, average about £17 10s. 11d. per ton, and items 78 to 82, £9 14s. 1½d.

## Department of Public Works, Roads and Bridges and Sewerage Branch.

## TENDER FORM.

In pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Eastern Main Branch Sewer, Western Suburbs Sewerage, from Premier-street to Sebastopol-street and Branches (Contract No. 69), agreeably to the Plans, Specification, Schedule to Specification, and General Conditions, which have been inspected by us for or at the rates entered in the Schedule of Quantities and Prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this Tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates or prices mentioned in the Schedule of Quantities and Prices annexed hereto, or if not in Schedule, at a price to be agreed upon at the time, and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said Tender, execute and deliver to the Minister for Public Works, a valid legal Contract with Her Majesty the Queen, embodying the terms and Conditions above mentioned, and to provide the security required by clause 29 of the said General Conditions; and we enclose herewith our cheque for the sum of £500 as a preliminary Deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said Tender is opened withdraw same, or if, in the event of this Tender being accepted, we fail to complete the above-mentioned Contract within fourteen days thereafter; and further, that this Tender is made subject to the Conditions contained in the Tender Board Regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 13th day of December, 1893.

J. N. CAMPBELL LANGTREE,  
Hunter's Hill.

HUGH OWEN,  
99, Elizabeth-street, Paddington.

Witness,—V. TURNBULL, 261 George-street.

## TENDER BOARD REGULATIONS.

No Tender shall be received after eleven a.m. on the day named for the receipt of such Tender unless there are circumstances which, in the opinion of the Members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the Tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of Tenders received for each work and the name of the lowest Tenderer; but no Tender shall be accepted until the Head of the Branch, under whose directions the work is to be carried out, has reported upon the whole of the Tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the Tenders received, showing the work, the name of the Tenderer, and the amount of each Tender.

All envelopes containing Tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the Tender is submitted.

Every Tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive ... ..	£5	0	0
For amounts exceeding £500 and not exceeding £1,000...	£10	0	0

For all sums over £1,000 one per cent. on the amount of Tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful Tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful Tenderer shall be returned to him on his executing the bond for the fulfilment of the Contract. When the Contract is for a less sum than £200 the deposit with Tender shall not be returnable until the service is satisfactorily completed.

Any Tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any Tenderer failing to take up his Tender, complete the bond, and proceed with the Contract, within the time specified, or withdrawing his Tender after it shall have been opened, whether such Tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a Tenderer shall fail to proceed with a Contract as aforesaid, fresh Tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another Tender in the same series to be accepted; but the Tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In the event of any Contract being tendered for at a Schedule of Rates, the approximate quantities as given of each item must be worked out and a total sum shown.

In submitting a Tender, the full Christian name of the Tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the Tender. The omission of this information will render the Tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any Tender.

The Board-room shall be open for the admission of the public while the Tenders are being opened and declared.

CONTRACT No. 69.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
	Excavations in open trenches, in more or less hard materials, and in hard rock, for sewers, branches, pipes, sub-ducts, &c., as specified in clause 3, as viz. :—				£ s. d.
1	Excavation in road surfaces, sand, soil, pipeclay, shale, soft rock, where in the opinion of the Engineer blasting is unnecessary .....	cubic yard	19,320	2/10	2,737 0 0
2	Excavation in hard shale or rock, where gadding and guttering only is permitted .....	"	1,165	11/-	640 15 0
3	Excavation in hard shale or rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	1,165	6/-	349 10 0
4	Excavation in hard shale or rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	1,165	5/6	320 7 6
	Excavation in tunnels in "more or less hard materials," for sewers, pipe-sewers, sub-ducts, &c., as specified in clause 3, as viz. :—				
5	Less hard excavation in clay, loose, and jointy shale, &c., where in the opinion of the Engineer blasting is unnecessary .....	"	810	8/-	324 0 0
6	Excavation in hard sandstone or shale, where gadding and guttering only is permitted .....	"	1,140	42/-	2,394 0 0
7	Excavation in hard sandstone, shale, ironstone, &c., where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted ..	"	1,140	41/-	2,337 0 0
8	Excavations in hard sandstone, shale, ironstone, &c., where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted ..	"	1,140	40/-	2,280 0 0
	Excavation in tunnels in "solid rock" for sewers, pipe-sewers, sub-ducts, &c., as specified in clause 3, as viz. :—				
9	Excavation in hard rock, where gadding and guttering only is permitted .....	"	1,850	42/-	3,885 0 0
10	Excavation in hard rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	1,850	41/-	3,702 10 0
11	Excavation in hard rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted .....	"	1,850	40/-	3,700 0 0
	Excavation in "solid rock," in shafts, shaft chambers, and sumps, as specified in clause 3, as viz. :—				
12	Excavation in road surfaces, soil clay, pipeclay, shale, and soft rock only, where in the opinion of the Engineer blasting is unnecessary ..	"	130	8/-	52 0 0
13	Excavation in hard rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	445	41/-	912 5 0
14	Excavation in hard rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	445	40/-	890 0 0
15	Excavation in hard rock, where gadding and guttering only is permitted .....	"	445	42/-	934 10 0
	Excavation in "more or less hard ground," in shafts, shaft chambers, and sumps, as specified in clause 3, as viz. :—				
16	Less hard excavation in road surfaces, soil, clay, pipeclay, loose and jointy shale, and soft rock, where in the opinion of the Engineer blasting is unnecessary .....	"	170	8/-	68 0 0
17	Excavation in hard sandstone or shale, where guttering and gadding only is permitted .....	"	115	42/-	241 10 0
18	Excavation in hard sandstone or shale, ironstone, &c., where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted .....	"	115	41/-	235 15 0
19	Excavation in hard sandstone or shale, ironstone, &c., where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	115	40/-	230 9 0

No. of Item.	Description or Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
20	Filling in at sides, round and over all concrete and brickwork of sewers, shafts, chambers, pipes, embankments, and tunnels, as specified in clause 5.....	cubic yard	15,220	1/3	£ 951 5 0
21	Timber ordered in writing to be left in excavations, as specified in clause 9, including all iron used in fixing same.....	cubic foot	9,000	1/-	450 0 0
22	Removing existing culverts crossing the Illawarra Road, as specified in clause 12, including masonry, pitching, and timber decking.....	cubic yard	244	2/-	24 8 0
23	Sub-duct 'th hard rock, with tile covers, as specified in clause 8.....	lineal yard	280	2/-	28 0 0
	Sub-duct, as specified in clause 8, in "more or less hard material," including dry or cement jointing for stoneware pipes:—				
24	Of 6 in. internal diameter.....	"	640	4/-	128 0 0
25	Of 9 in. internal diameter.....	"	640	5/3	168 0 0
	Sub-duct in water-charged loose ground, as specified in clause 8, including hardwood boxes with packing in same, and dry or cement jointing for pipes of:—				
26	6 in. internal diameter.....	"	280	7/-	98 0 0
27	9 in. internal diameter.....	"	280	8/3	115 10 0
28	Hand-packed stone filling 4-in. gauge, as specified in clauses 8 and 10.....	cubic yard.	760	3/-	114 0 0
29	Bluestone metal, 2½-in. gauge, on road surfaces, as specified in clause 10.....	"	190	13/-	123 10 0
30	Blinding 2 in. thick over metallised surfaces, as specified in clause 10.....	"	90	2/6	11 5 0
31	Sandstone concrete, in any situation, as specified in clause 13.....	"	1,050	32/-	1,680 0 0
32	Bluestone concrete, in any situation, as specified in clause 13.....	"	4,550	50/-	11,375 0 0
33	Brickwork in cement, in any situation, as specified in clause 15.....	"	1,605	56/-	4,494 0 0
34	Cement facing, in any situation, as specified in clause 14.....	square yard	11,600	2/3	1,305 0 0
35	Pymont sandstone, ashlar, in any situation, as specified in clause 16.....	cubic foot.	210	4/-	42 0 0
36	Squared bluestone pitchers, in any situation, as specified in clause 17.....	square yard	12	20/-	12 0 0
37	Squared freestone pitchers, in any situation, 6 in. deep, as specified in clause 18.....	"	38	9/-	17 2 0
38	Supply and fix ordnance fencing complete, with ironwork, painting, and tarring, as specified in clause 11.....	rod ...	7	15/-	5 5 0
	Providing, laying, and jointing glazed stoneware, plain, junction, and bend-pipes, in trenches, shafts, &c., as specified in clause 19, including providing and fixing discs, complete, as viz:—				
39	9-in. diameter pipes in pipe-sewers and shafts.....	lineal yard.	40	8/6	17 0 0
40	12-in. diameter pipes in pipe-sewers.....	"	64	10/-	32 0 0
41	16-in. diameter pipes in pipe-sewers.....	"	15	15/-	11 5 0
42	18-in. diameter pipes in pipe-sewers.....	"	5	18/-	4 10 0
<b>SURPLUS MATERIALS.</b>					
	Removal of surplus materials from all excavations, as specified in clauses 51, 54, and 86 of the Schedule to Specification, including spreading, as viz:—				
43	For the first half-mile of lead.....	cubic yard.	20,420	1/-	1,021 0 0
44	For every further quarter of a mile of lead.....	"	30,000	-/4	500 0 0
<b>GOVERNMENT PROPERTY.</b>					
45	Receiving and fixing ironwork, supplied by the Government, as specified in clauses 272 to 275 of the Schedule to Specification.....	ton ...	25	40/-	50 0 0
<b>IRONWORK.</b>					
	Manufacture, supply, and fix (except where otherwise specified) all wrought-iron, gun-metal, and cast-iron work, and including painting and tarring, complete, as specified in clauses 21 to 26 inclusive, as viz:—				
<b>PENSTOCKS.</b>					
46	Cast-iron frame and penstock, 6-ft. diameter opening, with lifting gear, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 20 and 3.....	each ...	3	£275	825 0 0
47	Cast-iron frame and penstock, 3-ft. 9-in. diameter opening, with lifting gear, street-box, cover-plate, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 19 and 14.....	" ...	2	£166	332 0 0
48	Cast-iron frame and penstock of 2-ft. diameter opening, with 2-ft diameter spigot and flanged bend; lifting gear, street-box, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 14 and 18.....	" ...	1	£54	54 0 0
<b>GAS CHECKS.</b>					
49	Cast-iron frame with Muntz metal gas-check for sewer of 6 ft. 10 in. x 5 ft. 10 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 23 and 3.....	each.	1	...	86 0 0
50	Cast-iron frame with Muntz metal gas-check for sewer of 6 ft. 8 in. x 5 ft. 8 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 24 and 3.....	" ...	1	...	77 0 0
51	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 6 in. x 4 ft. 6 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 25 and 3.....	" ...	1	...	51 0 0

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
52	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 2 in. x 4 ft. 2 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 26 and 3 .....	each	1	£ ...	£ 47 0 0
53	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 1 in. x 4 ft. 1 in., complete with all wrought-iron and gun-metal work, as shown on drawings Nos. 27 and 17 .....	"	1	£ ...	£ 45 0 0
<b>IRREGULAR CASTINGS, &amp;c.</b>					
54	Cast-iron flange and faucet pipe, 3 ft. 9 in. internal diameter, 8 ft. long in the body, as shown on drawings Nos. 14 and 16 .....		Tons. cwt. qr. lb.	...	38 0 0
55	Cast-iron pipe, 3 ft. 9 in. internal diameter, 8 ft. long over all, with two flange ends, one flange turned and drilled for 1½-in. diameter bolt-holes, as shown on drawings Nos. 14 and 16, weighing .....		2 0 0 18	...	36 0 0
56	Cast-iron flange and spigot pipe, 3 ft. 9 in. internal diameter, 9 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 16, weighing .....		1 16 3 13	...	33 0 0
57	Cast-iron pipe, 3 ft. 9 in. internal diameter, 10 ft. long over all, with spigot ends, as shown on drawing No. 16 .....		2 5 3 23	...	40 0 0
58	Cast-iron thimble, for 3-ft. 9-in. diameter syphon pipes, 18 in. long over all, as shown on drawing No. 16 .....		0 11 3 20	...	11 0 0
59	2—cast-iron flanged pipes, 3 ft. 6 in. internal diameter, 10 ft. long over all, one flange turned and drilled for 1½-in. diameter bolt-holes, as shown on drawings Nos. 17 and 18 .....		4 12 2 2	...	80 0 0
60	2—cast-iron flange and faucet pipes, 3 ft. 6 in. internal diameter, 12 ft. long in the body, as shown on drawings Nos. 17 and 18 .....		5 16 0 6	...	100 0 0
61	2—cast-iron flange and spigot pipes, 3 ft. 6 in. internal diameter, 10 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 18 .....		4 9 2 2	...	78 0 0
62	Cast-iron spigot pipe, 3 ft. 6 in. internal diameter, 10 ft. long over all, as shown on drawing No. 18 .....		2 2 3 25	...	38 0 0
63	Cast-iron spigot pipe, 3 ft. 6 in. internal diameter, 6 ft. 6 in. long over all, as shown on drawing No. 18 .....		1 7 3 20	...	24 0 0
64	Cast-iron spigot and faucet pipe, 3 ft. 6 in. internal diameter, 4 ft. 10 in. long in the body, as shown on drawing No. 18 .....		1 5 2 24	...	22 0 0
65	2—cast-iron thimbles for 3-ft. 6-in. diameter pipe-sewer, 18 in. long over all, as shown on drawing No. 18 .....		1 0 2 14	...	17 10 0
66	Cast-iron flange and faucet pipe, 2 ft. internal diameter, 10 ft. long over all, drawings Nos. 15 and 16 .....		0 19 0 4	...	15 15 0
67	2—cast-iron flange and spigot pipes, 2 ft. internal diameter, 10 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 16 .....		1 13 3 18	...	30 0 0
68	Cast-iron thimble for 2-ft. diameter scour-pipes, 15 in. long over all, as shown on drawing No. 16 .....		0 4 1 5	...	3 17 0
69	Cast iron flanged bend, 12 in. internal diameter, as shown on drawings Nos. 14 and 16 .....		0 14 1 0	...	12 14 0
70	Cast-iron flange and spigot bend, 16 in. internal diameter, as shown on drawings Nos. 3 and 10 .....		0 8 1 10	...	7 7 0
	Total, including placing on cement mortar bedding, where ordered, and fixed (except lead joints) in position in the works .....	ton.	33 12 3 12	...	
71	2—wrought-iron rolled girders for supporting lifting gear of penstocks at Premier-street shaft-chamber, 25 ft. long each, weighing per foot run 46 lb., as shown on drawings Nos. 3 and 20 .....	"	1 0 2 4	...	24 0 0
72	Platform for working penstocks in Premier-street shaft-chamber, consisting of two wrought-iron rolled girders, 25 ft. long each, weight per foot run 19 lb., with cast iron gratings and wrought-iron standard and railings, complete, as shown on drawings Nos. 2 and 22, weighing in all .....	cwt.	1 4 2 15	...	41 0 0
73	Cast-iron standards and wrought-iron tube-railing at top of shaft, and solid bar-railings across shaft at landings, complete, as shown on drawing No. 4 .....	"	0 4 1 11	...	11 0 0
74	Wrought-iron ladder in shaft, with supports, in four lengths, complete, as shown on drawing No. 4 .....	"	0 16 2 15	...	24 0 0
75	3—angle-iron bearers, with cast-iron perforated landing-plates in shaft, complete, as shown on drawing No. 4 .....	"	0 15 2 27	...	14 0 0
76	Wrought-iron hinged gratings, for outlet well of syphon, with cast-iron hinge-plates and wrought-iron channel-girders, complete, as shown on drawings Nos. 14 and 21 .....	"	0 4 1 20	...	7 15 0
77	Wrought-iron hinged gratings, for inlet well of syphon, with cast-iron hinge-plates and wrought-iron channel-girders, complete, as shown on drawings Nos. 14 and 21 .....	"	0 9 1 11	...	15 10 0
<b>CAST-IRON PIPES.</b>					
78	Cast-iron straight, spigot and faucet pipes, 12 ft. long in the body, complete, as shown on drawings Nos. 16 and 18, as viz. :— 96—3-ft. 9-in. diameter syphon pipes .....		289 4 0 0	195½	2,819 14 0

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
			Tons cwt. qr. lb.	£	£ s. d.
79	154—3-ft. 6-in. diameter duplicate sewer pipes .....	.....	435 5 0 14	195/-	4,243 14 0
80	59—2-ft. diameter scour-pipes .....	.....	63 16 3 20	195/-	622 11 0
81	74—screw bolts, 1½ in. diameter, with hexagon heads and nuts, for 3-ft. 6-in. and 3-ft. 9-in. diameters flange pipe-joints .....	.....	0 2 0 23	62/-	5 16 0
82	15—screw bolts, 1 in. diameter, with hexagon heads and nuts, for 2-ft. diameter flange pipe-joints .....	.....	0 0 1 26	52/-	1 5 0
	Total for all straight pipes.....	ton.	788 8 2 27		
<b>PIPE-LAYING.</b>					
	Laying and jointing (including providing lead and spun-yarn) the 3-ft. 9-in. diameter, the 3-ft. 6-in. diameter, and the 2-ft. diameter cast-iron pipes, and irregular castings in open trenches and shafts, as specified in clause 20, complete, as viz.:—				
83	3-ft. 9-in. diameter syphon pipes and short ends, &c. ....	lineal yard	396	7/6	148 10 0
84	3-ft. 6-in. diameter duplicate sewer-pipes, short ends, &c. ....	"	649	7/-	227 3 0
85	2-ft. diameter scour-pipes and short ends, &c. ....	"	246	6/-	73 16 0
<b>TRAPPED JUNCTIONS.</b>					
86	Flap-traps, providing, delivering, and building in, including providing and fixing discs .....	each	10	30/-	15 0 0
<b>GENERAL.</b>					
87	Permanent puddle, where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 29, including spreading in 9-in. layers and ramming, complete .....	cubic yard	10	6/-	3 0 0
88	Special bluestone concrete, in any situation, as specified in clause 2 ...	"	10	60/-	30 0 0
89	Bluestone metal (clause 2), 1½-in. gauge, stacked .....	"	15	15/-	11 5 0
90	Sandstone metal (clause 2), 2-in. gauge, stacked .....	"	15	5/-	3 15 0
91	Bluestone metal (clause 2), 2½-in. gauge, stacked .....	"	15	15/-	11 5 0
92	Sharp, clean, washed sand (clause 2), stacked ..	"	15	5/-	3 15 0
93	Sawn hardwood, in scantlings or planks (clause 2) .....	cubic foot	100	2/6	12 10 0
94	Oregon timber, in scantlings or planks .....	"	100	2/6	12 10 0
95	Wrought-iron, in bolts, galvanized step-irons, screws, nails, spikes, straps, &c. (clause 2) .....	cwt.	20	70/-	70 0 0
96	Portland cement .....	cask	25	15/-	18 15 0
97	Artizan or mechanic, supplied by Contractor .....	day	Rate only	12/-	.....
98	Quarryman or other skilled labourer, supplied by Contractor .....	"	"	10/-	.....
99	Ordinary labourer, supplied by Contractor .....	"	"	9/-	.....
100	Cart with one horse and driver, supplied by Contractor.....	"	"	15/-	.....
101	One additional horse, supplied by Contractor .....	"	"	20/-	.....
	TOTAL .....	.....	.....£	...	59,676 14 0

The quantities are not guaranteed as correct, and are merely for the guidance of Tenderers, who must satisfy themselves as to their accuracy, which is not in any way guaranteed by the Government, and they are subject to omissions, deductions, or alterations.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in strict accordance with the Specification.

The above Schedule Prices include, in every case, continual maintenance of the works during the whole time of construction, the period of maintenance, and up to the day of their being formally taken over by the Engineer.

Item No. 45 to include the cost of conveying the Government property from the Contractor's Store or Field Office to the various sites of works along line of Main and Branch Sewers, at man-holes, gas-check, and shaft-chamber, &c.

Prices for items Nos. 89, 90, 91, 92, 93, 94, 95, and 96 are to be for materials in strict accordance with Specification, delivered on the works ready for use, and only the actual net quantities ordered and approved of shall be paid for. In case Contractor's prices are considered too high by the Engineer at the time such materials may be required, or if the Contractor fail to deliver such materials at the time required and ordered, then the Engineer shall have the power to supply the same from any other sources, and the Contractor shall have no claim for loss or compensation on account of the exercise of such power by the Engineer.

Prices for items Nos. 97, 98, 99, 100, and 101 are to be for such as are able-bodied and efficient. The Schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

**SUMMARY**

## SUMMARY of Weights of Wrought and Cast Ironwork, including all Gun-metal.

(The number of Items underneath correspond with those of the Schedule of the Quantities and Prices.)

No. of Item.	Description of Item.	Number required.	Weight of each Item.	Total weight.
<b>PENSTOCKS.</b>				
			Ts. ct. qr. lb.	Ts. ct. qr. lb.
46	Cast-iron frame and penstock, with 6-ft. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	3	6 5 1 22	18 16 1 10
47	Cast-iron frame and penstock, with 3-ft. 9-in. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	2	3 7 0 4	6 14 0 8
48	Cast-iron frame and penstock, with 2-ft. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	1	1 1 1 20	1 1 1 20
	<b>Total weight</b> .....	...	.....	26 11 3 10
<b>GAS-CHECKS.</b>				
49	Cast-iron frame, with muntz metal gas-check, for 6-ft. 10-in. by 5-ft. 10-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	1 1 1 20	1 1 1 20
50	Cast-iron frame, with muntz metal gas-check, for 6-ft. 8-in. by 5-ft. 8-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 19 2 17	0 19 2 17
51	Cast-iron frame, with muntz metal gas-check, for 5-ft. 6-in. by 4-ft. 6-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 14 0 26	0 14 0 26
52	Cast-iron frame, with muntz metal gas-check, for 5-ft. 2-in. by 4-ft. 2-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 13 0 3	0 13 0 3
53	Cast-iron frame, with muntz metal gas-check, for 5-ft. 1-in. by 4-ft. 1-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 11 0 2	0 11 0 2
	<b>Total weight</b> .....	...	.....	3 19 1 18
<b>IRREGULAR CASTINGS, &amp;c.</b>				
54	Flange and faucet pipe, 8 ft. long, 3 ft. 9 in. internal diameter.....	1	2 2 3 4	2 2 3 4
55	Flange pipe, 8 ft. long, 3 ft. 9 in. internal diameter, one flange turned and drilled, for 1½ in. diameter bolt-holes.....	1	2 0 0 18	2 0 0 18
56	Flange and spigot pipe, 9 ft. long, 3 ft. 9 in. internal diameter, the flanges to be turned and drilled for 1½ in. diameter bolt-holes.....	1	1 16 3 13	1 16 3 13
57	Spigot pipe, 10 ft. long, 3 ft. 9 in. internal diameter .....	1	2 5 3 23	2 5 3 23
58	Cast-iron thimble for 3-ft. 9-in. diameter pipe, 18 in. long .....	1	0 11 3 20	0 11 3 20
59	Flange-pipe, 10 ft. long, 3 ft. 6 in. internal diameter, one flange turned and drilled, for 1½-in. diameter bolt-holes .....	2	2 6 1 1	4 12 2 2
60	Flange and faucet pipe, 12 ft. long, 3 ft. 6 in. internal diameter .....	2	2 18 0 3	5 16 0 6
61	Flange and spigot pipe, 10 ft. long, 3 ft. 6 in. internal diameter, the flange turned and drilled for 1½-in. diameter bolt-holes .....	2	2 4 3 1	4 9 2 2
62	Spigot pipe, 10 ft. long, 3 ft. 6 in. internal diameter .....	1	2 2 3 25	2 2 3 25
63	Spigot pipe, 6 ft. 6 in. long, 3 ft. 6 in. internal diameter.....	1	1 7 3 20	1 7 3 20
64	Spigot and faucet pipe, 4 ft. 10 in. long, 3 ft. 6 in. internal diameter .....	1	1 5 2 24	1 5 2 24
65	Cast-iron thimble for 3-ft. 6-in. diameter pipe, 18 in. long.....	2	0 10 1 7	1 0 2 14
66	Flange and faucet pipe, 10 ft. long, 2 ft. internal diameter .....	1	0 19 0 4	0 19 0 4
67	Flange and spigot pipe, 10 ft. long, 2 ft. internal diameter, the flange to be turned and drilled for 1½-in. diameter bolt-holes .....	2	0 16 3 23	1 13 3 18
68	Cast-iron thimble for 2-ft. diameter pipe, 15 in. long .....	1	0 4 1 5	0 4 1 5
69	Cast-iron flange bend, 12 in. internal diameter .....	4	0 3 2 7	0 14 1 0
70	Cast-iron flange and spigot bend, 16 in. internal diameter .....	2	0 4 0 19	0 8 1 10
	<b>Total weight</b> .....	...	.....	33 12 3 12
71	Wrought-iron rolled girders, 13½ in. high, top and bottom flange 5½ in. wide, 25 ft. long, to be walled in at Premier-street shaft chamber .....	2	at 46 lb. per ft.	1 0 2 4
72	Platform for working penstocks, Premier-street shaft, two wrought-iron rolled girders, 9 in. high, top and bottom flanges, 3 in. wide, 25 ft. long, weighing 19 lb. per lineal foot, with cast-iron gratings and wrought-iron standards and railings complete .....	...	.....	1 4 2 15
73	Cast-iron standards and wrought-iron tube-railing at top of shaft, and solid bar-railing across shaft at landings .....	...	.....	0 4 1 11
74	Wrought-iron ladder in shaft, with supports, in four lengths, complete .....	...	.....	0 16 2 15
75	Angle-iron bearers with cast-iron perforated landing plates in shaft in Premier-street, complete .....	3	.....	0 15 2 27
76	Wrought-iron hinged gratings on cast-iron hinge-plates and double wrought-iron channel girders, with cast-iron distance blocks for outlet well of syphon .....	...	.....	0 4 1 20
77	Wrought-iron hinged grating for inlet well of syphon on cast-iron hinge-plates and double wrought-iron, channel-iron girders with cast-iron distance blocks .....	...	.....	0 9 1 11
	<b>Total weight</b> .....	...	.....	4 15 2 19
<b>CAST-IRON STRAIGHT SPIGOT AND FAUCET PIPES, 12 FT. LONG.</b>				
78	3-ft. 9-in. diameter syphon pipes .....	96	3 0 1 0	289 4 0 0
79	3-ft. 6-in. diameter duplicate sewer-pipes.....	154	2 16 2 3	435 5 0 14
80	2-ft. diameter scour-pipes .....	59	1 1 2 16	63 16 3 20
	<b>Total weight of pipes</b> .....	...	.....	788 6 0 6
81	Screw-bolts 1½ in. diameter, with hexagon heads and nuts, for 3-ft. 9-in. and 3-ft. 6-in. diameters, flange pipe-joints .....	74	.....	0 2 0 23
82	Screw-bolts 1 in. diameter, with hexagon heads and nuts, for 2-ft. diameter flange pipe-joints .....	15	.....	0 0 1 26
	<b>Total weight</b> .....	...	.....	0 2 2 21

## No. 10.—PARRY &amp; FARLEY'S TENDER.

Department of Public Works, Roads and Bridges and Sewerage Branch.

## TENDER FORM.

In pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Eastern Main Branch Sewer, Western Suburbs Sewerage, from Premier-street to Sebastopol-street and Branches (Contract No. 69), agreeably to the Plans, Specification, Schedule to Specification, and General Conditions, which have been inspected by us for or at the rates entered in the Schedule of Quantities and Prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this Tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates or prices mentioned in the Schedule of Quantities and Prices annexed hereto, or if not in Schedule, at a price to be agreed upon at the time, and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said Tender, execute and deliver to the Minister for Public Works, a valid legal Contract with Her Majesty the Queen, embodying the terms and Conditions above mentioned, and to provide the security required by clause 29 of the said General Conditions; and we enclose herewith our cheque for the sum of £500 as a preliminary Deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said Tender is opened withdraw same, or if, in the event of this Tender being accepted, we fail to complete the above-mentioned Contract within fourteen days thereafter; and further, that this Tender is made subject to the Conditions contained in the Tender Board Regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 13th day of December, 1893.

PARRY & FARLEY,  
158, The Strand, Sydney.

## TENDER BOARD REGULATIONS.

No Tender shall be received after eleven a.m. on the day named for the receipt of such Tender unless there are circumstances which, in the opinion of the Members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the Tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of Tenders received for each work and the name of the lowest Tenderer; but no Tender shall be accepted until the Head of the Branch, under whose directions the work is to be carried out, has reported upon the whole of the Tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the Tenders received, showing the work, the name of the Tenderer, and the amount of each Tender.

All envelopes containing Tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the Tender is submitted.

Every Tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive ... ..	£5 0 0
For amounts exceeding £500 and not exceeding £1,000... ..	£10 0 0

For all sums over £1,000 one per cent. on the amount of Tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful Tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful Tenderer shall be returned to him on his executing the bond for the fulfilment of the Contract. When the Contract is for a less sum than £200 the deposit with Tender shall not be returnable until the service is satisfactorily completed.

Any Tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any Tenderer failing to take up his Tender, complete the bond, and proceed with the Contract, within the time specified, or withdrawing his Tender after it shall have been opened, whether such Tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever

Whenever a Tenderer shall fail to proceed with a Contract as aforesaid, fresh Tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another Tender in the same series to be accepted; but the Tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In the event of any Contract being tendered for at a Schedule of Rates, the approximate quantities as given of each item must be worked out and a total sum shown.

In submitting a Tender, the full Christian name of the Tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the Tender. The omission of this information will render the Tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any Tender.

The Board-room shall be open for the admission of the public while the Tenders are being opened and declared.

CONTRACT No. 69.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
					£ s. d.
1	Excavations in open trenches, in more or less hard materials, and in hard rock, for sewers, branches, pipes, sub-ducts, &c., as specified in clause 3, as viz. :—				
1	Excavation in road surfaces, sand, soil, pipeclay, shale, soft rock, where in the opinion of the Engineer blasting is unnecessary .....	cubic yard	19,320	2/-	1,932 0 0
2	Excavation in hard shale or rock, where gadding and guttering only is permitted .....	"	1,165	12/-	699 0 0
3	Excavation in hard shale or rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	1,165	9/-	524 5 0
4	Excavation in hard shale or rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	1,165	8/-	466 0 0
	Excavation in tunnels in "more or less hard materials," for sewers, pipe-sewers, sub-ducts, &c., as specified in clause 3, as viz. :—				
5	Less hard excavation in clay, loose, and jointy shale, &c., where in the opinion of the Engineer blasting is unnecessary .....	"	810	25/-	1,012 10 0
6	Excavation in hard sandstone or shale, where gadding and guttering only is permitted .....	"	1,140	40/-	2,280 0 0
7	Excavation in hard sandstone, shale, ironstone, &c., where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted ..	"	1,140	35/-	1,995 0 0
8	Excavations in hard sandstone, shale, ironstone, &c., where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted..	"	1,140	34/-	1,938 0 0
	Excavation in tunnels in "solid rock" for sewers, pipe-sewers, sub-ducts, &c., as specified in clause 3, as viz. :—				
9	Excavation in hard rock, where gadding and guttering only is permitted .....	"	1,850	38/-	3,515 0 0
10	Excavation in hard rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	1,850	33/-	3,052 10 0
11	Excavation in hard rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted.....	"	1,850	31/-	2,867 10 0
	Excavation in "solid rock," in shafts, shaft chambers, and sumps, as specified in clause 3, as viz. :—				
12	Excavation in road surfaces, soil clay, pipeclay, shale, and soft rock only, where in the opinion of the Engineer blasting is unnecessary ..	"	130	25/-	162 10 0
13	Excavation in hard rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	445	45/-	1,001 5 0
14	Excavation in hard rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	445	42/6	945 12 6
15	Excavation in hard rock, where gadding and guttering only is permitted .....	"	445	50/-	1,112 10 0
	Excavation in "more or less hard ground," in shafts, shaft chambers, and sumps, as specified in clause 3, as viz. :—				
16	Less hard excavation in road surfaces, soil, clay, pipeclay, loose and jointy shale, and soft rock, where in the opinion of the Engineer blasting is unnecessary .....	"	170	25/-	212 10 0
17	Excavation in hard sandstone or shale, where guttering and gadding only is permitted.....	"	115	45/-	258 15 0
18	Excavation in hard sandstone or shale, ironstone, &c., where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted .....	"	115	42/6	244 7 6
19	Excavation in hard sandstone or shale, ironstone, &c., where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	115	40/-	230 0 0

No. of Item.	Description or Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
20	Filling in at sides, round and over all concrete and brickwork of sewers, shafts, chambers, pipes, embankments, and tunnels, as specified in clause 5.....	cubic yard	15,220	1/6	£ 1,141 10 0
21	Timber ordered in writing to be left in excavations, as specified in clause 9, including all iron used in fixing same .....	cubic foot	9,000	1/-	450 0 0
22	Removing existing culverts crossing the Illawarra Road, as specified in clause 12, including masonry, pitching, and timber decking .....	cubic yard	244	4/-	48 16 0
23	Sub-duct in hard rock, with tile covers, as specified in clause 8.....	lineal yard	280	3/-	42 0 0
	Sub-duct, as specified in clause 8, in "more or less hard material," including dry or cement jointing for stoneware pipes:—				
24	Of 6 in. internal diameter .....	"	640	3/-	96 0 0
25	Of 9 in. internal diameter .....	"	640	3/6	112 0 0
	Sub-duct in water-charged loose ground, as specified in clause 8, including hardwood boxes with packing in same, and dry or cement jointing for pipes of:—				
26	6 in. internal diameter .....	"	280	5/-	70 0 0
27	9 in. internal diameter .....	"	280	6/-	84 0 0
28	Hand-packed stone filling 4-in. gauge, as specified in clauses 8 and 10 .....	cubic yard	760	2/-	76 0 0
29	Bluestone metal, 2½-in. gauge, on road surfaces, as specified in clause 10 .....	"	190	12/6	118 15 0
30	Blinding 2 in. thick over metal surfaces, as specified in clause 10 .....	"	90	2/-	9 0 0
31	Sandstone concrete, in any situation, as specified in clause 13 .....	"	1,050	35/-	1,837 10 0
32	Bluestone concrete, in any situation, as specified in clause 13 .....	"	4,550	45/-	10,237 10 0
33	Brickwork in cement, in any situation, as specified in clause 15 .....	"	1,605	80/-	6,420 0 0
34	Cement facing, in any situation, as specified in clause 14 .....	square yard	11,600	2/6	1,450 0 0
35	Pyrmont sandstone, ashlar, in any situation, as specified in clause 16 .....	cubic foot	210	4/-	42 0 0
36	Squared bluestone pitchers, in any situation, as specified in clause 17 .....	square yard	12	20/-	12 0 0
37	Squared freestone pitchers, in any situation, 6 in. deep, as specified in clause 18.....	"	38	12/-	22 16 0
38	Supply and fix ordnance fencing complete, with ironwork, painting and tarring, as specified in clause 11 .....	rod	7	50/-	17 10 0
	Providing, laying, and jointing glazed stoneware, plain, junction, and bend-pipes, in tranches, shafts, &c., as specified in clause 19, including providing and fixing discs, complete, as viz.:—				
39	9-in. diameter pipes in pipe-sewers and shafts .....	lineal yard	40	3/6	7 0 0
40	12-in. diameter pipes in pipe-sewers .....	"	64	6/-	19 4 0
41	16-in. diameter pipes in pipe-sewers .....	"	15	12/-	9 0 0
42	18-in. diameter pipes in pipe-sewers .....	"	5	16/-	4 0 0
<b>SURPLUS MATERIALS.</b>					
	Removal of surplus materials from all excavations, as specified in clauses 51, 54, and 86 of the Schedule to Specification, including spreading, as viz.:—				
43	For the first half-mile of lead.....	cubic yard	20,420	1/3	1,276 5 0
44	For every further quarter of a mile of lead .....	"	30,000	-/3	375 0 0
<b>GOVERNMENT PROPERTY.</b>					
45	Receiving and fixing ironwork, supplied by the Government, as specified in clauses 272 to 275 of the Schedule to Specification .....	ton	25	80/-	100 0 0
<b>IRONWORK.</b>					
	Manufacture, supply, and fix (except where otherwise specified) all wrought-iron, gun-metal, and cast-iron work, and including painting and tarring, complete, as specified in clauses 21 to 26 inclusive, as viz.:—				
<b>PENSTOCKS.</b>					
46	Cast-iron frame and penstock, 6-ft. diameter opening, with lifting gear, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 20 and 3 .....	each	3	£292	876 0 0
47	Cast-iron frame and penstock, 3-ft. 9-in. diameter opening, with lifting gear, street-box, cover-plate, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 19 and 14.....	"	2	£191	382 0 0
48	Cast-iron frame and penstock of 2-ft. diameter opening, with 2-ft. diameter spigot and flanged bend, lifting gear, street-box, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 14 and 18.....	"	1	122/10/-	122 10 0
<b>GAS CHECKS.</b>					
49	Cast-iron frame with Muntz metal gas-check for sewer of 6 ft. 10 in. x 5 ft. 10 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 23 and 3 .....	each	1	£112	112 0 0
50	Cast-iron frame with Muntz metal gas-check for sewer of 6 ft. 8 in. x 5 ft. 8 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 24 and 3 .....	"	1	£98	98 0 0
51	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 6 in. x 4 ft. 6 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 25 and 3 .....	"	1	£78	78 0 0

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
				£	£ s. d.
52	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 2 in. x 4 ft. 2 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 26 and 3 .....	each	1	73/10/-	73 10 0
53	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 1 in. x 4 ft. 1 in., complete with all wrought-iron and gun-metal work, as shown on drawings Nos. 27 and 17 .....	"	1	65/10/-	65 10 0
IRREGULAR CASTINGS, &c.					
54	Cast-iron flange and faucet pipe, 3 ft. 9 in. internal diameter, 8 ft long in the body, as shown on drawings Nos. 14 and 16 .....			Tons. cwt. qr. lb.	
55	Cast-iron pipe, 3 ft. 9 in. internal diameter, 8 ft. long over all, with two flange ends, one flange turned and drilled for 1½-in. diameter bolt-holes, as shown on drawings Nos. 14 and 16, weighing .....			2 2 3 4	
56	Cast-iron flange and spigot pipe, 3 ft. 9 in. internal diameter, 9 ft long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 16, weighing .....			2 0 0 18	
57	Cast-iron pipe, 3 ft. 9 in. internal diameter, 10 ft. long over all, with spigot ends, as shown on drawing No. 16 .....			1 16 3 13	
58	Cast-iron thimble, for 3-ft. 9-in. diameter syphon pipes, 18 in. long over all, as shown on drawing No. 16 .....			2 5 3 23	
59	2—cast-iron flanged pipes, 3 ft. 6 in. internal diameter, 10 ft. long over all, one flange turned and drilled for 1½-in. diameter bolt-holes, as shown on drawings Nos. 17 and 18 .....			0 11 3 20	
60	2—cast-iron flange and faucet pipes, 3 ft. 6 in. internal diameter, 12 ft. long in the body, as shown on drawings Nos. 17 and 18 .....			4 12 2 2	
61	2—cast-iron flange and spigot pipes, 3 ft. 6 in. internal diameter, 10 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 18 .....			5 16 0 6	
62	Cast-iron spigot pipe, 3 ft. 6 in. internal diameter, 10 ft. long over all, as shown on drawing No. 18 .....			4 9 2 2	
63	Cast-iron spigot pipe, 3 ft. 6 in. internal diameter, 6 ft. 6 in. long over all, as shown on drawing No. 18 .....			2 2 3 25	
64	Cast-iron spigot and faucet pipe, 3 ft. 6 in. internal diameter, 4 ft. 10 in. long in the body, as shown on drawing No. 18 .....			1 7 3 20	
65	2—cast-iron thimbles for 3-ft. 6-in. diameter pipe-sewer, 18 in. long over all, as shown on drawing No. 18 .....			1 5 2 24	
66	Cast-iron flange and faucet pipe, 2 ft. internal diameter, 10 ft. long over all, drawings Nos. 15 and 16 .....			1 0 2 14	
67	2—cast-iron flange and spigot pipes, 2 ft. internal diameter, 10 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 16 .....			0 19 0 4	
68	Cast-iron thimble for 2-ft. diameter scour-pipes, 15 in. long over all, as shown on drawing No. 16 .....			1 13 3 18	
69	Cast-iron flanged bend, 12 in. internal diameter, as shown on drawings Nos. 14 and 16 .....			0 4 1 5	
70	Cast-iron flange and spigot bend, 16 in. internal diameter, as shown on drawings Nos. 3 and 10 .....			0 14 1 0	
	- Total, including placing on cement mortar bedding, where ordered, and fixed (except lead joints) in position in the works ..	ton.	33 12 3 12	24/10/-	824 5 0
71	2—wrought-iron rolled girders for supporting lifting gear of penstocks at Premier-street shaft-chamber, 25 ft. long each, weighing per foot run 46 lb., as shown on drawings Nos. 3 and 20 .....	"	1 0 2 4	27/10/-	21 1 0
72	Platform for working penstocks in Premier-street shaft-chamber, consisting of two wrought-iron rolled girders, 25 ft. long each, weight per foot run 19 lb., with cast-iron gratings and wrought-iron standard and railings, complete, as shown on drawings Nos. 3 and 22, weighing in all .....	cwt.	1 4 2 15	28/-	34 10 0
73	Cast-iron standards and wrought-iron tube-railing at top of shaft and solid bar-railings across shaft at landings, complete, as shown on drawing No. 4 .....	"	0 4 1 11	57/-	12 7 9
74	Wrought-iron ladder in shaft, with supports, in four lengths, complete, as shown on drawing No. 4 .....	"	0 16 2 15	56/-	46 11 6
75	3—angle-iron bearers, with cast-iron perforated landing-plates in shaft, complete, as shown on drawing No. 4 .....	"	0 15 2 27	28/-	22 0 9
76	Wrought-iron hinged gratings, for outlet well of syphon, with cast-iron hinge-plates and wrought-iron channel-girders, complete, as shown on drawings Nos. 14 and 21 .....	"	0 4 1 20	50/-	11 1 4
77	Wrought-iron hinged gratings, for inlet well of syphon, with cast-iron hinge-plates and wrought-iron channel-girders, complete, as shown on drawings Nos. 14 and 21 .....	"	0 9 1 11	48/-	22 8 8
CAST-IRON PIPES.					
	Cast-iron straight, spigot and faucet pipes, 12 ft. long in the body, complete, as shown on drawings Nos. 16 and 18, as viz. :—				
78	96—3-ft. 9-in. diameter syphon pipes .....		289 4 0 0		

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
			Tons cwt. qr. lb.	£	£ s. d.
79	154—3-ft. 6-in. diameter duplicate sewer pipes .....		435 5 0 14		
80	59—2-ft. diameter scour-pipes .....		63 16 3 20		
81	74—screw bolts, 1½ in. diameter, with hexagon heads and nuts, for 3-ft. 6-in. and 3-ft. 9-in. diameters flange pipe-joints .....		0 2 0 23		
82	15—screw bolts, 1 in. diameter, with hexagon heads and nuts, for 2-ft. diameter flange pipe-joints .....		0 0 1 26		
	Total for all straight pipes.....	ton.	788 8 2 27	14½/3/-	11,156 7 9
<b>PIPE-LAYING.</b>					
	Laying and jointing (including providing lead and spun-yarn) the 3-ft. 9-in. diameter, the 3-ft. 6-in. diameter, and the 2-ft. diameter cast iron pipes, and irregular castings in open trenches and shafts, as specified in clause 20, complete, as viz.:-				
83	3-ft. 9-in. diameter syphon pipes and short ends, &c. ....	lineal yard	396	8/-	158 8 0
84	3-ft. 6-in. diameter duplicate sewer-pipes, short ends, &c. ....	"	649	7/6	243 7 6
85	2-ft. diameter scour-pipes and short ends, &c. ....	"	246	4/-	49 4 0
<b>TRAPPED JUNCTIONS.</b>					
86	Flap-traps, providing, delivering, and building in, including providing and fixing discs .....	each	10	15/-	7 10 0
<b>GENERAL.</b>					
87	Permanent puddle, where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 29, including spreading in 9-in. layers and ramming, complete .....	cubic yard	10	3/-	1 10 0
88	Special bluestone concrete, in any situation, as specified in clause 2 ...	"	10	60/-	30 0 0
89	Bluestone metal (clause 2), 1½-in. gauge, stacked .....	"	15	12/6	9 7 6
90	Sandstone metal (clause 2), 2-in. gauge, stacked .....	"	15	4/-	3 0 0
91	Bluestone metal (clause 2), 2½-in. gauge, stacked .....	"	15	12/6	9 7 6
92	Sharp, clean, washed sand (clause 2), stacked .....	"	15	10/-	7 10 0
93	Sawn hardwood, in scantlings or planks (clause 2) .....	cubic foot	100	1/6	7 10 0
94	Oregon timber, in scantlings or planks .....	"	100	1/8	8 6 8
95	Wrought-iron, in bolts, galvanized step-irons, screws, nails, spikes, straps, &c. (clause 2) .....	cwt.	20	56/-	56 0 0
96	Portland cement .....	cask	25	15/-	18 15 0
97	Artizan or mechanic, supplied by Contractor .....	day	Rate only	15/-	.....
98	Quarryman or other skilled labourer, supplied by Contractor .....	"	"	13/-	.....
99	Ordinary labourer, supplied by Contractor .....	"	"	12/-	.....
100	Cart with one horse and driver, supplied by Contractor.....	"	"	20/-	.....
101	One additional horse, supplied by Contractor .....	"	"	5/-	.....
	TOTAL .....			£ ...	63,095 11 11

The quantities are not guaranteed as correct, and are merely for the guidance of Tenderers, who must satisfy themselves as to their accuracy, which is not in any way guaranteed by the Government, and they are subject to omissions, deductions, or alterations.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in strict accordance with the Specification.

The above Schedule Prices include, in every case, continual maintenance of the works during the whole time of construction, the period of maintenance, and up to the day of their being formally taken over by the Engineer.

Item No. 45 to include the cost of conveying the Government property from the Contractor's Store or Field Office to the various sites of works along line of Main and Branch Sewers, at man-holes, gas-check, and shaft-chamber, &c.

Prices for items Nos. 89, 90, 91, 92, 93, 94, 95, and 96 are to be for materials in strict accordance with Specification, delivered on the works ready for use, and only the actual net quantities ordered and approved of shall be paid for. In case Contractor's prices are considered too high by the Engineer at the time such materials may be required, or if the Contractor fail to deliver such materials at the time required and ordered, then the Engineer shall have the power to supply the same from any other sources, and the Contractor shall have no claim for loss or compensation on account of the exercise of such power by the Engineer.

Prices for items Nos. 97, 98, 99, 100, and 101 are to be for such as are able-bodied and efficient. The Schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

SUMMARY

## SUMMARY of Weights of Wrought and Cast Ironwork, including all Gun-metal.

(The number of Items underneath correspond with those of the Schedule of the Quantities and Prices.)

No. of Item.	Description of Item.	Number required.	Weight of each Item.			Total weight.				
			Ts.	ct.	qr.	lb.	Ts.	ct.	qr.	lb.
<b>PENSTOCKS.</b>										
46	Cast-iron frame and penstock, with 6-ft. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	3	6	5	1	22	18	16	1	10
47	Cast-iron frame and penstock, with 3-ft. 9 in. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	2	3	7	0	4	6	14	0	8
48	Cast-iron frame and penstock, with 2-ft. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	1	1	1	1	20	1	1	1	20
	Total weight .....	...	.....			26 11 3 10				
<b>GAS-CHECKS.</b>										
49	Cast-iron frame, with muntz metal gas-check, for 6-ft. 10-in. by 5-ft. 10-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	1	1	1	26	1	1	1	26
50	Cast-iron frame, with muntz metal gas-check, for 6-ft. 8-in. by 5-ft. 8-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0	19	2	17	0	19	2	17
51	Cast-iron frame, with muntz metal gas-check, for 5-ft. 6-in. by 4-ft. 6-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0	14	0	26	0	14	0	26
52	Cast-iron frame, with muntz metal gas-check, for 5-ft. 2-in. by 4-ft. 2-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0	13	0	3	0	13	0	3
53	Cast-iron frame, with muntz metal gas-check, for 5-ft. 1-in. by 4-ft. 1-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0	11	0	2	0	11	0	2
	Total weight .....	...	.....			3 19 1 18				
<b>IRREGULAR CASTINGS, &amp;c.</b>										
54	Flange and faucet pipe, 8 ft. long, 3 ft. 9 in. internal diameter.....	1	2	2	3	4	2	2	3	4
55	Flange pipe, 8 ft. long, 3 ft. 9 in. internal diameter, one flange turned and drilled, for 1½-in. diameter bolt-holes .....	1	2	0	0	18	2	0	0	18
56	Flange and spigot pipe, 9 ft. long, 3 ft. 9 in. internal diameter, the flanges to be turned and drilled for 1½-in. diameter bolt-holes .....	1	1	16	3	13	1	16	3	13
57	Spigot pipe, 10 ft. long, 3 ft. 9 in. internal diameter .....	1	2	5	3	23	2	5	3	23
58	Cast-iron thimble for 3-ft. 9-in. diameter pipe, 18 in. long .....	1	0	11	3	20	0	11	3	20
59	Flange-pipe, 10 ft. long, 3 ft. 6 in. internal diameter, one flange turned and drilled, for 1½-in. diameter bolt-holes .....	2	2	6	1	1	4	12	2	2
60	Flange and faucet pipe, 12 ft. long, 3 ft. 6 in. internal diameter .....	2	2	13	0	3	5	16	0	6
61	Flange and spigot pipe, 10 ft. long, 3 ft. 6 in. internal diameter, the flange turned and drilled for 1½-in. diameter bolt-holes .....	2	2	4	3	1	4	9	2	2
62	Spigot pipe, 10 ft. long, 3 ft. 6 in. internal diameter .....	1	2	2	3	25	2	2	3	25
63	Spigot pipe, 6 ft. 6 in. long, 3 ft. 6 in. internal diameter.....	1	1	7	3	20	1	7	3	20
64	Spigot and faucet pipe, 4 ft. 10 in. long, 3 ft. 6 in. internal diameter .....	1	1	5	2	24	1	5	2	24
65	Cast-iron thimble for 3-ft. 6-in. diameter pipe, 18 in. long .....	2	0	10	1	7	1	0	2	14
66	Flange and faucet pipe, 10 ft. long, 2 ft. internal diameter .....	1	0	19	0	4	0	19	0	4
67	Flange and spigot pipe, 10 ft. long, 2 ft. internal diameter, the flange to be turned and drilled for 1½-in. diameter bolt-holes .....	2	0	16	3	23	1	13	3	18
68	Cast-iron thimble for 2-ft. diameter pipe, 15 in. long .....	1	0	4	1	5	0	4	1	5
69	Cast-iron flange bend, 12 in. internal diameter .....	4	0	3	2	7	0	14	1	0
70	Cast-iron flange and spigot bend, 16 in. internal diameter.....	2	0	4	0	19	0	8	1	10
	Total weight .....	...	.....			33 12 3 12				
71	Wrought-iron rolled girders, 13½ in. high, top and bottom flange 5½ in. wide, 25 ft. long, to be walled in at Premier-street shaft chamber .....	2	at 46 lb. per ft.			1 0 2 4				
72	Platform for working penstocks, Premier-street shaft, two wrought-iron rolled girders, 9 in. high, top and bottom flanges, 3 in. wide, 25 ft. long, weighing 19 lb. per lineal foot, with cast-iron gratings and wrought-iron standards and railings complete.....	...	.....			1 4 2 15				
73	Cast-iron standards and wrought-iron tube-railing at top of shaft, and solid bar-railing across shaft at landings .....	...	.....			0 4 1 11				
74	Wrought-iron ladder in shaft, with supports, in four lengths, complete .....	...	.....			0 16 2 15				
75	Angle-iron bearers with cast-iron perforated landing plates in shaft in Premier-street, complete .....	3	.....			0 15 2 27				
76	Wrought-iron hinged gratings on cast-iron hinge-plates and double wrought-iron channel girders, with cast-iron distance blocks for outlet well of syphon .....	...	.....			0 4 1 20				
77	Wrought-iron hinged grating for inlet well of syphon on cast-iron hinge-plates and double wrought-iron, channel-iron girders with cast-iron distance blocks .....	...	.....			0 9 1 11				
	Total weight .....	...	.....			4 15 2 19				
<b>CAST-IRON STRAIGHT SPIGOT AND FAUCET PIPES, 12 FT. LONG.</b>										
78	3-ft. 9-in. diameter syphon pipes .....	96	3	0	1	0	289	4	0	0
79	3-ft. 6-in. diameter duplicate sewer-pipes.....	154	2	16	2	3	495	5	0	14
80	2-ft. diameter scour-pipes .....	59	1	1	2	16	63	16	3	20
	Total weight of pipes.....	...	.....			788 6 0 6				
81	Screw-bolts 1½ in. diameter, with hexagon heads and nuts, for 3-ft. 9-in. and 3-ft. 6-in. diameters, flange pipe-joints .....	74	.....			0 2 0 23				
82	Screw-bolts 1 in. diameter, with hexagon heads and nuts, for 2-ft. diameter flange pipe-joints .....	15	.....			0 0 1 26				
	Total weight .....	...	.....			0 2 2 21				

No. 11.—J. STEWART & CO'S. TENDER.

Item No.	Add.			Deduct.		
	£	s.	d.	£	s.	d.
43.....	0	10	6	.....		
" 74.....	0	0	6	.....		
" 75.....				3	7	9
" 76.....	0	8	5	.....		
" 78.....	1	0	0	.....		
" 80.....				0	0	10
" 90.....				0	15	0
				1	19	5
				4	3	7
				1	19	5
				2	4	2

Department of Public Works, Roads and Bridges and Sewerage Branch.

TENDER FORM.

In pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Eastern Main Branch Sewer, Western Suburbs Sewerage, from Premier-street to Sebastopol-street and Branches (Contract No. 69), agreeably to the Plans, Specification, Schedule to Specification, and General Conditions, which have been inspected by us for or at the rates entered in the Schedule of Quantities and Prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this Tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates or prices mentioned in the Schedule of Quantities and Prices annexed hereto, or if not in Schedule, at a price to be agreed upon at the time, and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said Tender, execute and deliver to the Minister for Public Works, a valid legal Contract with Her Majesty the Queen, embodying the terms and Conditions above mentioned, and to provide the security required by clause 29 of the said General Conditions; and we enclose herewith our cheque for the sum of £500 as a preliminary Deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said Tender is opened withdraw same, or if, in the event of this Tender being accepted, we fail to complete the above-mentioned Contract within fourteen days thereafter; and further, that this Tender is made subject to the Conditions contained in the Tender Board Regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 13th day of December, 1893.

Witness,—DANIEL STEWART.

J. STEWART & CO.,  
4, Mercantile Chambers, Park-street.

TENDER BOARD REGULATIONS.

No Tender shall be received after eleven a.m. on the day named for the receipt of such Tender unless there are circumstances which, in the opinion of the Members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the Tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of Tenders received for each work and the name of the lowest Tenderer; but no Tender shall be accepted until the Head of the Branch, under whose directions the work is to be carried out, has reported upon the whole of the Tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the Tenders received, showing the work, the name of the Tenderer, and the amount of each Tender.

All envelopes containing Tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the Tender is submitted.

Every Tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive ... ..	£5	0	0
For amounts exceeding £500 and not exceeding £1,000...	£10	0	0

For all sums over £1,000 one per cent. on the amount of Tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful Tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful Tenderer shall be returned to him on his executing the bond for the fulfilment of the Contract. When the Contract is for a less sum than £200 the deposit with Tender shall not be returnable until the service is satisfactorily completed.

Any Tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any Tenderer failing to take up his Tender, complete the bond, and proceed with the Contract, within the time specified, or withdrawing his Tender after it shall have been opened, whether such Tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever

Whenever a Tenderer shall fail to proceed with a Contract as aforesaid, fresh Tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another Tender in the same series to be accepted; but the Tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In the event of any Contract being tendered for at a Schedule of Rates, the approximate quantities as given of each item must be worked out and a total sum shown.

In submitting a Tender, the full Christian name of the Tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the Tender. The omission of this information will render the Tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any Tender.

The Board-room shall be open for the admission of the public while the Tenders are being opened and declared.

CONTRACT No. 69.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
	Excavations in open trenches, in more or less hard materials, and in hard rock, for sewers, branches, pipes, sub-ducts, &c., as specified in clause 3, as viz. :—				£ s. d.
1	Excavation in road surfaces, sand, soil, pipeclay, shale, soft rock, where in the opinion of the Engineer blasting is unnecessary .....	cubic yard	19,320	3/6	3,381 0 0
2	Excavation in hard shale or rock, where gadding and guttering only is permitted .....	"	1,165	6/-	349 10 0
3	Excavation in hard shale or rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	1,165	5/6	320 7 6
4	Excavation in hard shale or rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	1,165	5½/-	221 5 0
5	Excavation in tunnels in "more or less hard materials," for sewers, pipe-sewers, sub-ducts, &c., as specified in clause 3, as viz. :—				
5	Less hard excavation in clay, loose, and jointy shale, &c., where in the opinion of the Engineer blasting is unnecessary .....	"	810	30/-	1,215 0 0
6	Excavation in hard sandstone or shale, where gadding and guttering only is permitted .....	"	1,140	60/-	3,420 0 0
7	Excavation in hard sandstone, shale, ironstone, &c., where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted ..	"	1,140	54/-	3,078 0 0
8	Excavations in hard sandstone, shale, ironstone, &c., where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted ..	"	1,140	50/-	2,850 0 0
9	Excavation in tunnels in "solid rock" for sewers, pipe-sewers, sub-ducts, &c., as specified in clause 3, as viz. :—				
9	Excavation in hard rock, where gadding and guttering only is permitted .....	"	1,850	60/-	5,550 0 0
10	Excavation in hard rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	1,850	56/-	5,180 0 0
11	Excavation in hard rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	1,850	54/-	4,995 0 0
12	Excavation in "solid rock," in shafts, shaft chambers, and sumps, as specified in clause 3, as viz. :—				
12	Excavation in road surfaces, soil, clay, pipeclay, shale, and soft rock only, where in the opinion of the Engineer blasting is unnecessary ..	"	130	£4	520 0 0
13	Excavation in hard rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	445	70/-	1,557 10 0
14	Excavation in hard rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	445	65/-	1,446 5 0
15	Excavation in hard rock, where gadding and guttering only is permitted .....	"	445	£4	1,780 0 0
16	Excavation in "more or less hard ground," in shafts, shaft chambers, and sumps, as specified in clause 3, as viz. :—				
16	Less hard excavation in road surfaces, soil, clay, pipeclay, loose and jointy shale, and soft rock, where in the opinion of the Engineer blasting is unnecessary .....	"	170	£4	680 0 0
17	Excavation in hard sandstone or shale, where guttering and gadding only is permitted.....	"	115	100/-	575 0 0
18	Excavation in hard sandstone or shale, ironstone, &c., where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted .....	"	115	85/-	488 15 0
19	Excavation in hard sandstone or shale, ironstone, &c., where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	115	80/-	460 0 0

No. of Item.	Description or Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
20	Filling in at sides, round and over all concrete and brickwork of sewers, shafts, chambers, pipes, embankments, and tunnels, as specified in clause 5.....	cubic yard	15,220	2/6	£ 380 10 0
21	Timber ordered in writing to be left in excavations, as specified in clause 9, including all iron used in fixing same .....	cubic foot	9,000	1/4	37 10 0
22	Removing existing culverts crossing the Illawarra Road, as specified in clause 12, including masonry, pitching, and timber decking ..	cubic yard	244	2/-	24 8 0
23	Sub-duct in hard rock, with tile covers, as specified in clause 8.....	lineal yard	280	6/-	84 0 0
	Sub-duct, as specified in clause 8, in "move or less hard material," including dry or cement jointing for stoneware pipes:—				
24	Of 6 in. internal diameter .....	"	610	3/-	96 0 0
25	Of 9 in. internal diameter .....	"	640	4/-	128 0 0
	Sub-duct in water-charged loose ground, as specified in clause 8, including hardwood boxes with packing in same, and dry or cement jointing for pipes of:—				
26	6 in. internal diameter .....	"	280	5/-	70 0 0
27	9 in. internal diameter .....	"	280	6/-	84 0 0
28	Hand-packed stone filling 4-in. gauge, as specified in clauses 8 and 10	cubic yard	700	6/-	228 0 0
29	Bluestone metal, 2½-in. gauge, on road surfaces, as specified in clause 10	"	190	12/-	114 0 0
30	Blinding 2 in. thick over metallised surfaces, as specified in clause 10...	"	90	12/-	54 0 0
31	Sandstone concrete, in any situation, as specified in clause 13 .....	"	1,050	40/-	2,100 0 0
32	Bluestone concrete, in any situation, as specified in clause 13 .....	"	4,550	45/-	10,237 10 0
33	Brickwork in cement, in any situation, as specified in clause 15 .....	"	1,605	55/-	4,413 15 0
34	Cement facing, in any situation, as specified in clause 14 .....	square yard	11,600	1/-	1,160 0 0
35	Pymont sandstone, ashlar, in any situation, as specified in clause 16	cubic foot.	210	5/-	62 10 0
36	Squared bluestone pitchers, in any situation, as specified in clause 17	square yard	12	30/-	18 0 0
37	Squared freestone pitchers, in any situation, 6 in. deep, as specified in clause 18.....	"	38	20/-	38 0 0
38	Supply and fix ordnance fencing complete, with ironwork, painting, and tarring, as specified in clause 11 .....	rod	7	20/-	7 0 0
	Providing, laying, and jointing glazed stoneware, plain, junction, and bend-pipes, in trenches, shafts, &c., as specified in clause 19, including providing and fixing discs, complete, as viz. :—				
39	9-in. diameter pipes in pipe-sewers and shafts .....	lineal yard.	40	6/-	12 0 0
40	12-in. diameter pipes in pipe-sewers .....	"	64	10/-	32 0 0
41	16-in. diameter pipes in pipe-sewers .....	"	15	15/-	11 5 0
42	18-in. diameter pipes in pipe-sewers .....	"	5	20/-	5 0 0
<b>SURPLUS MATERIALS.</b>					
	Removal of surplus materials from all excavations, as specified in clauses 51, 54, and 86 of the Schedule to Specification, including spreading, as viz. :—				
43	For the first half-mile of lead.....	cubic yard.	20,420	7/-	595 1 2
44	For every further quarter of a mile of lead .....	"	30,000	1/-	125 0 0
<b>GOVERNMENT PROPERTY.</b>					
45	Receiving and fixing ironwork, supplied by the Government, as specified in clauses 272 to 275 of the Schedule to Specification ...	ton	25	£3	75 0 0
<b>IRONWORK.</b>					
	Manufacture, supply, and fix (except where otherwise specified) all wrought-iron, gun-metal, and cast-iron work, and including painting and tarring, complete, as specified in clauses 21 to 26 inclusive, as viz. :—				
<b>PENSTOCKS.</b>					
46	Cast-iron frame and penstock, 6-ft. diameter opening, with lifting gear, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 20 and 3 .....	each	3	£180	540 0 0
47	Cast-iron frame and penstock, 3-ft. 9-in. diameter opening, with lifting gear, street-box, cover-plate, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 19 and 14.....	"	2	£140	280 0 0
48	Cast-iron frame and penstock of 2-ft. diameter opening, with 2-ft. diameter spigot and flanged bend, lifting gear, street-box, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 14 and 18 .....	"	1	£100	100 0 0
<b>GAS CHECKS.</b>					
49	Cast-iron frame with Muntz metal gas-check for sewer of 6 ft. 10 in. x 5 ft. 10 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 23 and 3 .....	each.	1	£80	80 0 0
50	Cast-iron frame with Muntz metal gas-check for sewer of 6 ft. 8 in. x 5 ft. 8 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 24 and 3 .....	"	1	£70	70 0 0
51	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 6 in. x 4 ft. 6 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 25 and 3 .....	"	1	£62	62 0 0
52	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 2 in. x 4 ft. 2 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 26 and 3 .....	each	1	£60	60 0 0
53	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 1 in. x 4 ft. 1 in., complete with all wrought-iron and gun-metal work, as shown on drawings Nos. 27 and 17 .....	"	1	£54	54 0 0

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
<b>IRREGULAR CASTINGS, &amp;c.</b>					
54	Cast-iron flange and faucet pipe, 3 ft. 9 in. internal diameter, 8 ft. long in the body, as shown on drawings Nos. 14 and 16 .....		Tons. cwt. qr. lb 2 2 3 4	£16	£ s. d.
55	Cast-iron pipe, 3 ft. 9 in. internal diameter, 8 ft. long over all, with two flange ends, one flange turned and drilled for 1½-in. diameter bolt-holes, as shown on drawings Nos. 14 and 16, weighing .....		2 0 0 18	£16	.....
56	Cast-iron flange and spigot pipe, 3 ft. 9 in. internal diameter, 9 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 16, weighing.....		1 16 3 13	£16	.....
57	Cast-iron pipe, 3 ft. 9 in. internal diameter, 10 ft. long over all, with spigot ends, as shown on drawing No. 16 .....		2 5 3 23	£16	.....
58	Cast-iron thimble, for 3-ft. 9-in. diameter syphon pipes, 18 in. long over all, as shown on drawing No. 16 .....		0 11 3 20	£16	.....
59	2—cast-iron flanged pipes, 3 ft. 6 in. internal diameter, 10 ft. long over all, one flange turned and drilled for 1½-in. diameter bolt-holes, as shown on drawings Nos. 17 and 18 .....		4 12 2 2	£16	.....
60	2—cast-iron flange and faucet pipes, 3 ft. 6 in. internal diameter, 12 ft. long in the body, as shown on drawings Nos. 17 and 18 .....		5 16 0 6	£16	.....
61	2—cast-iron flange and spigot pipes, 3 ft. 6 in. internal diameter, 10 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 18 .....		4 0 2 2	£16	.....
62	Cast-iron spigot pipe, 3 ft. 6 in. internal diameter, 10 ft. long over all, as shown on drawing No. 18 .....		2 2 3 25	£16	.....
63	Cast-iron spigot pipe, 3 ft. 6 in. internal diameter, 6 ft. 6 in. long over all, as shown on drawing No. 18 .....		1 7 3 20	£16	.....
64	Cast-iron spigot and faucet pipe, 3 ft. 6 in. internal diameter, 4 ft. 10 in. long in the body, as shown on drawing No. 18 .....		1 5 2 24	£16	.....
65	2—cast-iron thimbles for 3-ft. 6-in. diameter pipe-sewer, 18 in. long over all, as shown on drawing No. 18 .....		1 0 2 14	£16	.....
66	Cast-iron flange and faucet pipe, 2 ft. internal diameter, 10 ft. long over all, drawings Nos. 15 and 16.....		0 19 0 4	£16	.....
67	2—cast-iron flange and spigot pipes, 2 ft. internal diameter, 10 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 16 .....		1 13 3 18	£16	.....
68	Cast-iron thimble for 2-ft. diameter scour-pipes, 15 in. long over all, as shown on drawing No. 16 .....		0 4 1 5	£16	.....
69	Cast-iron flanged bend, 12 in. internal diameter, as shown on drawings Nos. 14 and 16 .....		0 14 1 0	£16	.....
70	Cast-iron flange and spigot bend, 16 in. internal diameter, as shown on drawings Nos. 5 and 10 .....		0 8 1 10	£16	.....
	Total, including placing on cement mortar bedding, where ordered, and fixed (except lead joints) in position in the works .....	ton.	33 12 3 12	£16	538 5 9
71	2—wrought-iron rolled girders for supporting lifting gear of penstocks at Premier-street shaft-chamber, 25 ft. long each, weighing per foot run 46 lb., as shown on drawings Nos. 3 and 20.....	"	1 0 2 4	£15	15 8 0
72	Platform for working penstocks in Premier-street shaft-chamber, consisting of two wrought-iron rolled girders, 25 ft. long each, weight per foot run 19 lb., with cast iron gratings and wrought-iron standard and risings, complete, as shown on drawings Nos. 2 and 22, weighing in all .....	cwt.	1 4 2 15	25/-	30 15 9
73	Cast-iron standards and wrought-iron tube-railing at top of shaft, and solid bar-railings across shaft at landings, complete, as shown on drawing No. 4 .....	"	0 4 1 11	63/-	13 1 0
74	Wrought-iron ladder in shaft, with supports, in four lengths, complete, as shown on drawing No. 4 .....	"	0 16 2 15	60/-	49 17 6
75	3—angle-iron bearers, with cast-iron perforated landing-plates in shaft, complete, as shown on drawing No. 4 .....	"	0 15 2 27	30/-	27 0 0
76	Wrought-iron hinged gratings, for outlet well of syphon, with cast-iron hinge-plates and wrought-iron channel-girders, complete, as shown on drawings Nos. 14 and 21 .....	"	0 4 1 20	50/-	10 13 0
77	Wrought-iron hinged gratings, for inlet well of syphon, with cast-iron hinge-plates and wrought-iron channel-girders, complete, as shown on drawings Nos. 14 and 21 .....	"	0 9 1 11	40/-	18 14 0
<b>CAST-IRON PIPES.</b>					
	Cast-iron straight, spigot and faucet pipes, 12 ft. long in the body, complete, as shown on drawings Nos. 16 and 18, as viz. :—				
78	96—3-ft. 9-in. diameter syphon pipes .....		289 4 0 0	9/10/-	2,746 8 0
79	154—3-ft. 6-in. diameter duplicate sewer pipes .....		435 5 0 14	9/10 -	4,134 18 9
80	59—2-ft. diameter scour-pipes .....		63 16 3 20	£11	702 7 0
81	74—screw bolts, 1½ in. diameter, with hexagon heads and nuts, for 3-ft. 6-in. and 3-ft 9-in. diameters flange pipe-joints .....		0 2 0 23	56/-	6 3 6
82	15—screw bolts, 1 in. diameter, with hexagon heads and nuts, for 2-ft. diameter flange pipe-joints .....		0 0 1 26	56/-	1 7 0
	Total for all straight pipes.....	ton.	788 8 2 27		
<b>PIPE-LAYING.</b>					
	Laying and jointing (including providing lead and spun-yarn) the 3-ft. 9-in. diameter, the 3-ft. 6-in. diameter, and the 2-ft. diameter cast-iron pipes, and irregular castings in open trenches and shafts, as specified in clause 20, complete, as viz. :—				
83	3-ft. 9-in. diameter syphon pipes and short ends, &c. ....	lineal yard	396	15/-	297 0 0
84	3-ft. 6-in. diameter duplicate sewer-pipes, short ends, &c. ....	"	649	10/-	324 10 0
85	2-ft. diameter scour-pipes and short ends, &c. ....	"	246	10/-	123 0 0
<b>TRAPPED JUNCTIONS.</b>					
86	Flap-traps, providing, delivering, and building in, including providing and fixing discs .....	each	10	20/-	10 0 0

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
<b>GENERAL.</b>					
			Tons ewt. qr. lb.	£	£ s. d.
87	Permanent puddle, where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 29, including spreading in 9-in. layers and ramming, complete .....	cubic yard	10	6/-	3 0 0
88	Special bluestone concrete, in any situation, as specified in clause 2 .....	"	10	70/-	35 0 0
89	Bluestone metal (clause 2), 1½-in. gauge, stacked .....	"	15	14/-	10 10 0
90	Sandstone metal (clause 2), 2-in. gauge, stacked .....	"	15	12/-	9 15 0
91	Bluestone metal (clause 2), 2½-in. gauge, stacked .....	"	15	12/-	9 0 0
92	Sharp, clean, washed sand (clause 2), stacked .....	"	15	6/-	4 10 0
93	Sawn hardwood, in scantlings or planks (clause 2) .....	cubic foot	100	2/-	10 0 0
94	Oregon timber, in scantlings or planks .....	"	100	2/-	10 0 0
95	Wrought-iron, in bolts, galvanized step-irons, screws, nails, spikes, straps, &c. (clause 2) .....	"	20	30/-	30 0 0
96	Portland cement .....	cwt.	25	13/-	16 5 0
97	Artizan or mechanic, supplied by Contractor .....	day	Rate only	12/-	.....
98	Quarryman or other skilled labourer, supplied by Contractor .....	"	"	10/-	.....
99	Ordinary labourer, supplied by Contractor .....	"	"	9/-	.....
100	Cart with one horse and driver, supplied by Contractor.....	"	"	14/-	.....
101	One additional horse, supplied by Contractor .....	"	"	8/-	.....
TOTAL .....			.....	£ ...	68,173 10 11

The quantities are not guaranteed as correct, and are merely for the guidance of Tenderers, who must satisfy themselves as to their accuracy, which is not in any way guaranteed by the Government, and they are subject to omissions, deductions, or alterations.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in strict accordance with the Specification.

The above Schedule Prices include, in every case, continual maintenance of the works during the whole time of construction, the period of maintenance, and up to the day of their being formally taken over by the Engineer.

Item No. 45 to include the cost of conveying the Government property from the Contractor's Store or Field Office to the various sites of works along line of Main and Branch Sewers, at man-holes, gas-check, and shaft-chamber, &c.

Prices for items Nos. 89, 90, 91, 92, 93, 94, 95, and 96 are to be for materials in strict accordance with Specification, delivered on the works ready for use, and only the actual net quantities ordered and approved of shall be paid for. In case Contractor's prices are considered too high by the Engineer at the time such materials may be required, or if the Contractor fail to deliver such materials at the time required and ordered, then the Engineer shall have the power to supply the same from any other sources, and the Contractor shall have no claim for loss or compensation on account of the exercise of such power by the Engineer.

Prices for items Nos. 97, 98, 99, 100, and 101 are to be for such as are able-bodied and efficient. The Schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

**SUMMARY of Weights of Wrought and Cast Ironwork, including all Gun-metal.**  
(The number of Items underneath correspond with those of the Schedule of the Quantities and Prices.)

No. of Item.	Description of Item.	Number required.	Weight of each Item.	Total weight.
<b>PENSTOCKS.</b>				
			Ts. ct. qr. lb.	Ts. ct. qr. lb.
46	Cast-iron frame and penstock, with 6-ft. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete .....	3	6 5 1 22	18 16 1 10
47	Cast-iron frame and penstock, with 3-ft. 9 in. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	2	3 7 0 4	6 14 0 8
48	Cast-iron frame and penstock, with 2-ft. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	1	1 1 1 20	1 1 1 20
Total weight .....			.....	26 11 3 10
<b>GAS-CHECKS.</b>				
49	Cast-iron frame, with muntz metal gas-check, for 6-ft. 10-in. by 5-ft. 10-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	1 1 1 26	1 1 1 26
50	Cast-iron frame, with muntz metal gas-check, for 6-ft. 8-in. by 5-ft. 8-in. sewer with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 19 2 17	0 19 2 17
51	Cast-iron frame, with muntz metal gas-check, for 5-ft. 6-in. by 4-ft. 6-in. sewer with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 14 0 26	0 14 0 26
52	Cast-iron frame, with muntz metal gas-check, for 5-ft. 2-in. by 4-ft. 2-in. sewer with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 13 0 3	0 13 0 3
53	Cast-iron frame, with muntz metal gas-check, for 5-ft. 1-in. by 4-ft. 1-in. sewer with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 11 0 2	0 11 0 2
Total weight .....			.....	3 19 1 18
<b>IRREGULAR CASTINGS, &amp;c.</b>				
54	Flange and faucet pipe, 8 ft. long, 3 ft. 9 in. internal diameter.....	1	2 2 3 4	2 2 3 4
55	Flange pipe, 8 ft. long, 3 ft. 9 in. internal diameter, one flange turned and drilled, for 1½-in. diameter bolt-holes.....	1	2 0 0 18	2 0 0 18
56	Flange and spigot pipe, 9 ft. long, 3 ft. 9 in. internal diameter, the flanges to turned and drilled for 1½-in. diameter bolt-holes.....	1	1 16 3 13	1 16 3 13
57	Spigot pipe, 10 ft. long, 3 ft. 9 in. internal diameter .....	1	2 5 3 23	2 5 3 23
58	Cast-iron thimble for 8-ft. 9-in. diameter pipe, 18 in. long .....	1	0 11 3 20	0 11 3 20
59	Flange-pipe, 10 ft. long, 3 ft. 6 in. internal diameter, one flange turned and drilled, for 1½-in. diameter bolt-holes .....	2	2 6 1 1	4 12 2 2

No. of Item.	Description of Item.	Number required	Weight of each Item.	Total weight.
60	Flange and faucet pipe, 12 ft. long, 3 ft. 6 in. internal diameter .....	2	2 18 0 3	5 16 0 6
61	Flange and spigot pipe, 10 ft. long, 3 ft. 6 in. internal diameter, the flange turned and drilled for 1½-in. diameter bolt-holes .....	2	2 4 3 1	4 9 2 2
62	Spigot pipe, 10 ft. long, 3 ft. 6 in. internal diameter .....	1	2 2 3 25	2 2 3 25
63	Spigot pipe, 6 ft. 6 in. long, 3 ft. 6 in. internal diameter.....	1	1 7 3 20	1 7 3 20
64	Spigot and faucet pipe, 4 ft. 10 in. long, 3 ft. 6 in. internal diameter .....	1	1 5 2 24	1 5 2 24
65	Cast-iron thimble for 3-ft. 6-in. diameter pipe, 18 in. long.....	2	0 10 1 7	1 0 2 14
66	Flange and faucet pipe, 10 ft. long, 2 ft. internal diameter .....	1	0 19 0 4	0 19 0 4
67	Flange and spigot pipe, 10 ft. long, 2 ft. internal diameter, the flange to be turned and drilled for 1½-in. diameter bolt-holes .....	2	0 16 3 23	1 13 3 18
68	Cast-iron thimble for 2-ft. diameter pipe, 15 in. long .....	1	0 4 1 5	0 4 1 5
69	Cast-iron flange bend, 12 in. internal diameter.....	4	0 3 2 7	0 14 1 0
70	Cast-iron flange and spigot bend, 16 in. internal diameter .....	2	0 4 0 19	0 8 1 10
	Total weight .....	...	.....	33 12 3 12
71	Wrought-iron rolled girders, 13½ in. high, top and bottom flange 5½ in. wide, 25 ft. long, to be walled in at Premier-street shaft chamber .....	2	at 40 lb. per ft.	1 0 2 4
72	Platform for working penstocks, Premier-street shaft, two wrought-iron rolled girders, 9 in. high, top and bottom flanges, 3 in. wide, 25 ft. long, weighing 19 lb. per lineal foot, with cast-iron gratings and wrought-iron standards and railings complete .....	...	.....	1 4 2 15
73	Cast-iron standards and wrought-iron tube-railing at top of shaft, and solid bar-railing across shaft at landings .....	...	.....	0 4 1 11
74	Wrought-iron ladder in shaft, with supports, in four lengths, complete .....	...	.....	0 16 2 15
75	Angle-iron bearers with cast-iron perforated landing plates in shaft in Premier-street, complete .....	3	.....	0 15 2 27
76	Wrought-iron hinged gratings on cast-iron hinge-plates and double wrought-iron channel girders, with cast-iron distance blocks for outlet well of syphon .....	...	.....	0 4 1 20
77	Wrought-iron hinged grating for inlet well of syphon on cast-iron hinge-plates and double wrought-iron, channel-iron girders with cast-iron distance blocks .....	...	.....	0 9 1 11
	Total weight .....	...	.....	4 15 2 19
CAST-IRON STRAIGHT SPIGOT AND FAUCET PIPES, 12 FT. LONG.				
78	3-ft. 9-in. diameter syphon pipes .. . . . .	96	3 0 1 0	289 4 0 0
79	3-ft. 6-in. diameter duplicate sewer-pipes.....	154	2 16 2 3	435 5 0 14
80	2-ft. diameter scour-pipes .....	59	1 1 2 16	63 16 3 20
	Total weight of pipes.....	...	.....	788 6 0 6
81	Screw-bolts 1½ in. diameter, with hexagon heads and nuts, for 3-ft. 9-in. and 3-ft. 6-in. diameters, flange pipe-joints .....	74	.....	0 2 0 23
82	Screw-bolts 1 in. diameter, with hexagon heads and nuts, for 2-ft. diameter flange pipe-joints .....	15	.....	0 0 1 20
	Total weight .....	...	.....	0 2 2 21

## No. 4.

The Engineer-in-Chief for Sewerage to The Under Secretary for Public Works.

Department of Public Works, Roads and Bridges and Sewerage Branch,  
Sydney, 14 December, 1893.

Minute Paper.

Subject: Eleven Tenders—Eastern Main Branch Sewer, Contract No. 69.

The tenders for Contract No. 69 have now been checked, the lowest tender being that of Messrs. Carter, Gummow, & Co. at £45,207 8s. 11d.

The other tenders were:—

	£	s.	d.
Messrs. John Ahearn, at .. . . . .	47,061	3	9
Kerle and Kerle, at .. . . . .	52,735	10	9
H. McKenzie & Sons, at .. . . . .	53,505	2	7
Justin McSweeney, at .. . . . .	54,623	18	2
Holloway Bros., at .. . . . .	55,104	8	9
J. F. Carson, at .. . . . .	57,239	0	9
Alex. Dean & Sons, at .. . . . .	58,165	10	8
Langtree & Owen, at .. . . . .	59,676	16	1
Parry and Farley, at .. . . . .	63,095	11	11
J. Stewart & Co. .. . . . .	68,171	6	9

Messrs. Carter, Gummow, & Co., being the lowest tenderers for the construction of the Western Suburbs Main Eastern Branch Sewer, Contract No. 69, I beg to recommend acceptance of their tender amounting to £45,207 8s. 11d., at schedule rates, on condition that they fill in and initial in their tender the average price per ton for all irregular castings, weighing in all 33 tons 12 cwt. 3 qrs. 12 lb., and the average price per ton for all cast-iron pipes, weighing in all 788 tons 8 cwt. 2 qrs. 27 lb.

C. H. OHLFSEN-BAGGE.

Not necessary.—R.H., 16/12/93. The Engineer-in-Chief. I recommend Carter, Gummow, & Co.'s tender at schedule rates.—R.H., 16/12/93. Under Secretary. Passed.—J.B., 18/12/93. Submitted to the Board of Reference, 18th December, 1893. The Board recommend acceptance of the tender of Carter, Gummow, & Co. at schedule rates.—J. W. HOLLIMAN, Secretary. Submitted.—J.B., 18/12/93. Approved; funded stock.—W.J.L., 21/12/93. Ask Messrs. Carter & Co. to call at 2 p.m. to morrow. Done, 21/12/93. Tender accepted, 27/12/93. Auditor-General informed, 27/12/93.

CONTRACT

CONTRACT No. 69.

Item.	Description.	Office Estimate.		(1) Carter, Gummow, & Co.		(2) John Ahearn.		(3) Kerle & Kerle.	
		Rate.	£ s. d.	Rate.	£ s. d.	Rate.	£ s. d.	Rate.	£ s. d.
1	Excavation (soft)	3/-	2,898 0 0	-/0	724 10 0	3/-	1,332 0 0	2/-	1,032 0 0
2	" (hard)	15/-	873 15 0	-/0	43 13 9	15/-	873 15 0	10/-	582 10 0
3	" (blasting)	12/6	728 2 6	-/0	43 13 9	10/-	582 10 0	8/-	466 0 0
4	" (blasting)	8/6	495 2 6	-/0	43 13 9	11/-	640 15 0	8/-	466 0 0
5	" (less hard)	20/-	810 0 0	27/6	1,113 10 0	10/-	495 0 0	7/-	283 10 0
6	" (gadding)	50/-	2,850 0 0	27/6	1,567 10 0	18/-	1,026 0 0	25/-	1,425 0 0
7	" (light blast)	40/-	2,230 0 0	27/6	1,567 10 0	15/-	855 0 0	25/-	1,811 0 0
8	" (heavy blasting)	30/-	1,710 0 0	27/6	1,567 10 0	16/-	912 0 0	23/-	1,310 0 0
9	" in hard rock, gadding and guttering only allowed.	60/-	5,550 0 0	27/6	2,543 15 0	25/-	2,312 10 0	40/-	3,700 0 0
10	" in hard rock, light blasting	55/-	5,087 10 0	27/6	2,543 15 0	18/-	1,665 0 0	35/-	3,237 10 0
11	" heavier blasting	45/-	4,162 10 0	27/6	2,543 15 0	19/-	1,767 10 0	35/-	3,237 10 0
12	" (soft)	10/-	65 0 0	4/-	26 0 0	10/-	65 0 0	4/-	26 0 0
13	" in hard rock, light blasting	40/-	89 0 0	4/-	39 0 0	15/-	323 15 0	20/-	445 0 0
14	" heavier blasting	30/-	667 10 0	4/-	89 0 0	15/-	333 15 0	20/-	445 0 0
15	" gadding and guttering only allowed.	50/-	1,212 10 0	4/-	89 0 0	20/-	445 0 0	23/-	511 15 0
16	" (less hard)	10/-	85 0 0	40/-	340 0 0	6/-	51 0 0	4/-	34 0 0
17	" hard sandstone	45/-	230 0 0	5/-	28 15 0	20/-	115 0 0	3/-	17 5 0
18	" light blasting	35/-	201 5 0	5/-	28 15 0	18/-	103 10 0	15/-	86 5 0
19	" &c., heavier blasting.	80/-	172 10 0	5/-	28 15 0	18/-	103 10 0	15/-	86 5 0
20	Filling in at sides	1/-	761 0 0	-/6	380 10 0	1/-	761 0 0	2/-	1,522 0 0
21	Timber and iron in excavations	2/-	900 0 0	-/1	37 10 0	2/-	900 0 0	-/1	37 10 0
22	Removing culverts	15/-	183 0 0	2 6	30 10 0	10/-	122 0 0	1/-	12 4 0
23	Subduct in hard rock	5/-	70 0 0	-/1	1 3 4	20/-	280 0 0	10/-	140 0 0
24	" of 6" internal diameter	4/-	133 0 0	-/1	2 13 4	6/-	192 0 0	4/6	144 0 0
25	" of 9"	6/-	192 0 0	-/1	2 13 4	8/-	256 0 0	5/-	160 0 0
26	" of 8"	7/-	98 0 0	-/1	1 3 4	7/-	98 0 0	7/-	98 0 0
27	" of 8"	8/-	112 0 0	-/1	1 8 4	9/-	126 0 0	9/-	126 0 0
28	Hand-packed 4" stone filling	4/-	152 0 0	1/-	38 0 0	3/-	114 0 0	3 6	153 0 0
29	Bluestone road metal, 2 1/2"	15/-	142 10 0	10/-	95 0 0	12 6	118 15 0	16/-	152 0 0
30	2" blinding over metal surfaces	7/6	83 15 0	2 6	11 5 0	1/-	4 10 0	2/-	9 0 0
31	Sandstone concrete	30/-	1,575 0 0	40/-	2,100 0 0	36/-	1,890 0 0	32/-	1,680 0 0
32	Bluestone	50/-	11,375 0 0	43/-	9,782 10 0	42/-	9,555 0 0	50/-	11,375 0 0
33	Brickwork in cement	60/-	4,815 0 0	55/-	4,413 15 0	55/-	4,413 15 0	55/-	4,413 15 0
34	Cement facing	2/-	1,160 0 0	5/-	2,400 0 0	2/6	1,450 0 0	3/-	1,740 0 0
35	Pyramont sandstone asblar	4/-	42 0 0	5/-	52 10 0	5/-	52 10 0	3/-	31 10 0
36	Squared bluestone pithers	30/-	18 0 0	£50	630 0 0	15/-	9 0 0	60/-	36 0 0
37	" freestone	20/-	33 0 0	£10/-	38 0 0	8/-	15 4 0	35/-	68 10 0
38	Supplying, &c., ordnance fencing, complete	20/-	7 0 0	80/-	23 0 0	50/-	17 10 0	80/-	10 10 0
39	Glazed stoneware pipes, 9" diameter	5/-	10 0 0	2/-	4 0 0	4/-	8 0 0	5/-	10 0 0
40	" " 12"	7/6	24 0 0	3/-	9 12 0	5/-	16 0 0	9/6	30 8 0
41	" " 16"	10/-	7 10 0	6/-	4 10 0	8/-	6 0 0	15/-	11 5 0
42	" " 18"	13/6	3 7 6	10/-	2 10 0	12/-	3 0 0	23/-	5 15 0
43	Removal of material first 1/4 mile	1/-	1,021 0 0	-/3	255 5 0	-/9	765 15 0	-/3	255 5 0
44	" every further 1/4 mile	-/6	150 0 0	-/1	125 0 0	-/3	375 0 0	-/1	125 0 0
45	Receiving and fixing ironwork	30/-	37 10 0	40/-	50 0 0	£6	150 0 0	40/-	50 0 0
46	Cast-iron frame and penstock, 6" diameter	£200	600 0 0	£230	600 0 0	£300	600 0 0	£220	660 0 0
47	" " 8"	£100	200 0 0	£140	280 0 0	£180	360 0 0	£140	280 0 0
48	" " 2"	£50	50 0 0	£45	45 0 0	£100	100 0 0	£95	95 0 0
49	Gas check for 6" 10" x 5" 10" sewer	£43	43 0 0	£75	75 0 0	£100	100 0 0	£80	80 0 0
50	" " 8" x 5" 8"	£39	39 0 0	£70	70 0 0	£95	95 0 0	£65	65 0 0
51	" " 6" x 4" 6"	£23	23 0 0	£45	45 0 0	£60	60 0 0	£40	40 0 0
52	" " 4" 2" x 5" 2"	£25	25 0 0	£40	40 0 0	£75	75 0 0	£60	60 0 0
53	" " 5" 1" x 4" 1"	£22	22 0 0	£40	40 0 0	£70	70 0 0	£50	50 0 0
54	Flange and faucet pipe			*£216	34 4 7	*£237	27 0 0		
55	Cast-iron pipe, 3' 9" diameter (8')			£116	32 2 7	£30	30 0 0		
56	" flange and spigot			£16	29 9 10	£30	30 0 0		
57	" pipe, 3' 9" diameter (10')			£18	36 15 3	£20	30 0 0		
58	" thimble			£16	9 10 10	£14	14 0 0		
59	2 cast-iron flange pipes			£16	74 0 3	£10	80 0 0		
60	" flange and faucet pipes			£16	92 16 10	£45	80 0 0		
61	" flange and spigot pipes			£16	71 12 3	£40	80 0 0		
62	Cast-iron spigot pipe, 3' 6" diameter	£18		£16	34 7 6	£25	25 0 0	£15	
63	" " 3' 6" " (6' 6")			£16	22 6 10	£18	18 0 0		
64	" spigot and faucet pipe			£16	20 11 5	£17	17 0 0		
65	2 cast-iron thimbles			£16	16 10 0	£10	20 0 0		
66	Cast-iron flange and faucet pipe			£16	15 4 7	£15	15 0 0		
67	2 cast-iron flange and spigot pipes			£16	27 2 9	£14	28 0 0		
68	Cast-iron thimble			£16	3 8 8	£3	3 0 0		
69	" flanged bend			£16	11 8 0	£18	18 0 0		
70	" flange and spigot bend			*£20	8 6 9	*£10	10 0 0		
	General average (54-70 inches) inclusive**	Total,	605 11 5	16,0,11	per ton	15,18,0,1	per ton	Total,	504 12 10
71	2 wrought-iron rolled girders for penstock	£20	29 10 9	£22	22 11 9	£15	15 8 0	£16	16 8 7
72	Platform for penstocks, Premier-street	£23	31 9 9	£30	36 10 0	£23	28 6 7	£25	30 15 10
73	Cast-iron standards and wrought-iron railing	£34	6 1 9	£50	10 17 5	£5/-	9 15 8	£5/-	11 19 1
74	Wrought-iron ladder in shaft	£28	23 5 9	£39	24 19 0	£40/-	23 5 4	£5/-	45 14 10
75	3 angle-iron bearers with landing plates	£28	22 0 9	£20	15 14 11	3/6	25 12 3	30/-	25 12 3
76	Wrought-iron gratings for outlet well of syphon	£23	6 4 0	£30	6 12 10	70/-	15 10 0	50/-	11 1 5
77	" " inlct	£25	13 1 0	30/-	14 0 5	60/-	23 0 0	50/-	23 7 5
78*	96 3' 9" syphon pipes			*£15/-	2,530 10 0	*9/-	2,602 16 0	*9/15/-	2,819 14 0
79	151 3' 6" diameter duplicate sewer pipes			8/15/-	3,803 9 10	9/-	3,917 6 2	9/15/-	4,243 14 11
80	59 2" scour pipes	9/10/-		8/15/-	558 13 1	9/-	574 12 4	£11	702 6 3
81	74 1 1/2" screw bolts			£50	5 10 3	35/-	317 2 0	£50	5 10 3
82*	15 1" screw bolts			£50	1 4 1	*35/-	0 16 11	*£20	1 4 1
	General average (73-82)**	Total,	7,490 3 0	10,2,8	per ton	9/0,1,0,7	per ton	9/16/-	per ton
83	3' 9" syphon pipes	7/6	148 10 0	3 6	69 6 0	20/-	386 0 0	15/-	297 0 0
84	3' 6" duplicate sewer pipes	7/-	227 3 0	3 6	113 11 6	18/6	600 6 6	13/-	421 17 0
85	2' diameter scour pipes	3/3	39 19 6	2 6	30 15 0	6/-	73 16 0	10/-	123 0 0
86	Flap traps	5/-	2 10 0	25/-	12 10 0	£5	50 0 0	25/-	12 10 0
87	Permanent puddle	6/-	3 0 0	2/-	1 0 0	7/-	3 10 0	1/-	0 10 0
88	Special blue-stone concrete	70/-	35 0 0	50/-	25 0 0	60/-	30 0 0	50/-	25 0 0
89	1 1/2" bluestone metal	20/-	15 0 0	10/-	7 10 0	15/-	11 5 0	12/-	9 0 0
90	2" sandstone	6/-	4 10 0	3/-	2 15 0	8/-	6 0 0	8/-	2 5 0
91	2 1/2" bluestone	17/6	13 2 6	10/-	7 10 0	14/-	10 10 0	11/-	8 5 0
92	Sharp sand	5/-	3 15 0	10/-	7 10 0	£5	3 15 0	4/-	3 0 0
93	Sawn hardwood	2/-	10 0 0	1/6	7 10 0	7/-	15 0 0	2/-	10 0 0
94	Oregon timber	3/-	15 0 0	1/6	7 10 0	2 6	12 10 0	2 6	11 5 0
95	Wrought-iron bolts, step-irons, &c.	30/-	30 0 0	50/-	50 0 0	40/-	40 0 0	30/-	30 0 0
96	Portland cement	16/-	20 0 0	12/-	15 0 0	15/-	18 15 0	11/-	13 15 0
97	Artisan or mechanic	15/-		16/-		14/-		15/-	
98	Quarryman or skilled labourer			14/-		10/-		11/-	
99	Ordinary labourer			11/-		9/-		9/-	
100	(art. 1 horse, and driver			20/-		15/-		12/-	
101	1 additional horse			10/-		6/-		5/-	
		Total,	£84,420 6 5		£85,207 3 11		£47,061 3 0		£52,735 10 9
					45,207 8 11		47,061 3 9		

Item.	Description.	(4) H. M'Kezie & Sons.			(5) J. M'Sweeney.			(6) Holloway Bros.			(7) J. F. Carson.		
		Rate.	£	s. d.	Rate.	£	s. d.	Rate.	£	s. d.	Rate.	£	s. d.
1	Excavation (soft)	3/6	3,381	0 0	3/0	3,622	10 0	1/8	1,449	0 0	3/-	2,898	0 0
2	" (hard)	13/6	786	7 6	4/-	233	0 0	15/-	873	15 0	10/-	582	10 0
3	" (blasting)	12/-	699	0 0	5/-	291	5 0	13/6	786	7 6	7/6	438	17 6
4	" (less hard)	9/-	524	5 0	5/-	291	5 0	12/6	728	2 6	5/-	291	5 0
5	" (gadding)	22/6	1,282	10 0	37/6	2,187	10 0	25/-	1,425	0 0	25/-	1,425	0 0
6	" (light blast)	18/-	1,026	0 0	32/6	1,852	10 0	22/6	1,232	10 0	20/-	1,140	0 0
7	" (heavy blasting)	18/6	769	10 0	32/6	1,852	10 0	20/-	1,140	0 0	15/-	755	0 0
8	" in hard rock, gadding and guttering only allowed.	27/-	2,497	10 0	45/-	4,162	10 0	30/-	2,775	0 0	60/-	5,550	0 0
9	" in hard rock, light blasting	22/6	2,081	10 0	35/-	3,237	10 0	27/6	2,312	10 0	50/-	4,925	0 0
10	" heavier blasting	18/-	1,685	0 0	35/-	3,237	10 0	25/-	2,081	5 0	40/-	3,700	0 0
11	" (soft)	12/-	78	0 0	12/-	78	0 0	30/-	195	0 0	10/-	65	0 0
12	" in hard rock, light blasting	27/-	600	15 0	23/-	511	15 0	30/-	667	10 0	40/-	890	0 0
13	" heavier blasting	22/6	500	12 6	23/-	489	10 0	27/6	611	17 6	30/-	667	10 0
14	" gadding and guttering only allowed.	50/-	667	10 0	34/-	756	10 0	40/-	850	0 0	45/-	1,001	5 0
15	" (less hard)	18/6	114	15 0	12/-	102	0 0	30/-	155	0 0	10/-	85	0 0
16	" hard sandstone	27/-	155	5 0	26/6	152	7 6	40/-	230	0 0	30/-	172	10 0
17	" light blasting	22/6	129	7 6	23/-	132	5 0	35/-	211	5 0	25/-	143	15 0
18	" heavier blasting	22/6	129	7 6	22/-	126	10 0	30/-	172	10 0	20/-	115	0 0
19	Filling in at sides	1/6	1,141	10 0	1/6	1,141	10 0	1/-	761	0 0	2/-	1,522	0 0
20	Timber and iron in excavations	2/6	1,125	0 0	3/-	1,125	0 0	5/-	2,250	0 0	2/6	1,125	0 0
21	Removing culverts	10/-	122	0 0	5/-	61	0 0	10/-	122	0 0	2/-	24	8 0
22	Subduct in hard rock	15/-	210	0 0	3/-	42	0 0	10/-	180	0 0	6/-	84	0 0
23	" of 6" internal diameter	9/-	288	0 0	5/-	100	0 0	5/-	160	0 0	7/6	240	0 0
24	" of 9"	14/-	448	0 0	6/-	192	0 0	6/-	132	0 0	7/6	240	0 0
25	" of 6"	12/-	168	0 0	6/-	84	0 0	7/6	105	0 0	10/-	140	0 0
26	" of 18"	18/-	252	0 0	8/-	112	0 0	10/-	140	0 0	12/6	175	0 0
27	Hand-packed 4" stone filling	5/-	110	0 0	4/-	152	0 0	5/-	190	0 0	5/-	190	0 0
28	Bluestone road metal, 2 1/2"	14/-	133	0 0	15/-	142	10 0	16/-	152	0 0	15/-	137	10 0
29	2" blinding over metal surfaces	5/-	32	10 0	20/-	50	0 0	10/-	45	0 0	7/6	33	15 0
30	Sandstone concrete	33/-	1,732	10 0	33/-	1,732	10 0	37/6	1,968	15 0	40/-	2,100	0 0
31	Bluestone	46/-	10,465	0 0	38/-	8,645	10 0	42/6	6,668	15 0	45/-	10,237	10 0
32	Brickwork in cement	54/-	4,338	10 0	49/-	3,932	5 0	55/-	4,413	15 0	50/-	4,012	0 0
33	Cement facing	3/-	1,740	0 0	1/6	870	0 0	1/6	870	13 6	1/6	870	0 0
34	Plymouth sandstone ashlar	4/-	31	10 0	4/-	32	0 0	4/-	42	0 0	4/-	42	0 0
35	Squared bluestone pichers	20/-	12	0 0	45/-	27	0 0	50/-	18	0 0	20/-	12	0 0
36	" freestone	10/-	19	0 0	10/-	19	0 0	20/-	38	0 0	15/-	28	10 0
37	Supplying, &c., ordnance fencing, complete	20/-	7	0 0	20/-	7	0 0	1/3	21	0 0	20/-	7	0 0
38	Glazed stoneware pipes, 9" diameter	6/-	12	0 0	5/-	10	0 0	5/-	10	0 0	3/-	6	0 0
39	" 12"	10/-	32	0 0	8/-	20	0 0	7/6	24	0 0	4/6	14	8 0
40	" 16"	20/-	16	0 0	20/-	7	10 0	15/-	11	5 0	9/-	6	15 0
41	" 18"	25/-	6	5 0	12/6	3	2 6	10/-	5	0 0	12/-	3	0 0
42	Removal of material, first 1/4 mile	1/3	1,276	5 0	-0	765	15 0	1/-	1,020	0 0	-8	510	10 0
43	" every further 1/4 mile	-3	375	0 0	-4 1/2	562	10 0	-6	750	0 0	-4	590	0 0
44	Receiving and fixing ironwork	4/5	125	0 0	60/-	75	0 0	4/5	125	0 0	4/10	250	0 0
45	Cast-iron frame and penstock, 6" diameter	£250	750	0 0	£210	810	0 0	£217	651	0 0	£250	750	0 0
46	" 3"	£140	280	0 0	£170	340	0 0	£137	274	0 0	£150	300	0 0
47	" 2"	£75	75	0 0	£63	63	0 0	.....	25	0 0	£90	90	0 0
48	Gas check for 6' 10" x 5' 10" sewer	£100	100	0 0	£100	100	0 0	.....	75	0 0	£75	75	0 0
49	" 6' 8" x 5' 8"	£80	80	0 0	£75	75	0 0	.....	61	0 0	£70	70	0 0
50	" 5' 6" x 4' 6"	£70	70	0 0	£75	75	0 0	.....	57	0 0	£63	63	0 0
51	" 4' 2" x 5' 2"	£67	67	0 0	£55	55	0 0	.....	54	0 0	£62	62	0 0
52	" 5' 1" x 1' 1"	£60	60	0 0	£55	55	0 0	.....	50	0 0	£60	60	0 0
53	Flange and faucet pipe	*18-	38	10 0	.....	.....	.....	.....	.....	.....	*£25	25	0 0
54	Cast-iron pipe, 3' 1/2" diameter (8')	20/-	40	3 2	.....	.....	.....	.....	.....	.....	£10	20	0 0
55	" flange and spigot	20/-	36	17 3	.....	.....	.....	.....	.....	.....	£30	30	0 0
56	" pipe, 3' 1/2" diameter (10')	15/-	34	10 0	.....	.....	.....	.....	.....	.....	£30	30	0 0
57	" thimble	18/-	10	15 0	.....	.....	.....	.....	.....	.....	£12	12	0 0
58	2 cast-iron flange pipes	18/-	83	5 0	.....	.....	.....	.....	.....	.....	£45	70	0 0
59	" flanged and faucet pipes	15/-	87	0 0	.....	.....	.....	.....	.....	.....	37/10-	75	0 0
60	" flange and spigot pipes	18/-	80	0 0	.....	.....	.....	.....	.....	.....	£35	70	0 0
61	Cast-iron spigot pipes, 3' 6" diameter	18/-	38	14 0	£20	.....	.....	£15	.....	.....	£27	27	0 0
62	" 3' 6" (6' 6")	18/-	25	3 0	.....	.....	.....	.....	.....	.....	£20	20	0 0
63	" spigot and faucet pipe	20/-	25	15 0	.....	.....	.....	.....	.....	.....	£18	18	0 0
64	2 cast-iron thimbles	20/-	20	12 6	.....	.....	.....	.....	.....	.....	10/10-	21	0 0
65	Cast-iron flange and faucet pipe	18/-	17	3 0	.....	.....	.....	.....	.....	.....	£15	15	0 0
66	2 cast-iron flange and spigot pipes	18/-	30	12 0	.....	.....	.....	.....	.....	.....	£15	30	0 0
67	Cast-iron thimble	20/-	4	6 0	.....	.....	.....	.....	.....	.....	£4	4	0 0
68	" flanged head	20/-	14	5 0	.....	.....	.....	.....	.....	.....	£15	15	0 0
69	" flange and spigot head	*25-	10	6 0	.....	.....	.....	.....	.....	.....	*£10	10	0 0
70	General average (64-70 inclusive)**	17/5,81	per ton	.....	Total,	672 17 2	Total,	504 13 0	54 to 70	.....	14,18/5/16	per ton	.....
71	2 wrought-iron rolled girders for penstock	25/-	25	12 6	£20	20	10 8	£15	15	8 0	£14	14	7 6
72	Platform for penstocks, Premier-street	25/-	30	15 0	30/-	36	19 0	20/-	24	12 6	£18	23	3 6
73	Cast-iron standards and wrought-iron railing	45/-	9	15 0	45/-	9	15 8	55/-	11	10 0	£38	8	5 3
74	Wrought-iron ladder in shaft	56/-	46	11 0	40/-	33	5 4	50/-	41	11 6	£30	24	19 0
75	3 angle-iron bearers with landing plates	50/-	30	7 6	25/-	19	13 5	20/-	15	15 0	£54	42	10 0
76	Wrought-iron gratings for outlet well of siphon	50/-	11	5 0	60/-	13	5 8	50/-	10	18 0	£56	12	8 0
77	" inlet	50/-	23	6 0	60/-	28	0 10	40/-	18	14 0	£6-	26	3 6
78	6 3/4" siphon pipes	*£10	2,882	0 0	.....	.....	.....	.....	.....	.....	*£9	2,602	16 0
79	154 3' 6" diameter duplicate sewer pipes	70/-	4,352	11 6	.....	.....	.....	.....	.....	.....	£9	3,917	6 3
80	59 2" scour pipes	10/10-	670	18 0	£10	.....	.....	£10	.....	.....	£9	574	12 7
81	74 1 1/2" screw bolts	40/-	4	3 9	.....	.....	.....	.....	.....	.....	£30	3	6 2
82	15 1" screw bolts	*40/-	80	18 4	.....	.....	.....	.....	.....	.....	*£20	0	14 6
83	General average (78-82)**	10,0,11 1/2	per ton	.....	Total,	7,£84 7 4	Total,	7,884 7 6	78 to 82	.....	9,0,8,86	per ton	.....
84	3' 6" siphon pipes	25/-	455	0 0	18/6	366	6 0	45/-	891	0 0	5/-	199	0 0
85	3' 6" duplicate sewer pipes	22/-	719	18 0	16/6	1,288	8 6	40/-	1,288	0 0	5/-	162	5 0
86	2' diameter scour pipes	12/-	147	12 0	13/-	159	18 0	50/-	246	0 0	5/-	61	10 0
87	Flap traps	£10	100	0 0	10/-	15	0 0	£5	50	0 0	20/-	15	0 0
88	Permanent puddle	4/-	2	0 0	12/-	6	0 0	60/-	10	0 0	10/-	5	0 0
89	Special bluestone concrete	45/-	22	10 0	60/-	50	0 0	60/-	30	0 0	45/-	22	10 0
90	1 1/2" bluestone metal	13/-	9	15 0	15/-	11	5 0	18/-	12	10 0	15/-	11	5 0
91	2" sandstone	5/-	3	15 0	8/-	6	0 0	16/-	12	0 0	5/-		

Item.	Description.	(8) A. Dean & Sons.			(9) Langtree & Owen.			(10) Parry & Farley.			(11) J. Stewart & Co.		
		Rate.	£	s. d.	Rate.	£	s. d.	Rate.	£	s. d.	Rate.	£	s. d.
1	Excavation (soft)	3/-	2,888	0 0	2/10	2,737	0 0	3/-	1,982	0 0	3/6	3,381	0 0
2	" (hard)	12/-	692	0 0	11/-	640	15 0	12/-	609	0 0	6/-	349	10 0
3	" (blasting)	10/-	582	10 0	6/-	349	10 0	9/-	524	5 0	5/6	320	7 6
4	" (less hard)	9/-	524	5 0	5/-	320	7 6	8/-	466	0 0	5/-	291	5 0
5	" (gadding)	16/-	648	0 0	8/-	324	0 0	25/-	1,012	10 0	30/-	1,215	0 0
6	" (light blast)	20/-	1,140	0 0	42/-	2,394	0 0	40/-	2,280	0 0	60/-	3,420	0 0
7	" (heavy blasting)	18/-	1,026	0 0	41/-	2,387	0 0	35/-	1,985	0 0	54/-	3,078	0 0
8	" in hard rock, gadding and guttering only allowed.	14/-	1,026	0 0	40/-	2,260	0 0	34/-	1,938	0 0	50/-	2,850	0 0
9	" in hard rock, light blasting	30/-	2,775	0 0	42/-	3,685	0 0	38/-	3,515	0 0	60/-	5,550	0 0
10	" heavier blasting	25/-	2,312	10 0	41/-	3,792	10 0	33/-	3,052	10 0	56/-	5,180	0 0
11	" (soft)	25/-	2,312	10 0	40/-	3,700	0 0	31/-	2,867	10 0	54/-	4,995	0 0
12	" in hard rock, light blasting	12/-	78	0 0	8/-	52	0 0	25/-	163	10 0	£4	520	0 0
13	" heavier blasting	20/-	445	0 0	41/-	912	5 0	45/-	1,091	5 0	70/-	1,557	10 0
14	" gadding and guttering only allowed.	20/-	445	0 0	40/-	800	0 0	42/6	945	12 6	65/-	1,446	5 0
15	" (less hard)	30/-	667	10 0	42/-	934	10 0	50/-	1,112	10 0	£4	1,780	0 0
16	" hard sandstone	12/-	102	0 0	8/-	68	0 0	25/-	212	10 0	£4	680	0 0
17	" light blasting	20/-	115	0 0	42/-	241	10 0	45/-	258	15 0	100/-	575	0 0
18	" &c., heavier blasting.	20/-	115	0 0	41/-	235	15 0	42/6	244	7 6	84/-	488	15 0
19	"	20/-	115	0 0	40/-	230	0 0	40/-	230	0 0	80/-	460	0 0
20	Filling in at sides	1/3	951	5 0	1/3	951	5 0	1/6	1,141	10 0	-6	380	10 0
21	Timber and iron in excavations	6/-	2,700	0 0	1/-	450	0 0	1/-	450	0 0	-1	37	10 0
22	Removing culverts	30/-	244	0 0	2/-	24	8 0	4/-	48	16 0	2/-	24	8 0
23	Subduct in hard rock	20/-	280	0 0	2/-	28	0 0	3/-	42	0 0	6/-	84	0 0
24	" of 6" internal diameter	10/-	320	0 0	4/-	128	0 0	8/-	16	0 0	3/-	96	0 0
25	" of 8"	15/-	480	0 0	5/3	168	0 0	3/6	112	0 0	4/-	128	0 0
26	" of 9"	18/-	282	0 0	7/-	98	0 0	5/-	70	0 0	5/-	70	0 0
27	" of 10"	20/-	280	0 0	8/3	115	10 0	6/-	84	0 0	6/-	84	0 0
28	Hand-packed 4" stone filling	10/-	380	0 0	3/-	114	0 0	2/-	76	0 0	6/-	228	0 0
29	Bluestone road metal, 24"	18/-	171	0 0	13/-	123	10 0	12/6	118	15 0	12/-	114	0 0
30	2" blinding over metalised surfaces	6/-	27	0 0	2/6	11	5 0	2/-	9	0 0	12/-	54	0 0
31	Sandstone concrete	55/-	1,837	10 0	32/-	1,680	0 0	35/-	1,837	10 0	40/-	2,100	0 0
32	Bluestone	50/-	11,375	0 0	50/-	11,375	0 0	65/-	10,237	10 0	45/-	10,237	10 0
33	Brickwork in cement	58/-	4,654	10 0	56/-	4,494	0 0	80/-	6,420	0 0	55/-	4,413	15 0
34	Cement facing	2/-	1,160	0 0	2/3	1,305	0 0	2/6	1,450	0 0	1/-	580	0 0
35	Pyromont sandstone ashlar	4/-	42	0 0	4/-	42	0 0	4/-	42	0 0	5/-	52	10 0
36	Squared bluestone pitchers	30/-	18	0 0	20/-	12	0 0	20/-	12	0 0	30/-	18	0 0
37	" freestone	15/-	28	10 0	9/-	17	2 0	12/-	22	16 0	20/-	38	0 0
38	Supplying, &c., ordnance fencing, complete	42	21	0 0	15/-	5	5 0	50/-	17	10 0	20/-	7	0 0
39	Glazed stoneware pipes, 9" diameter	5/-	10	0 0	8/6	17	0 0	3/6	7	0 0	6/-	12	0 0
40	" " 12"	7/6	24	0 0	10/-	32	0 0	6/-	19	4 0	10/-	32	0 0
41	" " 16"	10/-	7	10 0	15/-	11	5 0	12/-	9	0 0	15/-	11	5 0
42	" " 18"	15/-	8	15 0	18/-	4	10 0	16/-	4	0 0	20/-	5	0 0
43	Removal of material first 1/4 mile	1/3	1,276	5 0	1/-	1,021	0 0	1/3	1,276	5 0	-7	595	1 2
44	" every further 1/4 mile	1/-	1,500	0 0	4	500	0 0	3/-	337	0 0	-1	125	0 0
45	Receiving and fixing ironwork	£4	100	0 0	40/-	50	0 0	80/-	100	0 0	£3	75	0 0
46	Cast-iron frame and penstock, 6" diameter	£253	759	0 0	£275	£25	0 0	£292	876	0 0	£180	540	0 0
47	" " 2"	£165	530	0 0	£166	342	0 0	£191	382	0 0	£140	250	0 0
48	" " 3"	107/16-	107	16 0	£54	54	0 0	122/10-	122	10 0	£100	100	0 0
49	Gas check for 6' 10" x 5' 10" sewer	£99	99	0 0	86	86	0 0	£112	112	0 0	£80	80	0 0
50	" 6' 8" x 5' 8"	83/12-	83	12 0	77	77	0 0	£68	98	0 0	£70	70	0 0
51	" 5' 6" x 4' 6"	£77	77	0 0	51	51	0 0	£78	78	0 0	£62	62	0 0
52	" 4' 2" x 5' 2"	73/14-	73	14 0	47	47	0 0	73/10-	73	10 0	£60	60	0 0
53	" 5' 1" x 4' 1"	£66	66	0 0	45	45	0 0	65/10-	65	10 0	£54	54	0 0
54	Flange and faucet pipe	*	38	10 0	*	38	0 0	*	38	0 0	*	38	0 0
55	Cast-iron pipe, 3' 9" diameter (8")	35	35	4 0	36	36	0 0	36	36	0 0	36	36	0 0
56	" flange and spigot	33	33	0 0	33	33	0 0	33	33	0 0	33	33	0 0
57	" pipe, 3' 9" diameter (10")	39	39	12 0	40	40	0 0	40	40	0 0	40	40	0 0
58	" thimble	11	11	11 0	11	11	0 0	11	11	0 0	11	11	0 0
59	2 cast-iron flange pipes	38/10-	77	0 0	80	80	0 0	80	80	0 0	80	80	0 0
60	" flanged and faucet pipe	45	45	0 0	100	100	0 0	100	100	0 0	100	100	0 0
61	" flange and spigot pipes	36/6-	72	12 0	78	78	0 0	78	78	0 0	78	78	0 0
62	Cast-iron spigot pipes, 3' 6" diameter	33	33	0 0	38	38	0 0	38	38	0 0	38	38	0 0
63	" " (6' 6")	23	23	0 0	24	24	0 0	24	24	0 0	24	24	0 0
64	" spigot and faucet pipe	22	22	0 0	22	22	0 0	22	22	0 0	22	22	0 0
65	2 cast-iron thimbles	19	19	16 0	17	17	10 0	17	17	10 0	17	17	10 0
66	Cast-iron flange and faucet pipe	17	17	1 0	15	15	15 0	15	15	15 0	15	15	15 0
67	2 cast-iron flange and spigot pipes	29	29	14 0	50	50	0 0	50	50	0 0	50	50	0 0
68	Cast-iron thimble	5	5	10 0	3	3	17 0	3	3	17 0	3	3	17 0
69	" flanged bend	14	14	17 0	12	12	14 0	12	12	14 0	12	12	14 0
70	" flange and spigot bend	*	11	11 0	*	7	7 0	*	7	7 0	*	7	7 0
	General average (64-70) inclusive**	16/19-	per ton	17/20/11	per ton	Total,	824	5 0	Total,	538	5 9		
71	2 wrought-iron rolled girders for penstock.	15/2 6	15	30 8	24	24	0 0	20/10-	21	1 0	£15	15	8 0
72	Platform for penstocks, Premier-street	21/6	30	3 6	41	41	0 0	28/-	34	10 0	25/-	30	15 9
73	Cast-iron standards and wrought-iron railing	66/-	14	7 0	11	11	0 0	57/-	12	7 9	60/-	13	1 0
74	Wrought-iron ladder in shaft	60/6	50	6 5	24	24	0 0	56/-	46	11 6	60/-	49	17 6
75	3 angle-iron bearers with landing plates	25/6	20	1 5	14	14	0 0	28/-	22	0 9	30/-	27	0 0
76	Wrought-iron gratings for outlet well of syphon	52/-	11	10 3	7	7	15 0	50/-	11	1 4	50/-	10	13 0
77	" " inlet	44/-	20	11 4	15	15	10 0	48/-	22	8 8	40/-	18	14 0
78*	93 3' 9" syphon pipes	* 10/3/6	2,942	12 2	195/-	2,819	14 0	14 3/-	9/10-	2,746	8 0		
79	154 3' 6" diameter duplicate sewer pipes	10/3/6	4,428	18 5	155/-	4,243	14 0	14 3/-	9/10-	4,134	18 9		
80	59 2' scour pipes	11/11-	737	8 6	155/-	622	11 0	14 3/-	£11	702	7 0		
81	74 1 1/2" screw bolts	*	6	12 0	52/-	5	15 0		56/-	6	3 6		
82*	15 1" screw bolts	*	1	3 0	* 52/-	1	5 0		56/-	1	7 0		
	General average (78-82)**	10/6/4	per ton	9/14/13	per ton	Total,	11,156	7 9	Total,	9,12/6	per ton,		
83	3' 9" syphon pipes	20/-	806	0 0	7/6	148	10 0	8/-	158	8 0	15/-	287	0 0
84	3' 6" duplicate sewer pipes	16/-	649	0 0	7/-	227	3 0	7/6	243	7 6	10/-	324	10 0
85	2' diameter scour pipes	24/6	246	0 0	6/-	74	16 0	4/-	49	4 0	10/-	121	0 0
86	Flap traps	£5	50	0 0	30/-	15	0 0	15/-	7	10 0	20/-	10	0 0
87	Permanent puddle	10/-	5	0 0	6/-	3	0 0	5/-	1	10 0	6/-	3	0 0
88	Special bluestone concrete	10/-	35	0 0	60/-	30	0 0	60/-	30	0 0	70/-	35	0 0
89	1 1/2" bluestone metal	17/-	12	15 0	15/-								

## No. 5.

## The Under Secretary for Public Works to Messrs. Carter, Gummow, &amp; Co.

Gentlemen,

Department of Public Works, Sydney, 27 December, 1893.

I have the honor, by the direction of the Secretary for Public Works, to inform you that your tender, dated the 13th day of December instant, is accepted for the construction, erection, and completion of Eastern Main Branch Sewer, Western Suburbs Sewerage, from Premier-street to Sebastopol-street and branches (Contract No. 69), at the rates set forth in your schedule of prices, on the conditions following, namely:—

In lieu of paying any sums that may become due to you under the contract in cash, the same shall be applied in the purchase, in your names, of Funded Stock, under the Funded Stock Act of 1892, and the issue to you of Funded Stock to an equal amount from time to time due to you under the contract shall be accepted by you in full satisfaction of the money due under the contract; and for the carrying out of such arrangement you undertake to sign any applications, vouchers, books, or other documents that may be necessary. As the Funded Stock is issued in amounts of £10, or of some multiple of £10, any odd sum remaining above the sum issued shall be carried to your credit and be included in the next payment.

If it shall be represented to the Minister for Public Works at any time during the progress of this contract that an undue number of men are being employed thereon who have not been domiciled in this Colony for six months previously to such employment, and such allegation be proved to his satisfaction, the Minister shall have the power to call upon you to discharge any or all such men, and on such direction being conveyed in writing to you under the hand of the Under Secretary for Public Works you shall discharge such men forthwith, and in the event of your non-compliance with any such direction the Minister shall have power to declare this contract to be cancelled, as if this stipulation had been expressly set out in the cancellation clause of the general conditions relating to this contract.

The work is to be carried out in strict accordance with the plans, specification, schedule to specification, and general conditions, and to be started immediately, and completed within eighteen months from this date.

The Secretary for Public Works is willing, in response to your verbal request, to accept two approved bondsmen in the sum of £4,520, as security for the due performance by you of the contract.

I have to refer you to the Commissioner and Engineer-in-Chief for Roads, Bridges, and Sewerage for further information, and to request that you will call upon the officer-in-charge of bonds and contracts at this office, for the purpose of executing the necessary agreement, &c., for the due observance of your contract.

I must also request you to be good enough to acknowledge the receipt of this letter of acceptance, and to intimate to me your assent to the terms hereof.

I am, &amp;c.,

J. BURLING,

Under Secretary.

## No. 6.

## Bond executed by Messrs. Carter, Gummow, &amp; Co., with Annexures.

*Minute-paper.**Subject:—*Contract No. 69, Sydney Sewerage Works.

Department of Public Works, Bonds and Contract Branch, Sydney, 7 February, 1894.

THE bond and agreement herein duly prepared have been executed by the contractors, Messrs. Carter, Gummow, & Co., and their sureties, and stamped, and may now be forwarded to the Commissioner and Engineer-in-Chief for Roads and Bridges. The tender and all other papers herein are sent herewith.

The Under Secretary.

HAROLD F. NORRIE,

Officer-in-charge.

Roads.—D.C.M'L. (for U.S.) B.C., 8/2/94. Authority to return deposit, 8/2/94. Agreement handed to Accountant, Roads Branch. Mr. Davis to note.—F.C.P., 8/2/94. Seen.—J.D., 9/2/94.

Know all men by these presents,—That we, John Carter, David Graham Snodgrass, George Maddison, Peter Ewing, and Frank Moorhouse Gummow, of North Sydney, in the Colony of New South Wales, contractors, carrying on business together under the name, style, or firm of "Carter, Gummow, & Co." (and hereafter referred to as "the said contractors"), Charles James Henty and Robert Le Neve Scrutton, both of Sydney, in the Colony aforesaid, merchants (and hereinafter referred to as "the said sureties"), are jointly and severally held and firmly bound unto Her Most Gracious Majesty Queen Victoria in the penal sum of £4,520 sterling, to be paid in Sydney to Her said Majesty, her heirs or successors, for which payment well and truly to be made we bind ourselves and each of us, our and each and every of our heirs, executors, and administrators, jointly and severally, firmly by these presents.

Sealed with our seals, dated the 22nd day of January, in the year of our Lord 1894.

WHEREAS by agreement bearing even date herewith, and expressed to be made between the said contractors of the one part, and Her said Majesty of the other part, the said contractors covenanted to perform the various works required in and about the full and proper construction, erection, and completion of Eastern Main Branch Sewer, Western Suburbs Drainage, from near the south building line of Premier-street to a point 4 chains north of the north building line of Emily-street, being called or known as Contract No. 69, Sydney Sewerage Works, according to the specification, schedule to specification, general conditions, tender, and schedule of quantities and prices, copy letter of acceptance of tender and letter of assent thereto, thereunto annexed, and marked "A," "B," "C," "D," "E," "F," and "G," respectively, and certain drawings relating thereto, now in the office of the Engineer-in-Chief for Sewerage, and marked "No. 1" to "No. 27," both inclusive.

And whereas the said sureties have severally offered to become and be bound to Her said Majesty, her heirs and successors, for the due performance and fulfilment of the said contract in accordance with the said several annexures and drawings. Now the condition of the above-written bond and obligation is such

such that if the said contractors do and shall well and truly perform and fulfil the said contract as in the said agreement is recited, and every the terms, conditions, and stipulations thereof, within the time in that behalf provided. Then this obligation will be void and of none effect, otherwise to remain in full force and virtue.

Signed, sealed, and delivered by the said John } Carter, in the presence of,—	JOHN CARTER.
HAROLD F. NORRIE, J.P.	
Signed, sealed, and delivered by the said David } Graham Snodgrass, in the presence of,—	D. G. SNODGRASS
V. C. LUMSDAINE.	
Signed, sealed, and delivered by the said George } Maddison, in the presence of,—	GEORGE MADDISON.
V. C. LUMSDAINE.	
Signed, sealed, and delivered by the said Peter } Ewing, in the presence of,—	PETER EWING.
V. C. LUMSDAINE.	
Signed, sealed, and delivered by the said Frank } Moorhouse Gummow, in the presence of,—	FRANK MOORHOUSE GUMMOW (By his Attorney, JOHN CARTER).
HAROLD F. NORRIE.	
Signed, sealed, and delivered by the said Charles } James Henty, in the presence of,—	CHAS. J. HENTY.
HAROLD F. NORRIE.	
Signed, sealed, and delivered by the said Robert } Le Neve Scrutton, in the presence of,—	R. L. SCRUTTON.
HAROLD F. NORRIE.	

Dear Sir,

Would you kindly lend me Carter, Gummow, & Co.'s bond and contract for Contract No. 69, Sydney Sewerage? I will return it as soon as possible.

The Treasury, Pay Branch, 17 May, 1894.

Yours, &c.,

S. R. CORKHILL,  
Paymaster.

Owen Carroll, Esq.

Received bond, Contract 69, Sydney Sewerage Works.—J. CONNELLY (for Paymaster), Treasury, 17/8/94. Lent to Mr. Peake, to be exhibited in Court.—E.H., 17/9/94.

*Minute-paper.*

*Subject* :—Advance on Cement Contract, No. 69, Sydney Sewerage.

Department of Public Works, Bonds and Contract Branch, Sydney, 29 March, 1894.

The memorandum, herein duly prepared, has been executed by the contractors, Messrs. Carter, Gummow, & Co., and stamped, and might now be forwarded to the Commissioner and Engineer-in-Chief for Roads and Bridges and Sewerage.

The other papers herein are with Sewerage.

HAROLD F. NORRIE,  
Officer-in-charge.

The Under Secretary.

Roads.—D.C.M'L. (for U.S.), B.C., 29/3/94. Mr. Davis. Seen.—J.D., 30/3/94.

"A."

MEMORANDUM.

In consideration of the Minister for Public Works, in and for the Colony of New South Wales, advancing to us the sum of £1,000, and of any future advances to be made to us, we hereby agree to repay to the said Minister for Public Works the said sum of £1,000, and future advances, together with interest at the rate of £6 per centum per annum on such sums respectively from the date of advance, on demand, and we hereby charge all moneys due or payable, or becoming due or payable to us under a certain contract for the construction of the Eastern Main Branch Sewer, Western Suburbs Drainage, Contract No. 69, Sydney Sewerage Works, in the said Colony, entered into by us with the Government of the said Colony; also all cement, building materials, and every other thing already used, or to be used in connection with our said contract, with the repayment of the said sum of £1,000, and any future advances and interest at the rate aforesaid; and we hereby undertake to give, whenever called upon to do so, a valid bill of sale to the said Minister for Public Works over the said cement, building materials, and every other thing used in connection with our said contract now stored in our premises at Illawarra Road, Marrickville, in the said Colony, or elsewhere, such bill of sale to contain a power of sale, and such other powers, provisos, and agreements as the said Minister for Public Works may be advised. Also further undertake to give immediate possession of same to the said Minister, or any person appointed by him for that purpose, whenever called upon to do so.

As witness our hands, at Sydney, this 27th day of March, A.D. 1894.

Witnesses to the signatures of John Carter, Frank } Moorhouse Gummow, and David Graham } Snodgrass,—	JOHN CARTER. F. M. GUMMOW (By his attorney, J. CARTER). D. G. SNODGRASS.
HAROLD F. NORRIE, J.P. JOSHUA J. FARR, J.P.	
Witness to the signatures of Peter Ewing and } George Maddison,—	GEORGE MADDISON. PETER EWING.
J. T. WARLOW DAVIES.	

This is memorandum marked "A," referred to in the annexed declaration of John Carter, made before me this 29th day of March, A.D. 1894.

HAROLD F. NORRIE, J.P.  
STATUTORY

## STATUTORY DECLARATION.

I, JOHN CARTER, of William-street, North Sydney, in the Colony of New South Wales, contractor, do hereby solemnly declare and affirm that—

1. I am the duly constituted attorney of Frank Moorhouse Gummow, at present residing in South Australia, under and by virtue of a deed-poll or power of attorney, under the hand and seal of the said Frank Moorhouse Gummow, dated the 2nd day of January, 1894.
2. At the time of the execution by me as such attorney as aforesaid of the annexed memorandum, marked "A," I had not, nor have I since received notice of the revocation, by death or otherwise, of the abovementioned deed-poll or power of attorney.

And I make this solemn declaration as to the matters aforesaid, according to the law in this behalf made, and subject to the punishment by law provided for any wilfully false statement in any such declaration.

Taken and declared at Sydney, this 29th day }  
of March, 1894, before me,— }  
HAROLD F. NORRIE, J.P.

JOHN CARTER.

No. 526.

REGISTERED a letter for Carter, Gummow, and Co., Box 10, North Sydney, from Under Secretary, Works. J.V.

2 January, 1894.

TELEGRAM from Mr. J. Carter, North Sydney, to Mr. H. F. Norrie, Bonds and Contracts, Department of Public Works Office.

WILL call early Tuesday morning.

J. CARTER.

POWER of Attorney, Frank Moorhouse Gummow to John Carter.

Sir,

We have the honor to acknowledge receipt of the above from your office, under separate cover, as registered letter.

Box No. 10, North Sydney, 29 January, 1894.

We are, sir, &c.,

CARTER, GUMMOW, & CO.

Mr. Norrie, Bonds and Contracts, Public Works, Sydney.

AGREEMENT made this 22nd day of January, in the year of our Lord 1894, between John Carter, David Graham Snodgrass, George Maddison, Peter Ewing, and Frank Moorhouse Gummow, of North Sydney, in the Colony of New South Wales, contractors, carrying on business together under the name, style, or firm of "Carter, Gummow, & Co." (and hereinafter styled or referred to as "the contractors"), of the one part, and Her Most Gracious Majesty Queen Victoria of the other part.

WHEREAS the Minister for Public Works of the said Colony (hereinafter called "the said Minister") recently called for tenders, by notice published in the *Government Gazette* (of which notice a copy is hereunto annexed), for construction of Eastern Main Branch Sewer, Western Suburbs Drainage Works, from near the south building line of Premier-street to a point 4 chains north of the north building line of Emily-street, being called or known as Contract No. 69, Sydney Sewerage Works, as shown in the drawings relating thereto in the office of the Engineer-in-Chief for Roads, Bridges, and Sewerage, and marked "No. 1" to "No. 27," both inclusive, and according to the specification, schedule to specification, and general conditions, which are hereunto annexed, and marked respectively "A," "B," and "C." And whereas the contractors made the tender hereunto annexed, marked "D," to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the said sewer agreeably to the said drawings, specification, schedule to specification, and general conditions for or at the rates entered in the schedule of quantities and prices annexed to the said tender, and also hereunto annexed, marked "E." And whereas the said tender was accepted by the said Minister, and such acceptance (a copy of which is annexed hereto, and marked "F") was duly notified to the contractors on the 27th day of December last past, and the contractors, as per their letter annexed hereto, marked "G," have assented thereto. And whereas the contractors have, with the consent of the said Minister, entered into a bond to Her said Majesty, with two approved sureties conditioned to secure the due performance of this contract, and all other matters herein contained, and which on the part of the contractors are to be done and performed in lieu of providing the cash security mentioned in clause 29 of the said general conditions: Now this agreement witnesseth that, in consideration of the premises, the contractors do hereby, for themselves, their heirs, executors, and administrators, covenant with and to Her said Majesty the Queen, her heirs, and successors: That they, the contractors, shall and will perform the various works required in and about the full and proper construction, erection, and completion of the said works in accordance in all things with the said specification, schedule to specification, general conditions, and drawings, and at and after the rates or prices in the said schedule of quantities and prices. That all sums becoming due to the contractors under this contract shall be applied by the said Minister in the purchase, in the names of the said contractors, of Funded Stock under the Funded Stock Act of 1892. That the issue of Funded Stock to an amount equal to the amount from time to time due to them, the said contractors, will be accepted by them, the said contractors, in full satisfaction of the money due under this contract, and for the carrying out of such arrangement the contractors undertake to sign any applications, vouchers, books, or other documents that may be necessary. And it is hereby agreed and declared between and by the said parties hereto that the said specification, schedule to specification, general conditions, tender, schedule of quantities and prices, copy letter of acceptance of tender, and letter of assent thereto, marked as aforesaid, all being hereunto annexed as aforesaid, shall be read as incorporated in, and forming part and parcel of, these presents in like manner as if the same had been herein written and set forth at length, and that the said specification, schedule to specification, general conditions, tender, schedule of quantities and prices, copy letter of acceptance, letter of assent thereto, and the said drawings, and these presents shall together be taken to be the contract between the said parties

parties in respect of the said works, amplified in manner following—that is to say, that the said general conditions shall at all times be read and construed as if the stipulation contained in the said letter of acceptance of tender as to the discharge of men (not domiciled in this Colony for six months previously to their employment on the said works) employed on the said works when called upon to do so, and the penalty for non-compliance therewith had been expressly set out in the said general conditions.

In witness whereof the said parties to these presents have hereunto set their hands and seals, the day and year first before written.

Signed, sealed, and delivered by the said John } Carter, in the presence of,—	JOHN CARTER.
HAROLD F. NORRIE, J.P.	
Signed, sealed, and delivered by the said } David Graham Snodgrass, in the pre- sence of,—	W. J. SNODGRASS.
V. C. LUMSDAINE.	
Signed, sealed, and delivered by the said } George Maddison, in the presence of,—	GEORGE MADDISON.
V. C. LUMSDAINE.	
Signed, sealed, and delivered by the said } Peter Ewing, in the presence of,—	PETER EWING.
V. C. LUMSDAINE.	
Signed, sealed, and delivered by the said } Frank Moorhouse Gummow, in the pre- sence of,—	FRANK MOORHOUSE GUMMOW (By his Attorney, JOHN CARTER).
HAROLD F. NORRIE.	

This is the agreement referred to in our bond to Her Majesty the Queen, dated the 22nd day of January, A.D. 1894.

CHAS. J. HENTY.  
R. L. SCRUTTON.

Witness,—HAROLD F. NORRIE.

#### STATUTORY DECLARATION.

I, JOHN CARTER, of Sydney, in the Colony of New South Wales, contractor, do hereby solemnly declare and affirm that—

1. I am the duly constituted attorney of Frank Moorhouse Gummow, at present residing at Adelaide, in the Province of South Australia, under and by virtue of a deed-poll or power of attorney, under the hand and seal of the said Frank Moorhouse Gummow, dated the 2nd day of January, 1894.
2. From letters and telegrams recently received from the said Frank Moorhouse Gummow, I have every reason to believe, and I verily do believe, that the said Frank Moorhouse Gummow is still alive.
3. All the time of the execution by me as such attorney as aforesaid of a bond to, and agreement with, Her Most Gracious Majesty Queen Victoria, and bearing date the 22nd day of January, 1894, in connection with Contract No. 69, Sydney Sewerage Works, I had not, nor have I since, received notice of the revocation, by death or otherwise, of the above-mentioned deed-poll or power of attorney.

And I make this solemn declaration as to the matters aforesaid according to the law in this behalf, and subject to the punishment by law provided for any wilfully false statement in any such declaration.

Taken and declared at Sydney this 23rd } day of January, 1894, before,—	JOHN CARTER.
HAROLD F. NORRIE, J.P.	

Know all men by these presents,—That I, Frank Moorhouse Gummow, of Adelaide, in the Province of South Australia, contractor, do hereby constitute and appoint John Carter, of Sydney, in the Colony of New South Wales, contractor, my true and lawful attorney within the said Colony of New South Wales, for the purposes hereinafter expressed—that is to say, to ask, demand, sue for, recover, and receive all sums of money, goods, effects, and things now owing or payable or belonging to me, or which shall at any time or times hereafter be owing or belong to me, by virtue of any security, or upon any balance of accounts, or otherwise howsoever, and on payment, transfer, or delivery thereof respectively, to give, sign, and execute receipts, releases, and other discharges for the same, respectively, and on non-payment, non-transfer, or non-delivery thereof, or any part thereof, respectively, to commence, carry on, and prosecute any action or other proceeding whatsoever for recovering and compelling the payment, transfer, and delivery thereof respectively. And also to state, settle, adjust, compound, submit to arbitration, and compromise all actions, suits, accounts, reckonings, claims, and demands whatsoever, which now or hereafter shall or may be depending between me and any person or persons whomsoever, in such manner in all respects as my said attorney shall think fit. And also to sell and convert into money any goods, effects, or things which now belong, or at any time hereafter may belong, to me. And to sign, seal, deliver, and execute in my name and on my behalf all necessary assignments and transfers to the purchasers, assignees, grantees, or transferees thereof. And I authorise and direct my said attorney to pay all moneys which shall come to his hands by virtue of any of the powers herein contained, or so much thereof as shall remain after paying thereat the costs, charges, and expenses incurred by him in the exercise of any of the powers and authorities herein contained, into my account at \_\_\_\_\_, or otherwise to pay and apply the same as I shall from time to time, by letter or otherwise, direct. And I also authorise my said attorney to appear for me in any Court of Justice to any action or other proceeding which

may be instituted against me, or whereunto I shall be a party, and to defend the same, or sooner judgment to be had or given against me in any such action or other proceeding by default or otherwise, as my said attorney be advised or think proper. And also to enter into, make, sign, seal, execute, deliver, acknowledge, and perform any contract, agreement, deed, writing, or thing with the Government of New South Wales, or with any Minister of the Crown, or other person on behalf of said Government, or with any other person or persons, corporation or corporations whatsoever, for the construction or management of sewage works, or the discharge of sewage, or for any other purpose whatsoever (the generality of this power not being in any respect limited by specifying any particular purpose) that my said attorney may think proper, or that may be necessary or proper to be entered into, made, signed, sealed, executed, delivered, acknowledged, or performed, for effectuating the purposes aforesaid, or any of them. And also to make, sign, seal, execute and deliver, acknowledge, and perform an assignment or transfer of any such contract, agreement, deed, writing, or thing that my said attorney may think necessary or proper, and for all or any of the purposes of these presents, to use the name of me, the said Frank Moorhouse Gummow. And generally to do, execute, and perform any other act, deed, matter, or thing whatsoever, which ought to be done, executed, or performed, or which, in the opinion of my said attorney, ought to be done, executed, or performed, in or about my concerns, engagements, and business of any nature and kind whatsoever, as fully and effectually to all intents and purposes as I myself could do, if I were present and did the same in my proper person, it being my intent and desire that all matters and things respecting the same shall be under the full management and direction of my said attorney. And all and whatsoever my said attorney shall do or cause to be done in the premises, I hereby covenant with the said John Carter to ratify and confirm.

In witness whereof I have hereunto set my hand and seal this 2nd day of January, 1894.

Signed, sealed, and delivered by the said Frank }  
Moorhouse Gummow, in the presence of,— }

F. M. GUMMOW.

P. M. M. GLYNN, Solicitor, Adelaide.

E. B. COLTON, Public Notary, Adelaide.

To all to whom these presents shall come,—I, Edwin Blackler Colton, of Adelaide, in the Province of South Australia, notary public, duly authorised, admitted, and sworn, residing and practising in the city of Adelaide aforesaid, do hereby certify that I was present at Adelaide aforesaid, on the 2nd day of January, 1894, with Patrick M'Mahon Glynn, of Adelaide aforesaid, solicitor, and did see Frank Moorhouse Gummow, of Adelaide aforesaid, contractor, duly sign, seal, and execute the within written paper, writing, or power of attorney, and that the signature, "F. M. Gummow," thereto affixed, is of the proper handwriting of the said Frank Moorhouse Gummow, and that the signatures, "P. M. M. Glynn" and "E. B. Colton," thereto subscribed as witnesses, are of the proper handwriting of the said Patrick M'Mahon Glynn and of me, the said Edwin Blackler Colton.

In testimony whereof I have hereunto set my hand and affixed my seal of office to serve and avail as occasion may require.

Dated at Adelaide aforesaid, the 2nd day of January, 1894.

E. B. COLTON.

We, the undersigned, hereby certify that we have this day examined the writing contained on this and the two preceding pages with the original power of attorney and notarial certificate, and find the same to contain and be a true copy thereof.

Dated at Sydney this 23rd day of January, A.D. 1894.

V. C. LUMSDAINE.  
E. G. ABRAMS.

"D."

Department of Public Works, Roads and Bridges and Sewerage Branch.

TENDER FORM.

IN pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Eastern Main Branch Sewer, Western Suburbs Sewerage, from Premier-street to Sebastopol-street and Branches (Contract No. 69), agreeably to the plans, specification, schedule to specification, and general conditions, which have been inspected by us for or at the rates entered in the schedule of quantities and prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this Tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates or prices mentioned in the schedule of quantities and prices annexed hereto, or if not in schedule, at a price to be agreed upon at the time, and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said Tender, execute and deliver to the Minister for Public Works, a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and we enclose herewith our cheque for the sum of £460 as a preliminary deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said Tender is opened withdraw same, or if, in the event of this Tender being accepted, we fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this Tender is made subject to the conditions contained in the Tender Board Regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 13th day of December, 1893.

Witness,—Jno. R. REID, North Sydney.

CARTER, GUMMOW, & CO.,  
Box No. 10, North Sydney.

This

This is the Tender marked "D," referred to in our annexed Bond to Her Majesty the Queen, dated the 22nd day of January, A.D. 1894.

Witness,—HAROLD F. NORRIE.

CHAS. J. HENTY.  
R. L. SCRUTTON.

This is the Tender marked "D," referred to in our annexed Agreement with Her Majesty the Queen, dated the 22nd day of January, A.D. 1894.

Witnesses,— { V. C. LUMSDAINE.  
                  { HAROLD F. NORRIE.

JOHN CARTER.  
FRANK MOORHOUSE GUMMOW.  
(By his Attorney, JOHN CARTER).  
W. J. SNODGRASS.  
GEORGE MADDISON.  
PETER EWING.

#### TENDER BOARD REGULATIONS.

No Tender shall be received after eleven a.m. on the day named for the receipt of such Tender unless there are circumstances which, in the opinion of the Members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the Tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of Tenders received for each work and the name of the lowest Tenderer; but no Tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the Tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the Tenders received, showing the work, the name of the Tenderer, and the amount of each Tender.

All envelopes containing Tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the Tender is submitted.

Every Tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive ... ..	£5 0 0
For amounts exceeding £500 and not exceeding £1,000...	£10 0 0

For all sums over £1,000 one per cent. on the amount of Tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful Tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful Tenderer shall be returned to him on his executing the bond for the fulfilment of the Contract. When the Contract is for a less sum than £200 the deposit with Tender shall not be returnable until the service is satisfactorily completed.

Any Tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any Tenderer failing to take up his Tender, complete the bond, and proceed with the Contract, within the time specified, or withdrawing his Tender after it shall have been opened, whether such Tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a Tenderer shall fail to proceed with a Contract as aforesaid, fresh Tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another Tender in the same series to be accepted; but the Tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In the event of any Contract being tendered for at a schedule of rates, the approximate quantities as given of each item must be worked out and a total sum shown.

In submitting a Tender, the full Christian name of the Tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the Tender. The omission of this information will render the Tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any Tender.

The Board-room shall be open for the admission of the public while the Tenders are being opened and declared.

CONTRACT No. 69.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
	Excavation in open trenches, in more or less hard materials, and in hard rock, for sewers, branches, pipes, sub-ducts, &c., as specified in clause 3, as viz. :—				£ s. d.
1	Excavation in road surfaces, sand, soil, pipeclay, shale, soft rock, where in the opinion of the Engineer blasting is unnecessary .....	cubic yard	19,320	-/9	724 10 0
2	Excavation in hard shale or rock, where gadding and guttering only is permitted .....	"	1,165	-/9	43 13 9
3	Excavation in hard shale or rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	1,165	-/9	43 13 9
4	Excavation in hard shale or rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	1,165	-/9	43 13 9
	Excavation in tunnels in "more or less hard materials," for sewers, pipe-sewers, sub-ducts, &c., as specified in clause 3, as viz. :—				
5	Less hard excavation in clay, loose, and jointy shale, &c., where in the opinion of the Engineer blasting is unnecessary .....	"	810	27/6	1,113 10 0
6	Excavation in hard sandstone or shale, where gadding and guttering only is permitted .....	"	1,140	27/6	1,567 10 0
7	Excavation in hard sandstone, shale, ironstone, &c., where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted..	"	1,140	27/6	1,567 10 0
8	Excavation in hard sandstone, shale, ironstone, &c., where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted ..	"	1,140	27/6	1,567 10 0
	Excavation in tunnels in "solid rock" for sewers, pipe-sewers, sub-ducts, &c., as specified in clause 3, as viz. :—				
9	Excavation in hard rock, where gadding and guttering only is permitted .....	"	1,850	27/6	2,543 15 0
10	Excavation in hard rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	1,850	27/6	2,543 15 0
11	Excavation in hard rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	1,850	27/6	2,543 15 0
	Excavation in "solid rock," in shafts, shaft chambers, and sumps, as specified in clause 3, as viz. :—				
12	Excavation in road surfaces, soil, clay, pipeclay, shale, and soft rock only, where in the opinion of the Engineer blasting is unnecessary ..	"	180	4/-	26 0 0
13	Excavation in hard rock, where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	445	4/-	89 0 0
14	Excavation in hard rock, where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	445	4/-	89 0 0
15	Excavation in hard rock, where gadding and guttering only is permitted .....	"	445	4/-	89 0 0
	Excavation in "more or less hard ground," in shafts, shaft chambers, and sumps, as specified in clause 3, as viz. :—				
16	Less hard excavation in road surfaces, soil, clay, pipeclay, loose and jointy shale, and soft rock, where in the opinion of the Engineer blasting is unnecessary .....	"	170	40/-	340 0 0
17	Excavation in hard sandstone or shale, where guttering and gadding only is permitted.....	"	115	5/-	23 15 0
18	Excavation in hard sandstone or shale, ironstone, &c., where charges of powder not exceeding 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted ..	"	115	5/-	23 15 0
19	Excavation in hard sandstone or shale, ironstone, &c., where charges of powder not exceeding 4 in. in length by 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted ..	"	115	5/-	23 15 0
20	Filling in at sides, round and over all concrete and brickwork of sewers, shafts, chambers, pipes, embankments, and tunnels, as specified in clause 5.....	"	15,220	-/6	380 10 0
21	Timber ordered in writing to be left in excavations, as specified in clause 9, including all iron used in fixing same .....	cubic foot	9,000	-/1	37 10 0
22	Removing existing culverts crossing the Illawarra Road, as specified in clause 12, including masonry, pitching, and timber decking ..	cubic yard	244	2/6	30 10 0
23	Sub-duct in hard rock, with tile covers, as specified in clause 8.....	lineal yard	280	-/1	1 3 4
	Sub-duct, as specified in clause 8, in "more or less hard material," including dry or cement jointing for stoneware pipes :—				
24	Of 6 in. internal diameter .....	"	640	-/1	2 13 4
25	Of 9 in. internal diameter .....	"	640	-/1	2 13 4
	Sub-duct in water-charged loose ground, as specified in clause 8, including hardwood boxes with packing in same, and dry or cement jointing for pipes of :—				
26	6 in. internal diameter .....	"	280	-/1	1 3 4
27	9 in. internal diameter .....	"	280	-/1	1 3 4
28	Hand-packed stone filling, 4-in. gauge, as specified in clauses 9 and 10	cubic yard	760	1/-	38 0 0
29	Bluestone metal, 2½-in. gauge, on road surfaces, as specified in clause 10	"	190	10/-	95 0 0
30	Blinding 2 in. thick over metallised surfaces, as specified in clause 10...	"	90	2/6	11 5 0
31	Sandstone concrete, in any situation, as specified in clause 13 .....	"	1,050	40/-	2,100 0 0
32	Bluestone concrete, in any situation, as specified in clause 13 .....	"	4,550	43/-	9,782 10 0
33	Brickwork in cement, in any situation, as specified in clause 15 .....	"	1,605	55/-	4,413 15 0
34	Cement facing, in any situation, as specified in clause 14 .....	square yard	11,600	5/-	2,900 0 0
35	Pyrmont sandstone, ashlar, in any situation, as specified in clause 16	cubic foot	210	5/-	52 10 0

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.	Amount.
36	Squared bluestone pitchers, in any situation, as specified in clause 17	square yard	12	£50	£ 600 0 0
37	Squared freestone pitchers, in any situation, 6 in. deep, as specified in clause 18	"	38	20/-	38 0 0
38	Supply and fix ordnance fencing complete, with ironwork, painting, and tarring, as specified in clause 11	rod	7	80/-	28 0 0
	Providing, laying, and jointing glazed stoneware, plain, junction, and bend pipes, in trenches, shafts, &c., as specified in clause 19, including providing and fixing discs, complete, as viz. :-				
39	9-in. diameter pipes in pipe-sewers and shafts	lineal yard	40	2/-	4 0 0
40	12-in. diameter pipes in pipe-sewers	"	64	3/-	9 12 0
41	16-in. diameter pipes in pipe-sewers	"	15	6/-	4 10 0
42	18-in. diameter pipes in pipe-sewers	"	5	10/-	2 10 0
<b>SURPLUS MATERIALS.</b>					
	Removal of surplus materials from all excavations, as specified in clauses 51, 54, and 86 of the schedule to specification, including spreading, as viz. :-				
43	For the first half-mile of lead	cubic yard	20,420	-/3	255 5 0
44	For every further quarter of a mile of lead	"	30,000	-/1	125 0 0
<b>GOVERNMENT PROPERTY.</b>					
45	Receiving and fixing ironwork, supplied by the Government, as specified in clauses 272 to 275 of the schedule to specification	ton	25	40/-	50 0 0
<b>IRONWORK.</b>					
	Manufacture, supply, and fix (except where otherwise specified) all wrought-iron, gun-metal, and cast-iron work, including painting and tarring, complete, as specified in clauses 21 to 26 inclusive, as viz. :-				
<b>PENSTOCKS.</b>					
46	Cast-iron frame and penstock, 6-ft. diameter opening, with lifting gear, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 20 and 3	each	3	£230	690 0 0
47	Cast-iron frame and penstock, of 3-ft. 9-in. diameter opening, with lifting gear, street-box, cover-plate, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 19 and 14	"	2	£140	280 0 0
48	Cast-iron frame and penstock of 2-ft. diameter opening, with 2-ft. diameter spigot and flanged bend, lifting gear, street-box, wrought-iron and gun-metal work, complete, as shown on drawings Nos. 14 and 18	"	1	£45	45 0 0
<b>GAS CHECKS.</b>					
49	Cast-iron frame with Muntz metal gas-check for sewer of 6 ft. 10 in. x 5 ft. 10 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 23 and 3	"	1	£75	75 0 0
50	Cast-iron frame with Muntz metal gas-check for sewer of 6 ft. 8 in. x 5 ft. 8 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 24 and 3	"	1	£70	70 0 0
51	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 6 in. x 4 ft. 6 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 25 and 3	"	1	£45	45 0 0
52	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 2 in. x 4 ft. 2 in., with all wrought-iron and gun-metal work, complete, as shown on drawings Nos. 26 and 3	"	1	£40	40 0 0
53	Cast-iron frame with Muntz metal gas-check for sewer of 5 ft. 1 in. x 4 ft. 1 in., complete with all wrought-iron and gun-metal work, as shown on drawings Nos. 27 and 17	"	1	£40	40 0 0
<b>IRREGULAR CASTINGS, &amp;c.</b>					
54	Cast-iron flange and faucet pipe, 3 ft. 9 in. internal diameter, 8 ft. long in the body, as shown on drawings Nos. 14 and 16		Tons. cwt. gr. lb.		
			2 2 3 4	£16	34 4 7
55	Cast-iron pipe, 3 ft. 9 in. internal diameter, 8 ft. long over all, with two flange ends, one flange turned and drilled for 1½-in. diameter bolt-holes, as shown on drawings Nos. 14 and 16, weighing		2 0 0 18	£16	32 2 7
56	Cast-iron flange and spigot pipe, 3 ft. 9 in. internal diameter, 9 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 16, weighing		1 16 3 13	£16	29 9 10
57	Cast-iron pipe, 3 ft. 9 in. internal diameter, 10 ft. long over all, with spigot ends, as shown on drawing No. 16		2 5 3 23	£16	36 15 3
58	Cast-iron thimble, for 3-ft. 9-in. diameter syphon pipes, 18 in. long over all, as shown on drawing No. 16		0 11 3 20	£16	9 10 10
59	2—cast-iron flanged pipes, 3 ft. 6 in. internal diameter, 10 ft. long over all, one flange turned and drilled for 1½-in. diameter bolt-holes, as shown on drawings Nos. 17 and 18		4 12 2 2	£16	74 0 3
60	2—cast-iron flange and faucet pipes, 3 ft. 6 in. internal diameter, 12 ft. long in the body, as shown on drawings Nos. 17 and 18		5 16 0 6	£16	92 16 10
61	2—cast-iron flange and spigot pipes, 3 ft. 6 in. internal diameter, 10 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 18		4 9 2 2	£16	71 12 3
62	Cast-iron spigot pipe, 3 ft. 6 in. internal diameter, 10 ft. long over all, as shown on drawing No. 18		2 2 3 25	£16	34 7 6
63	Cast-iron spigot pipe, 3 ft. 6 in. internal diameter, 6 ft. 6 in. long over all, as shown on drawing No. 18		1 7 3 20	£16	22 6 10
64	Cast-iron spigot and faucet pipe, 3 ft. 6 in. internal diameter, 4 ft. 10 in. long in the body, as shown on drawing No. 18		1 5 2 24	£16	20 11 5
65	2—cast-iron thimbles for 3-ft. 6-in. diameter pipe-sewer, 18 in. long over all, as shown on drawing No. 18		1 0 2 14	£16	16 10 0
66	Cast-iron flange and faucet pipe, 2 ft. internal diameter, 10 ft. long over all, drawings Nos. 15 and 16		0 19 0 4	£16	15 4 7

No. of Item.	Description of Work.	Unit.	Probable Quantity	Rate per Unit.	Amount.
67	2—cast-iron flange and spigot pipes, 2 ft. internal diameter, 10 ft. long over all, the flange to be turned and drilled for 1½-in. diameter bolt-holes, as shown on drawing No. 16		Tons. cwt. qr. lb.		£ s. d.
			1 13 3 18	£16	27 2 9
68	Cast-iron thimble for 2-ft. diameter scour-pipes, 15 in. long over all, as shown on drawing No. 16		0 4 1 5	£16	3 8 8
69	Cast-iron flanged bend, 12 in. internal diameter, as shown on drawings Nos. 14 and 16		0 14 1 0	£16	11 8 0
70	Cast-iron flange and spigot bend, 16 in. internal diameter, as shown on drawings Nos. 3 and 10		0 8 1 10	£20	8 6 9
	Total, including placing on cement mortar bedding, where ordered, and fixed (except lead joints) in position in the works	ton.	33 12 3 12		
71	2—wrought-iron rolled girders for supporting lifting gear of penstocks at Premier-street shaft-chamber, 25 ft. long each, weighing per foot run 46 lb., as shown on drawings Nos. 3 and 20	"	1 0 2 4	£22	22 11 9
72	Platform for working penstocks in Premier-street shaft-chamber, consisting of two wrought-iron rolled girders, 25 ft long each, weight per foot run 19 lb., with cast-iron gratings and wrought-iron standard and railings, complete, as shown on drawings Nos. 2 and 22, weighing in all	cwt.	1 4 2 15	£30	36 19 0
73	Cast-iron standards and wrought-iron tube-railing at top of shaft, and solid bar-railings across shaft at landings, complete, as shown on drawing No. 4	"	0 4 1 11	£50	10 17 5
74	Wrought-iron ladder in shaft, with supports, in four lengths, complete, as shown on drawing No. 4	"	0 16 2 15	£30	24 19 0
75	3—angle-iron bearers, with cast-iron perforated landing-plates in shaft, complete, as shown on drawing No. 4	"	0 15 2 27	£20	15 14 11
76	Wrought-iron lunged gratings, for outlet well of syphon, with cast-iron hinge-plates and wrought-iron channel-girders, complete, as shown on drawings Nos. 14 and 21	"	0 4 1 20	£30	6 12 10
77	Wrought-iron hinged gratings, for inlet well of syphon, with cast-iron hinge-plates and wrought-iron channel-girders, complete, as shown on drawings Nos. 14 and 21	"	0 9 1 11	30/-	14 0 5
CAST-IRON PIPES.					
	Cast-iron straight, spigot and faucet pipes, 12 ft. long in the body, complete, as shown on drawings Nos. 16 and 18, as viz. :—				
78	96—3-ft. 9-in. diameter syphon pipes		289 4 0 0	8/15/-	2,530 10 0
79	154—3-ft. 6-in. diameter duplicate sewer pipes		435 5 0 14	8/15/-	3,608 9 10
80	59—2-ft. diameter scour-pipes		63 16 3 20	8/15/-	558 13 1
81	74—screw-bolts, 1½ in. diameter, with hexagon heads and nuts, for 3-ft. 6-in. and 3-ft. 9-in. diameters flange pipe-joints		0 2 0 23	£50	6 10 3
82	15—screw-bolts, 1 in. diameter, with hexagon heads and nuts, for 2-ft. diameter flange pipe-joints		0 0 1 26	£50	1 4 1
	Total for all straight pipes	ton.	788 8 2 27		
PIPE-LAYING.					
	Laying and jointing (including providing lead and spun-yarn) the 3-ft. 9-in. diameter, the 3-ft. 6-in. diameter, and the 2-ft. diameter cast-iron pipes, and irregular castings in open trenches and shafts, as specified in clause 20, complete, as viz. :—				
83	3-ft. 9-in. diameter syphon pipes and short ends, &c.	lineal yard	396	3/6	69 6 0
84	3-ft. 6-in. diameter duplicate sewer-pipes, short ends, &c.	"	649	3/6	113 11 6
85	2-ft. diameter scour-pipes and short ends, &c.	"	246	2/6	30 15 0
TRAPPED JUNCTIONS.					
86	Flap-traps, providing, delivering, and building in, including providing and fixing discs	each	10	25/-	12 10 0
GENERAL.					
87	Permanent puddle, where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 29, including spreading in 9-in. layers and ramming, complete	cubic yard	10	2/-	1 0 0
88	Special bluestone concrete, in any situation, as specified in clause 2	"	10	50/-	25 0 0
89	Bluestone metal (clause 2), 1½-in. gauge, stacked	"	15	10/-	7 10 0
90	Sandstone metal (clause 2), 2-in. gauge, stacked	"	15	3/-	2 5 0
91	Bluestone metal (clause 2), 2½-in. gauge, stacked	"	15	10/-	7 10 0
92	Sharp, clean, washed sand (clause 2), stacked	"	15	10/-	7 10 0
93	Sawn hardwood, in scantlings or planks (clause 2)	cubic foot	100	1/6	7 10 0
94	Oregon timber, in scantlings or planks	"	100	1/6	7 10 0
95	Wrought-iron, in bolts, galvanised step-irons, screws, nails, spikes, straps, &c. (clause 2)	cwt.	20	50/-	50 0 0
96	Portland cement	cask	25	12/-	15 0 0
97	Artizan or mechanic, supplied by Contractor	day	Rate only	16/-	
98	Quarryman or other skilled labourer, supplied by Contractor	"	"	14/-	
99	Ordinary labourer, supplied by Contractor	"	"	11/-	
100	Cart with one horse and driver, supplied by Contractor	"	"	20/-	
101	One additional horse, supplied by Contractor	"	"	10/-	
	TOTAL			£	45,207 3 11

The rates quoted are shillings per cwt., not pounds. CARTER, GUMOW, & Co.

The quantities are not guaranteed as correct, and are merely for the guidance of Tenderers, who must satisfy themselves as to their accuracy, which is not in any way guaranteed by the Government, and they are subject to omissions, deductions, or alterations.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in strict accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, the period of maintenance, and up to the day of their being formally taken over by the Engineer.

Item No. 45 to include the cost of conveying the Government property from the Contractor's store or field office to the various sites of works along line of main and branch sewers, at man-holes, gas-check, and shaft-chamber, &c.

Prices for items Nos. 89, 90, 91, 92, 93, 94, 95, and 96 are to be for materials in strict accordance with specification, delivered on the works ready for use, and only the actual net quantities ordered and approved of shall be paid for. In case Contractor's prices are considered too high by the Engineer at the time such materials may be required, or if the Contractor fail to deliver such materials at the time required and ordered, then the Engineer shall have the power to supply the same from any other sources, and the Contractor shall have no claim for loss or compensation on account of the exercise of such power by the Engineer.

Prices for items Nos. 97, 98, 99, 100, and 101 are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

### SUMMARY of Weights of Wrought and Cast Ironwork, including all Gun-metal.

(The number of Items underneath correspond with those of the Schedule of the Quantities and Prices.)

No. of Item.	Description of Item.	Number required.	Weight of each Item.	Total weight.
<b>PENSTOCKS.</b>				
			Ts. cwt. qr. lb.	Ts. cwt. qr. lb.
46	Cast-iron frame and penstock, with 6-ft. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	3	6 5 1 22	18 16 1 10
47	Cast-iron frame and penstock, with 3-ft. 9-in. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	2	3 7 0 4	6 14 0 8
48	Cast-iron frame and penstock, with 2-ft. diameter opening, with all lifting gear, screw-bolts, anchor-bolts, and gun-metal, complete.....	1	1 1 1 20	1 1 1 20
	Total weight .....	...	.....	26 11 3 10
<b>GAS-CHECKS.</b>				
49	Cast-iron frame, with Muntz metal gas-check, for 6-ft. 10-in. by 5-ft. 10-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	1 1 1 26	1 1 1 26
50	Cast-iron frame, with Muntz metal gas-check, for 6-ft. 8-in. by 5-ft. 8-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 19 2 17	0 19 2 17
51	Cast-iron frame, with Muntz metal gas-check, for 5-ft. 6-in. by 4-ft. 6-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 14 0 26	0 14 0 26
52	Cast-iron frame, with Muntz metal gas-check, for 5-ft. 2-in. by 4-ft. 2-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 13 0 3	0 13 0 3
53	Cast-iron frame, with Muntz metal gas-check, for 5-ft. 1-in. by 4-ft. 1-in. sewer, with all screw-bolts, anchor-bolts, gun-metal work, complete .....	1	0 11 0 2	0 11 0 2
	Total weight .....	...	.....	3 19 1 18
<b>IRREGULAR CASTINGS, &amp;c.</b>				
54	Flange and faucet pipe, 8 ft. long, 3 ft. 9 in. internal diameter.....	1	2 2 3 4	2 2 3 4
55	Flange pipe, 8 ft. long, 3 ft. 9 in. internal diameter, one flange turned and drilled, for 1½-in. diameter bolt-holes.....	1	2 0 0 18	2 0 0 18
56	Flange and spigot pipe, 9 ft. long, 3 ft. 9 in. internal diameter, the flange to be turned and drilled for 1½-in. diameter bolt-holes.....	1	1 16 3 13	1 16 3 13
57	Spigot pipe, 10 ft. long, 3 ft. 9 in. internal diameter .....	1	2 5 3 23	2 5 3 23
58	Cast-iron thimble for 3-ft. 9-in. diameter pipe, 18 in. long .....	1	0 11 3 20	0 11 3 20
59	Flange-pipe, 10 ft. long, 3 ft. 6 in. internal diameter, one flange turned and drilled, for 1½-in. diameter bolt-holes .....	2	2 6 1 1	4 12 2 2
60	Flange and faucet pipe, 12 ft. long, 3 ft. 6 in. internal diameter .....	2	2 18 0 3	5 16 0 6
61	Flange and spigot pipe, 10 ft. long, 3 ft. 6 in. internal diameter, the flange turned and drilled for 1½-in. diameter bolt-holes .....	2	2 4 3 1	4 9 2 2
62	Spigot pipe, 10 ft. long, 3 ft. 6 in. internal diameter .....	1	2 2 3 25	2 2 3 25
63	Spigot pipe, 6 ft. 6 in. long, 3 ft. 6 in. internal diameter.....	1	1 7 3 20	1 7 3 20
64	Spigot and faucet pipe, 4 ft. 10 in. long, 3 ft. 6 in. internal diameter .....	1	1 5 2 24	1 5 2 24
65	Cast-iron thimble for 3-ft. 6-in. diameter pipe, 18 in. long .....	2	0 10 1 7	1 0 2 14
66	Flange and faucet pipe, 10 ft. long, 2 ft. internal diameter .....	1	0 19 0 4	0 19 0 4
67	Flange and spigot pipe, 10 ft. long, 2 ft. internal diameter, the flange to be turned and drilled for 1½-in. diameter bolt-holes .....	2	0 16 3 23	1 13 3 18
68	Cast-iron thimble for 2-ft. diameter pipe, 15 in. long .....	1	0 4 1 5	0 4 1 5
69	Cast-iron flange bend, 12 in. internal diameter.....	4	0 3 2 7	0 14 1 0
70	Cast-iron flange and spigot bend, 16 in. internal diameter .....	2	0 4 0 19	0 8 1 10
	Total weight .....	...	.....	33 12 3 12
71	Wrought-iron rolled girders, 13½ in. high, top and bottom flange 5½ in. wide, 25 ft. long, to be walled in at Premier-street shaft chamber .....	2	at 46 lb. per ft.	1 0 2 4
72	Platform for working penstocks, Premier-street shaft, two wrought-iron rolled girders, 9 in. high, top and bottom flanges, 3 in. wide, 25 ft. long, weighing 19 lb per lineal foot, with cast-iron gratings and wrought-iron standards and railings complete .....	...	.....	1 4 2 15
73	Cast-iron standards and wrought-iron tube-railing at top of shaft, and solid bar-railing across shaft at landings .....	...	.....	0 4 1 11
74	Wrought-iron ladder in shaft, with supports, in four lengths, complete .....	...	.....	0 16 2 15
75	Angle-iron bearers with cast-iron perforated landing plates in shaft in Premier-street, complete .....	3	.....	0 15 2 27
76	Wrought-iron hinged gratings on cast-iron hinge-plates and double wrought-iron channel girders, with cast-iron distance blocks for outlet well of syphon .....	..	.....	0 4 1 20
77	Wrought-iron hinged grating for inlet well of syphon on cast-iron hinge-plates and double wrought-iron, channel-iron girders with cast-iron distance blocks .....	...	.....	0 9 1 11
	Total weight .....	...	.....	4 15 2 19

No. of Item.	Description of Item.	Number required.	Weight of each Item.	Total weight.
<b>CAST-IRON STRAIGHT SPIGOT AND FAUCET PIPES, 12 FT. LONG.</b>				
78	3-ft. 9-in. diameter syphon pipes .....	96	Ts. cwt. qr. lb. 3 0 1 0	Ts. cwt. qr. lb. 289 4 0 0
79	3-ft. 6-in. diameter duplicate sewer-pipes.....	154	2 16 2 3	435 5 0 14
80	2-ft. diameter scour-pipes .....	59	1 1 2 16	63 16 3 20
	Total weight of pipes .....	...	.....	788 6 0 6
81	Screw-bolts 1½ in. diameter, with hexagon heads and nuts, for 3-ft. 9-in. and 3-ft. 6-in. diameters, flange pipe-joints .....	74	.....	0 2 0 23
82	Screw-bolts 1 in. diameter, with hexagon heads and nuts, for 2-ft. diameter flange pipe-joints .....	15	.....	0 0 1 26
	Total weight .....	...	.....	0 2 2 21

This is the schedule of quantities and prices marked "E," referred to in our annexed Bond to Her Majesty the Queen, dated the 22nd day of January, A.D. 1894.

Witness,—HAROLD F. NORRIE.

CHAS. J. HENTY.  
R. L. SCRUTTON.

This is the schedule of quantities and prices marked "E," referred to in our annexed Agreement with Her Majesty the Queen, dated the 22nd day of January, A.D. 1894.

JOHN CARTER.  
FRANK MOORHOUSE GUMMOW  
(By his Attorney, JOHN CARTER).  
W. J. SNODGRASS.  
GEORGE MADDISON.  
PETER EWING.

Witnesses,— { V. C. LUMSDAINE.  
{ HAROLD F. NORRIE.

"F."

LETTER OF ACCEPTANCE.

Gentlemen,

27 December, 1893.

I have the honor, by direction of the Secretary for Public Works, to inform you that your tender, dated the 13th day of December instant, is accepted for the construction, erection, and completion of Eastern Main Branch Sewer, Western Suburbs Sewerage, from Premier-street to Sebastopol-street and branches (Contract No. 69), at the rates set forth in your schedule of prices, on the conditions following, namely:—

In lieu of paying any sums that may become due to you under the contract in cash, the same shall be applied in the purchase, in your names, of Funded Stock under the "Funded Stock Act of 1892," and the issue to you of Funded Stock to an equal amount from time to time due to you under the contract shall be accepted by you in full satisfaction of the money due under the contract; and for the carrying out of such arrangement you undertake to sign any applications, vouchers, books, or other documents that may be necessary. As the Funded Stock is issued in amounts of £10, or of some multiple of £10, any odd sum remaining above the sum issued shall be carried to your credit and be included in the next payment.

If it shall be represented to the Minister for Public Works at any time during the progress of this contract that an undue number of men are being employed thereon who have not been domiciled in this Colony for six months previously to such employment, and such allegation be proved to his satisfaction, the Minister shall have the power to call upon you to discharge any or all such men, and on such direction being conveyed in writing to you under the hand of the Under Secretary for Public Works you shall discharge such men forthwith, and in the event of your non-compliance with any such direction, the Minister shall have power to declare this contract to be cancelled, as if this stipulation had been expressly set out in the cancellation clause of the general conditions relating to this contract.

The work is to be carried out in strict accordance with the plans, specification, schedule to specification, and general conditions, and to be started immediately, and completed within eighteen months from this date.

The Secretary for Public Works is willing, in response to your verbal request, to accept two approved bondsmen in the sum of £4,520 as security for the due performance by you of the contract.

I have to refer you to the Commissioner and Engineer-in-Chief for Roads, Bridges, and Sewerage for further information, and to request that you will call upon the office-in-charge of bonds and contract at this office, for the purpose of executing the necessary agreement for the due observance of your contract.

I must also request you to be good enough to acknowledge the receipt of this letter of acceptance, and to intimate to me your assent to the terms hereof.

I am, &c.,

J. BARLING,

Under Secretary.

This is the copy letter of acceptance of tender marked "F," referred to in our annexed Bond to Her Majesty the Queen, dated the 22nd day of January, A.D. 1894.

Witness,—HAROLD F. NORRIE.

CHAS. J. HENTY.  
R. J. SCRUTTON.

This is the copy letter of acceptance of tender marked "F," referred to in our annexed Agreement with Her Majesty the Queen, dated the 22nd day of January, A.D. 1894.

JOHN CARTER.  
FRANK MOORHOUSE GUMMOW.  
(By his Attorney, JOHN CARTER).  
J. G. SNODGRASS.  
GEORGE MADDISON.  
PETER EWING.

Witnesses,— { HAROLD F. NORRIE.  
{ V. C. LUMSDAINE.

"G."

"G."

## LETTER OF ASSENT.

Sir, We have the honor to acknowledge the receipt of your letter of date 27th December instant, accepting our tender for Contract No. 69, Western Suburbs Sewerage, and to state that we assent to the terms of such acceptance.

We have, &amp;c.,

CARTER, GUMMOW, &amp; CO.

The Under Secretary, Department of Public Works.

This is the Letter of Assent marked "G," referred to in our annexed Bond to Her Majesty the Queen, dated the 22nd day of January, A.D. 1894.

Witness,—HAROLD F. NORRIE.

CHAS. J. HENTY.  
R. L. SCRUTTON.

This is the Letter of Assent marked "G," referred to in our annexed Agreement with Her Majesty the Queen, dated the 22nd day of January, A.D. 1894.

Witnesses,— { HAROLD F. NORRIE.  
T. C. LUMSDAINE.JOHN CARTER.  
FRANK MOORHOUSE GUMMOW  
(By his Attorney, JOHN CARTER).  
D. G. SNODGRASS.  
GEORGE MADDISON.  
PETER EWING.

Department of Public Works, Sydney, 24 November, 1893.

## TENDERS FOR PUBLIC WORKS.

TENDERS will be received at this office for the public works specified in the Schedule hereunder up to 11 o'clock a.m. of the various dates set forth in the second column.

All envelopes containing tenders must be addressed to the President of the Tender Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Tenderers may be in attendance when tenders are opened, and the name of the lowest tenderer will be announced, if possible, before the duties of the Board have terminated.

The following conditions will have to be strictly complied with, otherwise the tenders will not be taken into consideration:—

1st.—Each tender must state the time within which it is proposed to complete the work, and in every instance the full name or names of persons tendering, also the names in full, occupations, and addresses of proposed bondsmen.

2nd.—At the foot of every tender there must be a memorandum, signed by the party tendering and two responsible persons as sureties, agreeing to be answerable for the due performance of the contract in the event of the tender being accepted; and undertaking, in that event, that they will severally execute and deliver a bond to Her Majesty in the penal sum mentioned in the specification, or otherwise arranged for securing such performance.

3rd.—No tender will be considered which shall have been received after 11 o'clock a.m. on the day upon which tenders are to be received, unless there are circumstances which, in the opinion of the Board, render it desirable that it should be received.

4th.—Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz:—

For amounts up to £500 inclusive ... ..	£5	0	0
For amounts exceeding £500 and not exceeding £1,000 ... ..	10	0	0

For all sums over £1,000, 1 per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the manager of the bank upon which it is drawn, or a bank draft.

5th.—Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

6th.—In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account of such contract shall be absolutely forfeited to the Crown, and shall be paid to the credit of the Consolidated Revenue of the Colony.

7th.—Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted, but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

8th.—In the event of any contract being tendered for at a schedule of rates, the approximate quantities as given of each item must be worked out and a total sum shown.

All deposits, with the exception of that of the lowest tenderer, when practicable, will be returned to the persons entitled thereto immediately after the Board shall have adjourned; and the deposit made by the successful tenderer shall be returned to him on executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender will not be returnable until the service is satisfactorily completed.

It is to be understood that the Government does not bind itself to accept the lowest or any tender; and no tender will be accepted until the head of the Branch under whose directions the work is to be carried out has reported upon the whole of the tenders received.

WILLIAM JOHN LYNE.

Roads.

## Roads.

Description of Work or Supplies to be Tendered for.	Dates up to which Tenders will be received	Where Plan, Specification, and Form of Tender may be seen.	Remarks.
* * * * *	*	* * * * *	* * *
Construction of the Eastern Main Branch Sewer, Western Suburbs Drainage Works, from near the south building line of Premier-street to a point 4 chains north of the north building line of Emily-street.	13 Dec., 1893	Sewerage Branch, Public Works Department.	Time extended.
* * * * *	*	* * * * *	* * *

This is the Copy Notice referred to in our annexed Bond to Her Majesty the Queen, dated the 22nd day of January, A.D. 1894.

Witness,—HAROLD F. NORRIE.

CHAS. J. HENTY.  
R. L. SCRUTTON.

This is the Copy Notice referred to in our annexed Agreement with Her Majesty the Queen, dated the 22nd day of January, A.D. 1894.

Witnesses,— { HAROLD F. NORRIE.  
T. C. LUMSDAINE.

JOHN CARTER.  
FRANK MOORHOUSE GUMMOW  
(By his Attorney, JOHN CARTER).  
D. G. SNODGRASS.  
GEORGE MADDISON.  
PETER EWING.

Box No. 10, North Sydney, 8 January, 1894.

Sir, CONTRACT No. 69.—WESTERN SUBURBS SEWERAGE.

With reference to the acceptance of sureties in lieu of the fixed deposit security for the above contract, we have the honor to inform you that Messrs. Charles James Henty (of Parbury, Henty and Co., Merchants, Pitt-street), and Frederick Lassetter (of Messrs. Lassetter and Co., George-street, City), are prepared to become such sureties, and will sign any necessary documents in connection with the same when called upon to do so.

We are, &c.,  
CARTER, GUMMOW, & CO.

The Under Secretary for Public Works.

Are names satisfactory? Commissioner for Roads.—D.C.M'L. (*pro* U.S.), B.C., 9/1/94. Yes.—R.H., 10/1/94. Mr. Norrie.—D.C.M'L. (*pro* U.S.), 10/1/94.

“A.”

## SPECIFICATION.

## 1. Description of Contract.

THIS contract comprises the provision by the contractor of all labour, machinery, tools, plant, and everything that may be necessary for the construction of the Eastern Main Branch Sewer, as described in detail in the specification, schedule to specification, and general conditions, and as shown on the following drawings:—

- No. 1.—General plan showing sites of sewers, shafts, &c., and longitudinal section of this length of the Main Eastern Branch Sewer.
- No. 2.—Plans and longitudinal sections of main branches at Premier-street junction and Camden and Renwick streets branch sewers.
- No. 3.—Design of penstock, gas-check, junction chamber and shaft at Premier-street, showing positions of gas-checks, penstocks, and storm-water discharge weir, working platforms, &c.
- No. 4.—Alteration of penstock chamber and shaft at Premier-street.
- Nos. 5 to 10.—Designs of ventilating shafts, junctions, cross-sections of sewers, &c.
- Nos. 11 and 12.—Designs of culverts passing under duplicate pipe-sewer on the Illawarra Road at 3 miles and 43·31 chains, and over the 3-ft. 9-in. diameter cast-iron syphon, on the same road at 3 miles 9·67 chains.
- No. 13.—Enlarged general plans and longitudinal sections on natural scale of 3-ft. 9-in. diameter cast-iron syphon and cast-iron 2-ft. diameter scour-pipe along the Illawarra Road.
- No. 14.—Design of inlet and outlet wells for syphon along the Illawarra Road.
- No. 15.—Top view of inlet and outlet wells of syphon ventilating shaft and chamber at junction of 24-in. diameter, and 3-ft. 3-in. x 2-ft. 2-in. sewers, shaft with pipe-junctions, &c.
- No. 16.—Details of cast-iron 3-ft. 9-in. diameter syphon pipe, and 24-in. diameter flushing pipe, &c. †
- No. 17.—Enlarged plan and longitudinal section on natural scale of cast-iron, 3 ft. 6 in. diameter duplicate pipe-sewer; details of inlet and outlet chambers, man-holes, &c.
- No. 18.—Details of cast-iron 3-ft. 6-in. diameter duplicate pipe-sewer and design of penstock for 24 in. diameter pipe-sewer.
- No. 19.—Design of penstock with lifting gear for 3-ft. 9-in. diameter pipe-sewer.
- No. 20.—Design of penstock with lifting gear for 6-ft. diameter sewer.
- No. 21.—Design of wrought-iron gratings for inlet and outlet wells of syphon.
- No. 22.—Design of working platform for penstock chamber, Premier-street.
- No. 23.—Design of gas-check for 6-ft. 10-in. x 5-ft. 10-in. sewer.
- No. 24.—Design of gas-check for 6-ft. 8-in. x 5-ft. 8-in. sewer.
- No. 25.—Design of gas-check for 5-ft. 6-in. x 4-ft. 6-in. sewer.
- No. 26.—Design of gas-check for 5-ft. 2-in. x 4-ft. 2-in. sewer.
- No. 27.—Design of gas-check for 5-ft. 1-in. x 4-ft. 1-in. sewer.

## 2. *Materials.*

The materials are to be of the quality specified in clauses 11 to 38, 212, and 213 of the schedule to specification.

## 3. *Excavation.*

The excavation to be executed in accordance with clauses 45 to 54, 56 to 76, 79 to 84, 86, and 97 to 108 of the schedule to specification.

The excavation of the various tunnels to be commenced from not less than forty-three different faces simultaneously within four months, unless otherwise directed, after the date the contract has been signed.

The schedule prices for 1 cubic yard of excavation in open cutting, shafts, and tunnels respectively, shall include the cost of taking out and placing said excavation aside in separate temporary spoil banks beyond the actual site of work, together with the works comprised in clauses 47 and 90 of the schedule to specification.

## 4. *Removal of Culverts.*

The existing culverts, consisting of stone abutments, pitched bottoms, and hardwood decking, crossing the Illawarra Road, and specified in clause 12, to be taken up in such lengths as may be ordered at the time, removed and stacked where directed, at the price per cubic yard stated in the schedule of prices.

## 5. *Filling.*

The filling is to be executed in accordance with clauses 54, 55, 75, 86 to 90, and 93 to 101 of the schedule to specification.

The schedule price of one (1) cubic yard of filling is to apply to filling in any situation in the construction of these works, the removing the material from temporary spoil banks or from other sources outside the limits of this contract, and the depositing same in accordance with the plans and specification; together with the withdrawing of all timber and the works comprised under clauses 55, 89, 90, and 93 of the schedule to specification.

## 6. *Shafts.*

Shafts are to be executed in accordance with clauses 2, 65, 66, 97 to 101, and 107 of the schedule to specification.

## 7. *Sumps.*

Sumps to be sunk as specified in clauses 102 and 103 of the schedule to specification.

## 8. *Sub-ducts.*

Sub-ducts to be executed in accordance with clauses 104 and 105 of the schedule to specification.

## 9. *Permanent and Temporary Shoring, Timbering, and Bridges.*

Permanent and temporary shoring, timbering, and bridges to be executed as specified in clauses 56, 73, 74, 75, 114, 115, and 117 of the schedule to specification.

## 10. *Road-making.*

The embankment and road-making along line of Illawarra Road, between Charles-street and Addison Road, to be executed in accordance with clauses 137 to 143 of the schedule to specification.

## 11. *Ordnance Fencing.*

Sawn hardwood ordnance fencing to be executed as specified in clauses 25 and 26 of the specification, and clause 134 of the schedule to specification. The sawn hardwood handrails at ends of culverts required in this contract to be of the same description, but two-rail only.

## 12. *Sewers, Storm-water Channels, &c.*

The sewers and other works are to be executed in conformity with clauses 70, 81, 82, 146 to 155 of the schedule to specification.

Three junction chambers, five gas-check chambers, inlet and outlet wells, with penstock chambers and manholes at ends of syphon, overflow outlet, culvert crossing over syphon, junction chamber at both ends of duplicate pipe-sewer, with man-holes and pipe-junction chambers, and culvert crossing under pipe-sewers, thirteen ventilating and pipe-junction shafts, twelve ventilating shafts, and four pipe-ventilating shafts, spaced as shown on longitudinal sections and general plan, to be constructed as shown on drawings.

The existing creek which crosses the Illawarra Road at 3 miles 9.67 chains by a culvert built with stone abutments, 12 ft. 6 in. apart, pitched bottom and hardwood decking, 49 ft. 6 in. in length, to be taken up and removed, when ordered, to permit of the cast-iron 3 ft. 9 in. diameter syphon pipe, and the cast-iron 2 feet diameter scour-pipe to be laid in open trench underneath, and for the purpose of rebuilding and constructing said length of culvert over the syphon and scour-pipes in concrete 12 ft. 6 in. wide, between abutments, and 4 feet in height between invert and closing arch, with foundation walls on each side of pipe trench and closing arch over same, wing-walls, railings, road-making, &c., with such gradient arches, shapes, forms, dimensions, as shown on drawings.

The existing culvert across the Illawarra Road at 3 miles 43.34 chains, built with stone abutments and hardwood timber decking, 6 feet wide and 4 ft. 6 in. high, and about 61 ft. 5 in. in length, to be taken up and removed, when ordered, for the purpose of rebuilding and constructing instead a concrete culvert, in the shape of an inverted syphon, with cross-sections varying from 7 ft. 6 in. in width, by 5 feet in height between invert and closing arch, at both ends of culvert, to 7 ft. 6 in. in width by 4 feet in height, between invert and closing arch, for the central portion of same, with such vertical and horizontal curves, arches, shapes, forms, wing-walls, railings, open earth inlet and outlet channels, gradients, and of such lengths and dimensions as may be ordered at the time, to permit of the main eastern branch sewer (at this site a duplicate 3 ft. 6 in. diameter cast-iron pipe-sewer) to pass over said culvert, as shown on drawings.

## 13. *Concrete Work.*

The concrete to be used in foundations, packing over brick arches in rock tunnels, and at back of brick lining of shafts, in culverts, building round stoneware pipes, where ordered, and in sumps, to be of sandstone

sandstone concrete of the quality specified in clause 31 of schedule to specification. The concrete to be used for all other works in sewers, junctions, chambers, shafts, man-holes, &c., unless where otherwise directed, to be bluestone concrete of the quality specified in clause 29 of schedule to specification.

The concrete work to be executed as specified in clauses 29, 31, 32, 81, 82, 156 to 170, 173, 176 to 182, and 195 of the schedule to specification.

14. *Cement Coating.*

The cement coating to be executed as specified in clauses 183 and 184 of the schedule to specification.

All internal and external surfaces of concrete work only where ordered, to be protected by cement coating, consisting of cement and sand, in the proportion of one cement to two of sand.

15. *Brickwork.*

The brickwork is to be executed as specified in clauses 81, 168, 169, 185, 186, 189, 191, 193, 194, and 195 of the schedule to specification.

16. *Freestone Ashlar.*

Freestone ashlar to be executed as specified in clauses 197, 198, and 203 of the schedule to specification.

Copings, curbings, and stones on top of ventilating shafts to be pierced, picked, axed, and dressed to the exact sizes and forms shown on drawings.

17. *Squared Bluestone Pitching.*

Squared bluestone pitching to be executed as specified in clause 201 of the schedule to specification.

18. *Squared Freestone Pitching.*

Squared freestone pitching to be executed as specified in clause 202 of the schedule to specification.

19. *Stoneware Pipe-laying.*

The providing, laying, and jointing of glazed stoneware pipes to be executed as specified in clauses 17, 18, 19, 181, 204, 205, 206 of the schedule to specification.

20. *Cast-iron Pipe-laying.*

The cast-iron 3-ft. 9-in. diameter, 3-ft. 6-in. diameter, and 2-ft. diameter pipes to be laid and jointed, including providing lead and spun yarn, as specified in clauses 207 to 213, 272 and 273 of the schedule to specification.

21. *Wrought-iron Work.*

The wrought-iron work to be executed as specified in clauses 214 to 219, 221 to 225, 228 to 230, 263 to 265, 270 to 273, and 295 of the schedule to specification.

22. *Gun-metal Work.*

The gun-metal work to be executed as specified in clauses 216, 217, 231 to 238, 272, 273, and 295 of the schedule to specification.

23. *Cast-iron Work.*

The cast-iron work to be executed as specified in clauses 214 to 217, 239 to 257, 260 to 262, 267 to 273, and 295 of the schedule to specification.

24. *Manufacture of Ironwork.*

All wrought-iron, gun-metal, and cast-iron work required for this contract must be manufactured in the Colony of New South Wales.

25. *Painting.*

All wrought-iron work, cast-iron work, unless where otherwise specified, and the hand-rails at ends of culverts, to be painted as specified in clauses 276, 277, and 278 of the schedule to specification.

26. *Tarring.*

All cast-iron pipes, short lengths, bends, junctions, or other castings shown on drawings, where covered up or walled in, and hand-rail posts below level of top of kerbs, to be coated with tar, as specified in clauses 239, 280, and 281 of the schedule to specification.

27. *Schedule to Specification and General Conditions.*

Notwithstanding that certain clauses of the schedule to specification are specially enumerated, it is to be understood that the schedule to specification and the general conditions attached to the specification shall be held binding in all matters relating to this contract, as far as the Engineer may deem the same applicable.

This is the specification marked "A," referred to in our annexed Bond to Her Majesty the Queen, dated the 22nd day of January, A.D. 1894.

Witness,—HAROLD F. NORRIE.

CHAS. J. HENTY.  
R. L. SCRUTTON.

This is the specification marked "A," referred to in our annexed Agreement with Her Majesty the Queen, dated the 22nd day of January, A.D. 1894.

Witnesses,— { HAROLD F. NORRIE.  
                  { V. C. LUMSDAINE.

JOHN CARTER.  
FRANK MOORHOUSE GUMMOW  
(By his Attorney, JOHN CARTER).  
W. J. SNODGRASS.  
GEORGE MADDISON.  
PETER EWING.

"B."

## "B."

## SCHEDULE TO SPECIFICATION.

*Site.*

1. Access to the site of the works to be had along all public roads, streets, or lanes, and along such strips or areas of land as the Engineer-in-Chief may deem it necessary to resume or temporarily provide for the purpose of the works.

2. For the purpose of sinking, working, and building shafts on lines of streets, and on private ground, when ordered, the contractor to have temporary possession of an area of 24 feet by 17 feet over the mouth of each shaft, unless otherwise directed.

3. For the purpose of excavating open cuttings for sewers, storm-water channels, piers, abutments, buildings, &c., and where ordered, for constructing and completing the various works therein, and raising embankments over same, contractor to have temporary possession of a strip or area of land the exact widths and lengths which, in the opinion of the Engineer, is required for these works in accordance with plans, sections, specifications, and with clause 7 of the general conditions.

4. All strips or areas of land for the site of the works, road connections and deviations, &c., hereinbefore referred to, to be set out by the Engineer, to whom written application for their temporary possession must be made by the contractor four weeks prior to the time the said land is required by him.

5. Exclusive of the quantity of fencing provided for in the contract for enclosing the works, the contractor shall provide and erect, where directed, to the satisfaction of the Engineer, all necessary fences to prevent trespass on land not at his disposal, or which the Government may require for other purposes connected with the contract, at his sole cost.

6. The contractor shall provide and erect all necessary temporary bridges over rivers, creeks, water-courses, drains, and underneath railways, tramways, roads, footpaths, and streets, boarding-barriers, &c., wherever directed to do so; and all fences, walls, railings, buildings, railways, tramways, walks, or streets, metalled, grassed, paved, pitched, or asphalted surfaces, to be left by the contractor at the completion of the works in the same order and condition as they were before the commencement of the works, at his sole cost, in strict accordance with the various stipulations and terms contained in clause 20 of the general conditions, to the entire satisfaction of the municipal authorities and of the Engineer.

7. Contractor shall also provide and maintain all boarding-barriers, night-lights, and properly ballasted temporary roads required by any municipal or other authorities having charge or control of streets or roads, or which may be required for the convenience or safety of the public; and he shall also make all arrangements, by temporary roads or bridges or otherwise, which may be required by any local authorities or by the Engineer, to prevent stoppage or delay of public traffic or any avoidable inconvenience to the public.

8. Should the contractor refuse or neglect to erect and maintain, either or both, any such temporary fences or other necessary accommodation, it shall be lawful for, but not obligatory on, the Engineer, after having given to the contractor twenty-four hours' notice in writing of his intention to do so, summarily, and without further process, to cause any such temporary hoarding, fences, gates, bridges, or other accommodation to be erected and maintained which he may deem necessary for the proper protection either of such lands or of the adjoining lands, or for the safety of the property of the owners and occupiers thereof or of the general public, and the cost of so doing shall be deducted from any money that may be or may become due to the contractor on account of this contract.

*Lines, Levels, Setting-out Work, and Inspection.*

9. The centre lines of main sewer, storm-water channels, and branch sewers, &c., are shown on general plans by full lines, which will be marked on the surface of the ground, the same as on plans, as the works proceed.

After setting-out, the centre lines of the works are to be preserved solely by reference to the pegs, iron nails, and other marks and signals which may be placed, fixed, and erected for the purpose of these works along their centre lines.

The gradients and levels of the works are to be preserved by reference to any bench-marks which the Engineer may deem necessary to establish along the lines of works during the progress of the contract, subject to check and adjustment, as shall be directed, from other bench-marks established beyond the site of the works.

10. Contractor shall also, at his own cost and expense, at any time—by day or by night, either on working days or on Sundays or holidays—render all such assistance and supply all such labour, plant, and lighting as the Engineer or Superintending Officer may require to set out, to check such setting-out, or to inspect any portion of the works, which must for that purpose be left clear and free from any obstruction or impediment. During and for the performance of those operations contractor shall be obliged to suspend any or all of his work if required to do so by the Superintending Officer, and without having any claim for loss or damage on account of such temporary suspension.

*Materials.*

11. All materials, as brick, stone, cement, timber, iron, sand, stoneware pipes, clay, lead, &c., which are to be supplied by the contractor, are to be of the best quality and description of their respective kinds. Samples of each kind to be submitted for the approval of the Engineer, and retained in office; and on approval having been obtained, they are to be delivered on the works ready for use, as per sample.

12. The contractor shall inform the Engineer of the sources whence the various materials are supplied, or of the places of their manufacture, and afford him every facility to inspect their supply or manufacture at any stage of the same.

13. Due notice shall be given by contractor to the Superintending Officer and overseer when any material is brought on the ground, all of which must be neatly stacked in regular heaps, submitted for approval, and approved of in writing by the Superintending Officer, before it may be used in the works; none but that so approved shall be used.

14. The contractor to make and provide proper and approved gauge-boxes or scales for measuring or weighing all materials supplied, whether specified to be broken or delivered to special sizes and mixed together in stated proportions or not.

15. Bricks to be of well-mixed material, of approved quality and uniform fineness; to be new, sound, hard, well-burnt kiln-bricks, free from cracks and all other defects, truly rectangular, with sharp arrises of approved dimensions and form; to be specially radiated where required for arching or curved  
and

and semi-circular work, and all red and white and specially moulded bricks for external works at aqueducts, buildings, &c., to be picked bricks of uniform and approved colour and shape. All bricks to be equal to sample bricks approved of, which must be sealed by the contractor and acknowledged as the sample or samples of the bricks to be used throughout the works.

Bricks used in these works will be subjected to the following tests, viz. :—

- (a) *Tensile strength*.—The tensile strength to be tested, in the departmental testing machine, by laying the brick horizontally on its base of 3 inches, between supports 7 inches apart, and the strain applied across the centre of the brick and distributed over a width of  $1\frac{1}{2}$  inch. An average breaking strain of twelve bricks to be taken, which must not be less than 8,000 lb.
- (b) *Porosity*.—Bricks immersed in water for twenty-four hours must not increase in weight more than 3 per cent.

Should the twelve bricks fracture under the foregoing average strain, or prove more impervious to water than 3 per cent., then the Engineer may reject the whole stack of bricks from which the twelve bricks were taken. The whole of the expense incurred in testing the bricks shall be borne solely by the contractor.

16. In the event of the contractor delivering quantities of bricks on the site of the works for the contract of a mixed description and quality, the officer in charge shall have the power to require of the contractor to have those bricks which, in his opinion, are suitable for the works, picked out and stacked where directed, and those defective or unsuitable removed from the site of the contract; and, in the event of the contractor refusing or failing to comply with such request within twelve hours from the time it has been made, then in all such cases the Superintending Officer shall have the power of rejecting the whole of the bricks so delivered by the contractor.

17. Stoneware pipes to be of well ground and mixed material, of tough, tenacious, impervious quality, well-burnt, sound, hard, uniform in thickness, true in section, straight longitudinally, uniformly glazed both inside and outside, free from fire and other cracks, flaws and ash-holes, the collar perfectly joined to the barrel, and in every way equal to sample pipe to be seen at the Engineer's office. Paving tiles to be of the same materials as the stoneware pipes, to be uniformly glazed on all sides, and of approved size and form.

Unless otherwise directed, the pipes to be of the following thicknesses and depth of collar, namely:—

Pipes, inside diameter, 9 inches; thickness, $\frac{1}{8}$ inches; depth of collar, 2 inches.						
"	"	12	"	"	1	"
"	"	15	"	"	$1\frac{1}{4}$	"
"	"	16	"	"	$1\frac{3}{8}$	"
"	"	18	"	"	$1\frac{1}{2}$	"
"	"	21	"	"	$1\frac{5}{8}$	"
"	"	24	"	"	$1\frac{3}{4}$	"

18. All parcels of pipes used in these works will be tested in the departmental testing machine, and submitted to the following crushing strains applied in the centre of the pipe:—

24 inches diameter pipe at 110 lb. per square inch of bearing surface.						
18	"	"	100	"	"	"
16	"	"	100	"	"	"
12	"	"	100	"	"	"
9	"	"	100	"	"	"

If the Engineer deems it necessary, the pipes will also be tested for porosity. Should the pipes fracture under the foregoing strains, or not prove impervious to water, then the Engineer may reject the whole of parcel from which the pipes were taken. The whole of the expense incurred in testing the pipes shall be borne solely by the contractor, and all pipes injured or broken by the testing shall be immediately replaced by sound pipes, subject to the foregoing tests, at contractor's cost.

19. In the event of the contractor delivering quantities of pipes, bends, and junctions, on the site of works for the contract of a mixed description and quality, the officer-in-charge shall have the power to require of the contractor to have those pipes, bends, and junctions which, in his opinion, are suitable for the works picked out and stacked where directed, and those defective or unsuitable removed from the site of the contract; and in the event of the contractor refusing or failing to comply with such request within twelve hours from the time it has been made, then in all such cases the Superintending Officer shall have the power of rejecting the whole of the pipes, bends, and junctions so delivered by the contractor.

20. *Stone*.—All stone used in the construction of these works for pitchers, concrete, or masonry, unless where otherwise specified, to be sound, solid, hard sandstone of the best description, free from all defects, and as per sample approved; to be duly subjected, when ordered, in the departmental testing machine, to a crushing strain of 5,892 lb. per square inch. The expense incurred in testing stone to be borne by the contractor.

21. Broken stone for ballast to be sound, solid stone, as specified in clause 20; to be broken to a size to pass freely with its largest dimensions through a ring of 4 inches in diameter. Broken stone for packing under and round sewer lining, about drains, &c., to be sound and solid, and broken to the same size as ballast.

22. Broken stone for bluestone concrete to be of basalt or other similar hard stone of approved quality; to be broken by hand or crushing machine, of a size to pass freely with its largest dimensions through a ring of  $1\frac{1}{2}$  inch in diameter; the whole of the metal to be free from dirt, quarry refuse, &c.; to be screened through a sieve of meshes  $\frac{1}{4}$  inch apart, and then to be washed with fresh water until approved, before it shall be deemed fit and suitable for these works.

23. Sand to be sharp quartz sand, free from all earthy, loamy, or clayey matter, equal in quality to the sample of Nepean River sand to be seen at the Engineer's office, and to be washed perfectly clean whenever the Engineer deems it necessary.

24. *Cement*.—The cement to be used throughout these works to be well packed in strongly-made casks, to be the best Portland cement, of approved brands and manufacture, delivered in thoroughly sound condition, fit for immediate use, and without requiring seasoning or air-slacking, to be free from any symptoms of staleness, caking, damage to the packing, hard or set lumps; and no barrel or portion of same

same to be used until it has been examined and approved by the Engineer, who may also delay approval of any brand of cement pending tests extending over a longer period than hereinafter specified. Samples taken from various casks (not exceeding six in number), and mixed together from each parcel brought on the works, to be submitted for testing:—The weight per striked bushel not to be less than 100 lb., and each cask shall contain not less than 337 lb. weight of cement, exclusive of weight of cask and packing. The specific gravity not to be less than 3.10. The cement, when passed through a wire sieve of 2,500 meshes per square inch, to leave a residue of not more than 10 per cent.; through a sieve of 5,806 meshes, not more than 25 per cent.; and through a sieve 14,400 meshes, not more than 40 per cent. Any cement which absorbs more than 2 milligrams of carbonic acid to 3 grams of cement shall be taken as containing more than the permissible quantity of free lime, and shall be liable to rejection. The cement when mixed neat with water, to give a tensile strength of not less than 250 lb. per square inch after three days' setting in water, 450 lb. after seven days, and 550 lb. after twenty-eight days. The cement to be "slow-setting," and when gauged with water to a stiff paste must set in a damp atmosphere of between 60° and 90° F., in from one and a half to six and a half hours. Neat cement of the consistency above mentioned to be made into pats kept in moist air until set, and then immersed in water at a temperature of between 60° and 80° F., and also placed in Faija's moist-heat and warm-bath apparatus at a temperature of 90° F., as to symptoms of blowing, or any alteration or variation of form or volume. The cement when mixed in the proportion of 1 of cement to 3 of standard sand (washed, dried, and sifted through a sieve of 400, and retained upon one of 900 meshes per square inch), and about 10.0 per cent. of the total weight of water, to give a tensile strength of not less than 150 lb. per square inch at seven days, and 230 lb. at twenty-eight days, the briquettes having been kept in a damp atmosphere, put in water twenty-four hours after they were made, and left in water at a temperature of between 60° and 80° F. The tensile strength will be ascertained in the departmental testing machine, with the load increased at the rate of 200 lb. per minute, and the average breaking weight of six briquettes will be taken for each test. Should the sample fail in any or all of these tests, or show irregularity in quality, or not show a proper progressive increase in strength with age of briquette, then the Engineer may reject the whole parcel from which the sample was taken, and the contractor shall at once remove the said parcel of cement from the site of the works at his own expense; failing which, the Engineer may have it removed at the contractor's cost without further notice. Empty casks to be immediately broken up and removed from off the works. To facilitate the gauging of cement throughout the contract, cement casks will be taken as equal to holding 4 cubic feet, otherwise the contractor to provide and make approved gauge-boxes, holding exactly 4 cubic feet, for measuring cement. Cement of a lighter weight than herein stipulated, but otherwise equal to the specified test, may be permitted to be used in the works, subject to the decision of the Engineer, and provided that the deficiency in weight is made up in quantity.

25. Cement is to be brought on the ground in quantities of not less than fifty barrels, provided that this quantity is sufficient for fourteen days' supply, but in no case is less than fourteen days' supply (whatever that may prove to be), to be brought on the ground in one parcel; nor is the supply stored on works to be at any time less than fourteen days' supply. All cement to be kept on the ground in approved weather-tight sheds, under lock and key, which shall be in the custody of the Superintending Officer.

26. *Mortar*.—The mortar to be used in these works to be composed of one part of Portland cement and of two parts of clean washed sharp sand, as described in clauses 23 and 24, the proportion of each to be correctly ascertained by measurement, the whole to be mixed with fresh water, as may be directed, to be well incorporated, and to be used fresh. Any mortar which has become hard or set to be at once rejected. All mortar to be mixed on approved sawn timber platforms close to where it is required.

27. Special mortar, composed of one part of cement and one part of sand, and prepared as before described, to be provided and used in all portions of the work where specially specified and directed.

28. *Grout*.—The grout to be made of mortar as described in clause 27, to be mixed fluid in tubs close to where it is required, and to be used fresh.

29. Bluestone concrete to be used in these works to be composed of the materials specified in clauses 22, 23, and 24, in the proportion of one part of Portland cement, two parts of sand, and four parts of bluestone metal.

30. Special concrete, if required, to be composed of two parts of Portland cement, three parts of sand, and seven parts of bluestone metal.

31. Sandstone concrete, where ordered to be used in these works, to be composed of one part of Portland cement, two parts of sand, and five parts of sandstone (as specified under clause 20) metal, free from dirt, quarry refuse, sieved (as specified in clause 22), washed, and of a size to pass with its largest dimensions through a ring of 2 inches in diameter. All materials to be mixed in the same manner as hereinafter specified for concrete.

32. All concrete to be prepared close to where it is required on sawn timber plank platform, all proportions to be correctly ascertained by measurement, the metal to be well washed when put on the platform and levelled at top, the sand to be placed in a level layer above the metal, and the cement to be placed in a level layer upon the sand; after which all materials to be carefully mixed and turned twice over, and then the whole to be mixed with fresh clean water, and thoroughly turned over twice, and oftener, until, in the opinion of the Engineer, it shall be well incorporated and fit for the work before it leaves the platform; it shall then be conveyed to the works as shall be directed, and to be used fresh.

33. If the concrete is made by machinery, all materials to be prepared as previously described, then to be mixed dry, and afterwards with fresh clean water, as may be directed and as shall be approved of; to be used fresh.

34. Puddle to consist of the best clay to be obtained in the district within a radius of 5 miles; to be carefully turned over and mixed with fresh clean water, as shall be directed, until the clay, in the opinion of the Engineer, has become of one even and uniform colour and plasticity.

35. Hardwood timber to be ironbark, blue or red gum, box, or other approved colonial hardwood, of the best description, sound, straight, free from sap, wanes, shakes, gum veins, cores, or other defects; all sawn timber to have clean sharp arrises, and to be of the full dimensions shown or specified, hewn timber to be square, smooth, and free from axe-marks; in round timber, the diameter given is to be measured at the smallest end, exclusive of bark. Posts and rails for fencing to be perfectly sound, straight, and cleanly split, posts to be backed off. All timbers to be perfectly straight, and the bark to be cleanly

cleanly removed from all round timber before being put on the ground. Softwood timber to be of the best Baltic or yellow deals, free from sap, shakes, and large or dead knots, and of the exact dimensions specified when finished.

36. *Wrought-iron*.—All wrought-iron work to be of the best description, quality, and workmanship, with square arrises, subject to tests hereinafter specified, and of the exact dimensions and forms shown on drawings.

37. *Bluestone road-metal*.—The stone used for metalling to be basalt or other similar hard stone of approved quality; to be broken to angular fragments of a size to pass freely with their largest dimensions through a ring  $2\frac{1}{2}$  inches in diameter, and to be free from dirt, quarry refuse, &c. For tarred metal-decking bluestone is to be used; but it shall be broken to pass with its largest dimensions through a ring 2 inches diameter, and as above.

38. *Bluestone*.—All bluestone used in the construction of these works for pitchers or masonry to be of the best description of basaltic bluestone obtainable, free from honeycomb and all defects, and as per sample approved.

#### GENERAL.

39. Earth-borings, have been taken along or close to the main line of sewer, storm-water channel, &c., the results of which are described on drawings; but the Government undertake no guarantee whatever regarding the kinds of soil that will be met with, or the firmness or stratification of the ground to be excavated, or the amount of unwatering to be done, or the strength of the timbering that may be required, or the nature and extent of other precautions which may have to be adopted.

40. *Providing materials, labour, &c.*—The contractor shall provide at his own cost and charges (except where otherwise specified) all materials, labour, tools, plant, tackle, cordage, cartage, machinery, scaffolding, staging, temporary bridges, planking, timbering, piling, centering, and everything necessary for the proper construction, erection, execution, and completion of the several works comprising this contract; all of which are to be approved before being used.

41. *Labour*.—All cartage and haulage and work done or to be performed by machinery shall be included in the term "Labour."

42. Plant shall mean and include all tools, utensils, stores, cement and other sheds, timber, scaffold, ladders, staging, centres, moulds, templates, coffer-dams, cordage, chains, tackle, boats, punts, rafts, sleepers, rails, waggons, trucks, trollies, engines, water and air pumps, boring and ventilating apparatus, signals, lights, diving bells and dresses, and every other thing necessary for the security, proper inspection, execution, completion, and specified maintenance of the several works.

43. All materials, plant, and prepared work, approved and accepted, for use in or on the works shall be considered, and shall be, the property of Her Majesty the Queen until completion of contract.

*Timber, Iron, Stone, Cement, Bricks, Sand, Appliances, Plant, &c., to be on the ground ready when required.*

44. The whole of the piles, sheet-piles, shoring, scaffolding, staging, temporary bridges, timber of every description, stone, cement, bricks, stoneware pipes, sand, iron, &c., together with all the necessary appliances and plant required in the construction of the various works comprised in this contract, shall be provided, prepared, delivered, and ready at the various sites of the works as they are required; to be driven in, erected, walled in, placed, and fixed in position at the various places shown on the different drawings, to ensure the whole of the works rising from the lowest levels and progressing without interruption, and in such a manner and in such order as may be specified or as may be directed.

45. No excavation to be commenced on any portion of the contract until, in the opinion of the Engineer, sufficient quantities of piles, sheet-piles, shoring, staging, temporary bridges, scaffolding, stone, cement, bricks, stoneware pipes, iron, sand, or other materials are on the ground, together with the necessary appliances and plant to ensure the uninterrupted progress and continuance of the works, after they once have been commenced, at any locality, without any delay or stoppage. Delays and stoppages in the progress of the works arising from disputes as to quality of materials, and from insufficient supply of any materials, plant, staging, temporary bridges, &c., and any damage or injury caused to the works in consequence of such stoppage or delay, shall be entirely and solely at the risk and cost of the contractor.

#### Excavation.

46. *Diverting surface, flood, and subsoil water, and unwatering*.—During the construction of these works the contractor shall, at his own cost, provide all materials, labour, fluming, pumping apparatus, and any other plant that may be required, and shall construct all temporary coffer or other dams around open trenches and excavations across low-lying grounds on lines of water-courses and drains above and below the site of the works, and do all other work and use all other precaution which may be required for the effectual diversion of surface water, subsoil water, and storm-water across and beyond the site of the works, for keeping the trenches free from water during the whole time the works are in progress, and in preventing any injury to the works by floods or any other causes.

47. *Clearing and grubbing*.—The areas of the sites for all excavations for main and branch sewers, storm-water channels, abutments, piers, &c., and the areas for seats of all embankments over main sewer and for road deviations and crossings, &c., and a margin of 10 feet in width beyond all these areas, to be cleared and grubbed of all trees, scrub, stumps, roots (to the depth of same), and dead timber, and the whole of such trees, scrub, stumps, roots, and dead timber thus grubbed and cleared to be removed and cleared away from any lands set apart for the purposes of this contract, described under clause 3, at the cost of the contractor, who shall be held solely responsible for the whole of the clearing being effected in a manner to the entire satisfaction of the Engineer. The cost of all clearing and grubbing to be covered by and included in the schedule price for excavation.

48. *Areas at mouth of shafts*.—It is to be distinctly understood that when sinking shafts on lines of streets, and, when ordered, on private grounds, &c., the materials excavated and raised, on their arrival at level of staging above mouth of shaft, are to be at once removed from off the streets or other surfaces, as the case may be; and when building materials, &c., are to be conveyed through shafts to the tunnel works, that all such materials on arrival at mouth of shafts must be at once conveyed to the works underground, as permission cannot be given to contractor to disturb and impede the usual traffic in the streets,

streets, or the usual occupation of the ground by the owners, as the case may be, beyond the possession for the time of an area not exceeding 24 feet by 17 feet, or less if ordered, over the mouth of each shaft, unless where otherwise determined and directed by the Engineer during the progress of the contract.

49. *Areas at open cuttings.*—When excavating for the foundations of the works in open cuttings, where ordered, the materials excavated and raised to the surface of the street or other ground, are to be at once removed from off the same; and when building materials, &c., are to be conveyed to the works, that the same, on arrival at open cutting, must be at once conveyed to the works in the same, as no allowance can be given to contractor to disturb or impede the usual traffic in the streets, or the usual occupation of the ground by the owner or the public beyond being in possession for the time of a strip of land of the exact width required for the works as described in clause 3, except in all cases where the contractor has obtained the necessary permission to occupy larger areas, in strict accordance with the provisions contained in clauses 19 and 20 of the general conditions.

50. *Diversion of sewage of existing sewers during the construction of the works.*—During the construction of the works in general, and of all points of intersection of existing and new sewers, and until completion of all works connected therewith, the contractor to provide all materials and labour and everything that may be necessary; and execute all the works of every description required to prevent all damage and injury, for which he shall be solely responsible, that may occur to private property or to the existing or new works by flooding with sewage, choking and bursting of sewers in consequence of insufficient and inadequate pumping apparatus, tanks, dams, fluming, &c., or any other cause; and erect and construct suitable tanks, pumps, watertight temporary dams across existing sewers, above and below points of intersection, and watertight adequate and secure fluming for the purpose of conveying constantly the whole of the sewage which may flow in said sewers at any time across said points of interception and intersection, at his sole cost, to the entire satisfaction of the Engineer.

51. *Removal of road metal, pitching, and wood paving, &c.*—Prior to commencing any excavation for shafts, junctions, sewers, storm-water channels, embanking, abutments, piers of aqueducts, &c., in open cutting (in accordance with the various stipulations and conditions contained in the specification and in clauses 19 and 20 of the conditions of contract), the sites for each work to be prepared by the removal of all surface soil, rubbish, sludge, and other objectionable matter, and of all road-metal, ballast, pitching, wood-paving, concrete, asphalt, flagging, &c., where such occur, as shall be directed. The materials so removed in the first instance to be laid and stacked aside, as the Engineer may direct, in different spoil-banks; and as the works proceed, the said materials, if approved of, to be used in the construction of or soiling of slopes of embankments, and in reinstating the metalled, pitched, and paved road or other surfaces, as the case may be, and those not approved of to be carted away to such places as shall be ordered, and to be paid for as lead.

52. All sods, road metal, pitching, ballast, wood-paving, concrete, &c., removed under the conditions of the foregoing clauses; and damaged, injured, or otherwise not approved of as fit for relaying, placing, setting, and fixing in the reformation and reinstatement of the various road and other surfaces (excepting wood-pavement, see clause 94), to be replaced by contractor with new, sound, and approved materials of their respective kinds, and therewith to reinstate and maintain, during continuance of contract, the various road and other surfaces, at his sole cost, as provided in clause 6, in a sound and satisfactory manner, in accordance with clause 20 of the general conditions, and to the entire satisfaction of the city or municipal authorities and of the Engineer.

53. The contractor shall, at the termination of the period of maintenance, procure certificates from the municipal authorities concerned, that the roads, &c., in their respective districts are in a satisfactory condition.

54. *All soft or loose soil, clay, soft and hard shale, rock, and other materials* obtained from excavations of open cuttings, tunnels, sub-ducts, sumps, shafts, abutments, piers of aqueducts, buildings, &c., if approved of shall, in the first instance, be put aside in separate spoil-banks beyond the site of the works, subsequently to be used in soiling slopes of embankments, refilling round and over pipes, and all concrete, masonry and brickwork, and into all excavations, road and other embankments, &c., as hereinafter specified, and as shall be directed at the time; and the surplus not so required shall be cleared away and removed by the contractor from the sites of all the works, and from the surfaces, streets, channels, and footpaths surrounding the same, to such places as shall be ordered, and to be paid for as lead.

55. All soil, sand, and other materials which the excavations of this contract do not supply, and which it is necessary to obtain for the completion of the embankments and filling of every description, as shown on drawings, the contractor shall procure, of approved quality, from any other source or land outside the limits of this contract. The cost of providing to be included in the price per cubic yard for "filling."

56. The excavation in tunnels as well as in open trenches requiring shoring, timbering, and close timbering, the same is to be executed as specified in clause 114, and the unwatering is to be executed as specified in clauses 46, 50, and 72.

57. The cross-sections of main sewer and branches, storm-water channels, &c., in tunnels and open trenches, shown on drawings, to vary in the quantities and thicknesses of brick and concrete work according to the depths, nature, and solidity of the ground and position under streets, &c., as shall be directed during the progress of the works.

58. Wherever the solidity of the ground permits it, the excavation in trenches for concrete or brickwork to be taken out with vertical sides to level of springing of sewer arch, and to the exact widths of concrete or brickwork shown on drawings, and below that level to bottom of trench with curved or vertical sides, as shall be directed.

Where timbering is required, trenches 8 feet deep and under shall have vertical sides, and shall be 1 ft. 3 in. wider to outside of polling-boards than width of concrete or brickwork. Where trenches are over 8 feet deep and require timbering, they shall have vertical sides, and shall be 1 ft. 3 in. wider to outside of polling-boards than the width of the concrete or brickwork for the lower 8 feet. Above that level they shall be 2 feet wider to outside of polling-boards than concrete or brickwork.

59. After the sites for the various excavations and embankments have been grubbed and cleared, the excavation for the foundations of the works of this contract to be executed to the various depths, level or inclined planes, gradients, steps, widths, batters, slopes, &c., as shown on drawings, and as shall

be directed, or to such greater or lesser depths and widths as the Engineer, during the progress of the works, from time to time, may determine and order, and they are to be measured, the net dimensions of the outside of the timbering as and where such has been approved of.

The excavation for foundation of embankments to be taken out in no case less than 12 inches below surface of ground, and to such widths and lengths as shall be directed.

60. The excavation in solid rock for pipe-trenches shall have vertical sides, and shall be of the following sizes, viz. :—

For 24-inch diameter stoneware pipe-sewers	...	...	...	3 ft. 9 in. wide.
21-inch do do do	...	...	...	3 ft. 4 in. do
18-inch do do do	...	...	...	3 ft. 0 in. do
15-inch do do do	...	...	...	2 ft. 6 in. do
12-inch do do do	...	...	...	2 ft. 0 in. do
9-inch do do do	...	...	...	2 ft. 0 in. do

61. When timbering is not required in excavation in all other ground for pipe-trenches, the trenches shall be of the same widths as those in solid rock. When timbering is required, the excavation for pipe-trenches 8 feet deep and under shall have vertical sides, and shall be of the following sizes to the outside of the polling-boards, viz. :—

24-inch diameter stoneware pipe-sewers	...	...	...	4 ft. 0 in. wide.
21-inch do do do	...	...	...	3 ft. 7 in. do
18-inch do do do	...	...	...	3 ft. 3 in. do
15-inch do do do	...	...	...	2 ft. 9 in. do
12-inch do do do	...	...	...	2 ft. 3 in. do
9-inch do do do	...	...	...	2 ft. 3 in. do

62. Where timbering is required, the excavation for pipe-trenches above 8 feet deep shall have vertical sides, and shall be the widths given in clause 61 for the lower 8 feet, and for any depth over and above 8 feet the trenches shall be of the following sizes to the outside of the 1½-inch polling-boards, unless otherwise ordered in writing, viz. :—

24-inch diameter stoneware pipe-sewers	...	...	...	4 ft. 9 in. wide.
21-inch do do do	...	...	...	4 ft. 4 in. do
18-inch do do do	...	...	...	4 ft. 0 in. do
15-inch do do do	...	...	...	3 ft. 6 in. do
12-inch do do do	...	...	...	3 ft. 0 in. do
9-inch do do do	...	...	...	3 ft. 0 in. do

63. Transverse and other cheeks to be excavated to receive pipe-sockets and junctions, and for the purpose of making the joints.

64. The trenches for the cast-iron pipe-sewers to be truly excavated to the exact lines, gradients, curves, depths, widths, &c., as shown on drawings, and as the Engineer may order from time to time. Man-holes or joint-holes not less than 3 feet in length to be excavated where directed, with such space at each side of pipe, and such clear space underneath same as shall be ordered at the time. No trenching to be commenced and carried on during wet weather.

The excavation of pipe-trenches to be carried on in such a manner that it shall be always completed and approved for a length of 48 feet (unless otherwise directed), in advance of any concrete, brickwork, penstocks, gas-checks, pipes, &c., so that when the laying of pipes has been completed in the first 48 feet of trench, the next 48 feet length of trench must be ready to receive pipes. No 48 feet length of trench to remain open more than eight days from the time of commencing the excavation to the time of the trench being filled in again to level of surface of street.

65. *Precaution.*—In all cases at excavations of open trenches, tunnel-mouths, and shafts, where sandstone, shale, or ironstone occurs, and the Engineer may consider that blasting may facilitate such excavations, and in tunnels through rock, shale, and ironstone, the contractor to use every precaution and carry on such operations with such limited charges of powder only, or other approved explosives, as will loosen the shale, rock, &c., without shattering the same; and to employ all necessary means, as temporary bridges, staging, chains, rope-nets, mats, or fagots, &c., to prevent effectually and thoroughly all stones and fragments of same, or other materials from being shot or thrown out of said trench, tunnel-mouth, and shaft excavations, as he shall be held solely responsible for any accident, damage, and injury resulting from such blasting to any person, works, or buildings, over the line of sewer or in the neighbourhood of same, &c., and as provided in clauses 19 and 20 of the general conditions. Blasting will not in any case be allowed between the hours of 10 p.m. and 6 a.m., nor after 1 p.m. on Saturdays, except by the written authority of the Engineer; every hole drilled for blasting purposes will be measured by an inspector, and charged under his supervision, and the work shall be carried on under such further regulations, in conformity with the provisions hereunder described, as the Engineer may make and shall consider necessary as the contract proceeds.

No larger quantity of explosive material shall be taken underground than is likely to be used during any current shift.

Storing of explosive material underground shall be, and hereby is, absolutely prohibited; and for its storage on the surface special directions will from time to time be issued by the Engineer in accordance with the provisions of the Act regulating storage and conveyance of explosives.

66. As regards the charges of powder required on the various portions of this contract to loosen the rock, shale, or ironstone without shattering the same, it is to be distinctly understood that only gadding and picking shall be allowed in ground which in the opinion of the Engineer is loose, jointy, or liable to slips, and when the ground, in the opinion of the Engineer, is hard and solid and suitable for blasting, that only powder, or other explosives, of approved quality shall be used, when ordered in writing, in charges of powder not exceeding 2 inches in length by 1½ inch in diameter, and not exceeding 4 inches in length by 1½ inch in diameter respectively. If other explosives are permitted to be used, the quantity and weight of such explosives relatively to powder to be carefully ascertained by the Engineer, and the respective charges made equivalent to those used in the case of powder.

67. Where the whole or any of the undermentioned items for the excavation appear in the schedule of quantities and prices of the contract, they shall be executed as follows:—

Under the headings of "Tunnel excavation in more or less hard ground," and "Open trench excavation in more or less hard ground;" subdivided under items—"Less hard excavation where, in the opinion of the Engineer, blasting is unnecessary." "Excavation in rock or hard shale, where gadding and guttering only are permitted." "Excavation in rock or hard shale, ironstone, &c., where blasting is permitted, with charges of powder, not exceeding 2 inches in length, and  $1\frac{3}{8}$  inch in diameter." "Excavation in hard rock, where blasting is permitted, with charges of powder, not exceeding 4 inches in length, and  $1\frac{3}{8}$  inch in diameter."

"Tunnel excavation in solid rock," subdivided under items—"Excavation in hard rock, where guttering and gadding only is permitted." "Excavation in hard rock, where blasting is permitted with charges of powder not exceeding 2 inches in length and  $1\frac{3}{8}$  inch in diameter." "Excavation in hard rock, where blasting is permitted, with charges of powder not exceeding 4 inches in length, and  $1\frac{3}{8}$  inch in diameter."

Excavation in shafts and sumps "in more or less hard ground," subdivided under items—"Less hard excavation where, in the opinion of the Engineer, blasting is unnecessary." "Excavation in rock or hard shale, where gadding and guttering only are permitted." "Excavation in rock or hard shale, ironstone, &c., where blasting is permitted, with charges of powder not exceeding 2 inches in length, and  $1\frac{3}{8}$  inch in diameter." "Excavation in hard rock, where blasting is permitted with charges of powder, not exceeding 4 inches in length, and  $1\frac{3}{8}$  inch in diameter."

Excavations in shafts and sumps in "solid rock," subdivided under items—"Excavation in hard rock, where gadding and guttering only is permitted." "Excavation in hard rock, where blasting is permitted, with charges of powder not exceeding 2 inches in length, and  $1\frac{3}{8}$  inch in diameter." "Excavation in hard rock, where blasting is permitted, with charges of powder not exceeding 4 inches in length and  $1\frac{3}{8}$  inch in diameter," and "Excavation in road surfaces, sand, soil, pipeclay, soft rock only," where, in the opinion of the Engineer, blasting is unnecessary.

No guarantee is given as to the relative qualities and quantities of excavation, as shown on longitudinal sections, or which may be found under the abovenamed items of the schedule, and in the execution of the work: they shall be paid for at schedule rates as they occur. The contractor shall not be entitled to claim any compensation for loss or damage in consequence of any alteration, increase, decrease, or omission the Engineer may order in writing of any of the respective quantities under the abovenamed items.

68. The excavations for main sewer, branches, storm-water channels, &c., as before described, may therefore vary from those shown on drawings, but the exact cross-sections will be determined by the Engineer as the works proceed; and all excavations, whether in tunnel, shaft, or open trench, will be measured the net dimensions only of the various cross-sections so determined and ordered by the Engineer.

69. With the exception of all portions where open trenches are ordered to be excavated, a heading of 4 feet by 3 feet, exclusive of timbering, to be driven for all lines of pipes, not exceeding 24 inches in diameter. The timbering to be executed as specified in clause 114.

70. The excavation for tunnels is assumed to be sandstone rock, shale, ironstone, &c., varying in hardness and solidity, and less compact material. In strong compact rock,  $4\frac{1}{2}$  inches concrete and brick lining will be requisite; and, as the materials occur less compact, two or three rings of brickwork or brick and concrete lining, as shall be determined by the Engineer as the heading proceeds, may be required.

71. The excavations for the tunnels in rock, shale, or ironstone, to be taken out to the exact form of the tunnel, leaving just room for the lining ordered. Great care to be taken in gadding or in blasting the rock, shale, &c., so that no portion of the sides, soffit, or invert of tunnel be removed beyond the exact dimensions determined on. In no case shall the excavation be taken out in advance of the brick and concrete lining in excess of internal dimensions of sewer, until the thickness of the lining of the succeeding length has been determined by the Engineer.

72. All water which, during the progress of the work, may accumulate in these excavations to be properly, effectively, and continually pumped out, and the whole to be kept dry until after the completion, setting, and hardening of all brick and concrete work; and the greatest care to be taken to prevent running water passing over any of the brick, concrete, and pipe-work until it has set perfectly hard; any concrete, mortar, and cement jointing exposed to wash of water must be taken up at once, and replaced by fresh concrete, mortar, and jointing at contractor's expense.

73. Great care to be taken while timbering (as specified in clause 114) that no portion of end faces, sides, floor, roof, or front faces of excavation in open trench, tunnel, shafts, &c., be removed, or fall in, beyond the exact dimensions determined on; and the contractor to provide and execute at his own cost whatever may be required to prevent such removal or falling in of the excavation, and the wet or dry material surrounding the timbering from being shaken, running, or forced through the joints of the polling-boards and open spaces between the wedges which keep the polling-boards in position; and to provide and have constantly in readiness, close to where they are required, all appliances and materials such as straw, bags, asphalted felt, tarred gasket, puddle, &c., and with the same carefully and securely close up and pack against the outside of the timbering, all such joints and open spaces wherever they occur; and caulk open joints if so directed; and attend to, execute, and maintain the said timbering till completion of the sewer works to the entire satisfaction of the Engineer.

74. In advancing the end faces of excavation in open trench and tunnel, particular precaution to be taken by the contractor that such advance is made in a careful, secure, and safe manner, by means of shoring, planking, polling-boards, props, and wedges, together with all packing and caulking materials.

75. In withdrawing timbering from open trenches and shafts, the same shall be commenced from bottom of excavation, or as the Engineer may direct, from lowest practicable portion of same, and continued upwards; the contractor to exercise every precaution by means of intermediate shoring, planking, props, &c., and the filling in around and above sewer and shaft lining, to be carried on simultaneously with the withdrawing of the timbering.

76. Throughout the excavation and timbering of open trenches, tunnels, and shafts, the contractor to take all due precaution against accidents, &c., during the progress of the works, whether arising from insufficient strength of timbering, bad workmanship, breakage of machinery, and plant, inefficient caulking

or

or packing of open joints and spaces, flood, or any other cause whatsoever, as he shall be held solely responsible for all damage, injury, or loss that may be occasioned during the progress of the works to the buildings, bridges, railways, tramways, streets, and other surfaces, above and adjacent to the excavations, to persons employed by the contractor, by Government, or otherwise, and to his own or other works; and the cost of all such damage, injury, and loss, shall be valued at the time by the Engineer (whose decision shall be held final and binding on the contractor), and shall be deducted from any money or security held by the Government, and due to the contractor on account of his contract.

77. *Railway and Tramway.*—Before proceeding to open excavation underneath any railway or tramway, the contractor must give ample notice in writing to the District Railway or Tramway Engineer of his intention to commence operations; and he must adopt such precautions as the said Engineer may think necessary or prudent for the safety or preservation of the traffic over the said railway or tramway. The contractor will be held wholly responsible for all stoppage of traffic, delays, accidents, &c., that he or his men may cause, no matter how brought about, during the execution of the work under or near any railway or tramway.

78. The Railway Commissioners may, if they consider it advisable, place a watchman or watchmen on all work to be executed under or near any railway or tramway, for the purpose of seeing that no danger to the traffic is allowed to occur; but this shall not relieve the contractor of any of the responsibilities set forth in the foregoing clauses, and the expense of such watchman or watchmen is to be borne by the contractor.

79. If the contractor has exceeded the sectional area of excavation as ordered, in consequence of injudicious timbering, gadding, blasting, slips, falling in of sides of excavation, or any other cause, which in the opinion of the Engineer should have been prevented by careful gadding, blasting, timbering, pumping out water, diversion of water, or by any other means, then the contractor shall remove each extra excavation, and make good and fill in same at sides of trench with approved materials, and at bottom of trench with concrete described in clause 31, at his sole cost; the actual cubic contents only of the excavation and of the concrete work shown on drawings and ordered for each special length of sewer in open trench, shall be paid for; and as regards excavation in tunnels, the contractor shall remove such extra excavation, and make good and fill in same with concrete or brickwork, in the manner herein specified, at his sole cost; the actual cubic contents only of the excavation and of the brick and concrete work shown on drawings, and ordered for each special length of tunnel, shall be paid for.

80. If, however, in cases where the use of explosives is ordered (and in no other case), the Engineer considers it impracticable to excavate any particular length of tunnel, or shaft, to the exact sectional area ordered, then he may, according to the nature of the ground, allow a margin of concrete lining not exceeding 3 inches over and above that ordered.

81. If, under the written authority of the Engineer, any portion of the excavation in tunnel has been enlarged or widened out for timbering or other purposes named in such instructions, then the contractor shall fill in such excess of excavation with concrete or brickwork in the manner herein described, and the extra excavations, concrete, or brickwork so built in, shall be paid for at schedule rates.

82. If, under the written authority of the Engineer, any portion of the excavation of open trenches has been deepened, then the contractor shall fill in such deeper excavation with concrete, in the manner herein described, and the extra excavation, or concrete, so built in, shall be paid for at schedule rates.

83. In all cases where a greater thickness of lining, or a greater cross-section area of tunnel or shaft is ordered to be executed, from whatever cause, after the length of tunnel or shaft in question has been excavated to the profile ordered in the first instance, the excess of excavation so ordered shall be paid for at schedule rates for tunnel or shaft excavation as the case may be, and as the Engineer shall classify and direct at the time. If such extra excavation, in the opinion of the Engineer, shall require special timbering and shoring, the same shall be dealt with in strict accordance with clause 114.

84. No concrete or brickwork shall be commenced until the portion of sewer excavation in tunnel or open trench to be operated upon has been cleaned and levelled, and until the Engineer has examined and approved of same.

85. The price of one cubic yard of all excavations to include the cost of all haulage, labour, timbering, unwatering, tools, implements, plant of every description necessary for taking out and putting said excavation in the first instance aside in separate and temporary spoil-banks beyond actual site of works; while the price of one cubic yard of filling at the sides of main sewer, piers, abutment, concrete, and masonry, into abutment chambers, over main sewer, &c., and into all embankments, shall include the cost of all haulage, labour, tools, implements, and plant of every description, carriage from temporary spoil-banks, procuring additional soil, quarry filling, sand, or other materials, at his own cost, from sources, places, or land outside the limits of this contract, and carriage from said places, and filling in, ramming, watering, and completing all filling in strict accordance with plans and specification.

86. *Measurement of excavation refilling and spoil.*—The excavation throughout these works to be measured, the net dimensions only of the various cross-sections shown on drawings, or determined at the time by the Engineer, and, where timbering has been ordered, the net dimensions only to the outside of said timbering. Refilling shall include filling into above described excavations, and also filling in abandoned open channels, low grounds adjoining channels, into road and other embankments, &c., as specified, shown on drawings, and as ordered by the Engineer, and shall be measured, the net dimensions of same, less the actual displacement of any permanent works, in strict accordance with the cross-sections ordered by the Engineer as the works proceed. The whole of the surplus materials to be measured, the actual net excavations less the actual net refilling as ascertained in accordance with the foregoing stipulations.

The distance of lead shall be measured from top of shaft or end of open cutting to centre of spoil-bank or other place of deposit.

#### *Filling.*

87. The materials obtained from all excavations to be dealt with as specified in clause 54. When gravel has been excavated it may, with the sanction of the Engineer, be used in special cases for refilling; otherwise sand, clay, loam, pipe-clay, soil, and soft rock, of approved quality only, shall be used for refilling. Rock and stone, unless where ordered, are not to be used for refilling at any of the trenches. Sand only to be used in filling over sewer between copings on lines of aqueducts. If the approved materials obtained from all excavations prove insufficient for refilling into all excavations, and filling into embankments,

embankments, &c., then the contractor to find and provide whatever may be required of approved materials (as specified in clauses 52, 55, and 89, &c.), to complete the refilling and embankments, &c., from any sources outside the limits of this contract. The approved materials, as shall be directed, to be used in filling in the spaces between sides of excavation and of concrete and brickwork of sewers, shafts, over sewers on lines of aqueducts, and in open trenches, into headings, round concrete work or masonry of piers, abutments, foundation walls of buildings, approaches of aqueducts, filling in abandoned open channels, low ground adjoining channels, into road and other embankments, &c., as shown on drawings and as ordered by the Engineer. All filling, unless otherwise specified, to be brought up in level layers, spread 6 inches thick, each layer to be rammed (and watered if directed) until approved of before the succeeding layer is put on. This filling to be carried up to the surface of the ground, or to such other level or slope, &c., as may be directed at the time. The spaces between the excavation (poing-boards where there are such) and the brick or concrete work of sewer in tunnels, unless otherwise directed, to be filled in with concrete; this filling to be carried on as the construction of sewers and shafts proceeds, and as the Engineer may direct at the time. Embankments to be formed for road deviations, road crossings, and over main sewer, as shown on longitudinal sections, to be finished in horizontal layers 9 inches thick, after spreading, if directed, one layer of broken stone succeeding one layer of sand or soil, each layer to be well rammed (and watered when directed) until approved of before the succeeding layer is put on, with side slopes at an inclination of five horizontal to four vertical, with a top width over main sewer, or for road embankments, as shown on drawings, or as may be determined at the time; to be finished with such benches and curves as shall be directed. Only iron-shod rammers of not less than 10 lb. weight, of approved pattern, to be used, and one man to be employed in ramming to each man employed in filling.

88. *Refilling of Pipe-trenches.*—Unless otherwise directed, sand, clay, loam, pipeclay, and soft rock of approved quality only shall be used in refilling the spaces between sides of pipes, &c., and sides of excavation, and over pipes, &c. The refilling to be done in level layers, spread 6 inches thick (and watered when directed), each layer to be carefully and separately rammed as hereinbefore specified. The lower layers up to level of top of pipes to be carefully packed and rammed solidly under and at sides of pipes and socket-joints with spades or other narrow tools. The filling to be done, as above described, to such a distance below the level of the street, road, path, &c., as the case may be, to admit of the ballasting, metal, or other covering being replaced.

89. Where it is found necessary to carry the excavation deeper than the under side of concrete foundations, in order to obtain a compact solid bottom, the portion so excavated, where ordered, to be filled in to the underside of concrete foundation, or as may be directed, with good quarry filling and sand (which shall be provided by the contractor), in alternate level layers spread 6 inches thick, rammed and watered until approved. The price per cubic yard of such filling is to be 1 cubic yard of "filling in," as described in clauses 85 and 86.

90. *Trimming.*—On completion of all embankments and cuttings, spreading, levelling, and filling over main sewer, &c., all top surfaces and slopes to be dressed and trimmed off to the specified inclinations and surfaces, and to such other inclination and slopes and surfaces as may be directed at the time, and all materials accumulating after trimming and levelling top surfaces and slopes, &c., shall at the completion of the works be removed, carted away, or spread about, as may be directed by the Engineer; and the schedule rates for filling and excavation shall include and cover all costs for trimming, dressing, spreading, levelling slopes and other surfaces, and of removing, carting away, or spreading about all superfluous accumulations at the conclusion of contract.

91. *Sodding.*—On completion of embanking and filling over main sewer, and where ordered, all top surfaces and slopes to be protected by sodding. Wherever directed, the surfaces to be sodded are to be boxed out the widths and depths required for the reception of turf-lining. The materials boxed out to be dealt with as provided in clause 90. The sods to be the best obtainable within a radius of 5 miles, of approved quality, not less than 3 inches in thickness and 10 inches square, full cut, with square arrises, to be laid in approved bond on their flat beds, close-jointed over all top surfaces of filling or embanking, to be beaten down as the work proceeds with proper tools, as shall be directed, and when finished to present throughout perfectly smooth and plain surfaces. If the season requires it, the turfing to be properly and regularly watered to ensure the grass taking fresh root. The boxing out and turfing to be carried out simultaneously, and no greater area to be boxed out at any time than what can be covered with turfing during two working days.

92. *Soiling and Sowing.*—All slopes of embankments, cuttings, and filling, after they have been trimmed, to be covered, when directed, with a layer of surface soil, as far as such is provided for in clause 51, to be carefully rolled, and when finished to be of a thickness of not less than 3 inches. All slopes, soiled or not soiled, of embankments, cuttings, or filling (where not sodded), after they have been trimmed, &c., and when ordered, to be sown with couch grass seed, as shall be directed, and to be rolled afterwards.

93. *Road Restoring.*—After the filling-in of sewer-pipes, trenches, and shafts has been consolidated and approved, as specified, the surface of roads, streets, paths, &c., to be at once restored in the manner hereafter described, viz., in the case of roads or streets which are ballasted and metalled, 9 inches of ballast shall be laid thereon, and after this has been blinded with selected and approved material, the metal put aside, as specified in clause 51, shall be evenly spread and rammed, until approved; in the case of roads or streets which are ballasted only, 9 inches of ballast shall be laid thereon, and blinded with selected and approved material; and in the case of other coverings, the surfaces to be restored to the same condition as they were before the commencement of the work. Any additional ballast which may be required, over and above that found on the site of the excavation, and referred to in clause 52, to be supplied by the contractor, and the cost of same to be included in schedule items for filling. If, however, in the opinion of the Engineer, sufficiently hard rock is excavated from the tunnels, shafts, and open cuttings, the contractor to be allowed to break rock to a 4-inch gauge, as specified in clause 21, and use same for restoring road surfaces.

94. The wood pavement and layer of concrete underneath, which during the progress of the contract (as referred to in clause 52), at sites of shafts and open trenches had to be taken up and removed, shall, as the works proceed, when directed, be replaced by the City Surveyor at 24s. per square yard at the contractor's cost, on receiving in each case three days notice from the contractor. The contractor to include the cost of restoring all wood-paving on concrete foundation in the manner herein specified, in his schedule prices for excavation and refilling.

95. *Cleaning Streets.*—Immediately the pipes are laid, or concrete and other work in connection with shafts, manholes, lamp-holes, &c., are executed, and the ground filled in over same in any length of sewer, it is to be distinctly understood that all surplus material is to be carted away, the road cleaned until approved, and the road and other surfaces to be made good, flush with surrounding surfaces of roads, paths, &c., to the satisfaction of the municipal authorities and the Engineer, in accordance with the specification, and if the contractor fails to do this, the Engineer shall be at liberty, without further notice, to get the roads cleaned, and the road and other surfaces made good at contractor's cost.

96. *Maintenance of Streets.*—The contractor shall maintain the surface of the roads, streets, &c., after the excavations have been filled in, where the streets, roads, &c., have been broken up or injured during the progress of the work, during the period of the contract time, and afterwards during the period of maintenance, and shall from time to time make good any sinkings in the surface, and shall provide any additional metal, ballast, or other material that may be necessary during these periods, in accordance with clauses 6 and 7.

#### *Shafts.*

97. Shafts are to be sunk at the various sites shown on longitudinal sections and on general plans, or in lieu of those shown on plan, at such other sites as the Engineer from time to time may determine. Wherever shafts are ordered, they are to be sunk truly plumb, and of the full dimensions, 6 ft. x 5 ft. sectional area, 6 ft. x 5 ft. 6 in., 7 ft. x 6 ft., 12 ft. x 5 ft., 18 ft. x 8 ft., or of such other sizes as may be ordered at the time, clear of timbering; the latter to be provided and fixed wherever considered necessary by the Engineer, in strict accordance with clause 114. On completion of concrete, brickwork, &c., in shafts, the space between the rock, shale, and earth sides and outer face of brickwork or concrete to be filled in in 6-inch layers, well rammed (and watered where directed) with materials provided for in clause 54; great care being taken in lowering the materials to the bottom of each respective layer, so that stones do not fall on top or against sides of pipe-shafts, brick or concrete lining, that stones, when directed, are put in in alternate layers with the earth or clay, and that at least 12 inches of earth be placed nearest and round the pipe-shafts, brick or concrete lining, well rammed.

98. For all shafts situated within the lengths, where ordered, of open trenches or cutting, the cost of excavating same, and afterwards filling in round brick and concrete work, is included in the cost of excavating and filling in open cuttings.

99. Shafts not required as manholes or ventilators, but ordered by the Engineer, to have, on completion of contract, or when directed, all timbers withdrawn; and they are at the same time to be carefully filled in as specified in clause 97, with material provided for in clause 54. The sinking, filling in, &c., of such shafts to be paid for at schedule rates.

100. *Temporary Shafts.*—If the contractor desires, to suit his own convenience, to sink temporary shafts, they are to be sunk only at approved places, and on completion of work to be filled in, as specified in clause 99, to the satisfaction of the Engineer. The cost of sinking, timbering, unwatering, &c., and of filling in, withdrawing, or covering up timber of such shafts, to be defrayed entirely by the contractor.

All temporary shafts to be sunk of the dimensions specified, or directed, clear of timber.

101. All shafts, temporary, or permanent, to be provided and fitted during their construction and completion, or during the progress of the contract, if deemed necessary by the Engineer, with approved winding engines and steel-wire ropes capable of resisting a strain equal to six times that of the working maximum strain, or with such other winding arrangements, ladders, staging, &c., as shall be directed and approved of by the Engineer.

#### *Sumps.*

102. Unless otherwise directed, sumps are to be sunk at the bottom of every shaft, not less than 6 feet deep below invert of sewer, and on completion of the works to be filled in with concrete, as specified in clause 31. Were sumps ordered to be sunk, the cost of sinking and filling same in with concrete to be paid for at schedule rates, and the removal of the excavated material to be paid for as lead.

103. Any other sumps which the contractor may think fit to sink on line of sewer, in tunnel, or in open trenches for his own convenience during the construction of these works, are to be filled in with concrete, as specified in clause 31, and the cost of sinking, timbering, unwatering, and filling in with concrete and removing the materials, &c., to be defrayed entirely by the contractor.

#### *Sub-ducts.*

104. Sub-ducts to be constructed, when decided on, along lines of tunnels and open trenches commencing on each length midway, or thereabouts, between two working shafts or faces, 33 inches below invert of main sewer, branches, &c., or as shall be directed at the time, and having a fall towards each working shaft, or face of such gradients as may be determined at the time, after the thickness of sewer-lining required for each length between shafts or faces has been ascertained and ordered. Sub-ducts of 9 inches, or of a greater or less internal diameter, if directed, to be laid immediately underneath the timber floor of tunnel or open trench, or at sides of sewer, in hardwood boxes varying in size and dimensions as shown on drawing. Said boxes to be laid straight and true to levels decided upon, and the pipes to be laid therein, upon, and surrounded by sandstone chippings and quarry refuse. Dry stone packing to be put over pipes, as specified in clause 21.

105. In solid and disintegrated rock the excavation for sub-duct to be executed as shown on cross-sections, and as shall be directed, and the sub-duct to consist of glazed stoneware spigot and faucet pipes of 9 inches internal diameter, more or less, as the case may be. The pipes to be jointed dry, and the filling above same up to underside of sewer lining, to be of dry stone, hand-packed, as above described. The Engineer may also, if he deems it necessary, order the pipes to be jointed altogether, or in part with tarred gasket,  $1\frac{1}{2}$  inch deep, and cement mortar,  $1\frac{3}{4}$  inch deep. The mortar to be prepared of one part cement to two parts of sand.

#### *Rock-boring, progress of Excavation, &c.*

106. Unless otherwise directed, the excavation of the various tunnels to be commenced from the different faces, described in the specification, simultaneously within the specified time after the date the contract has been signed.

The excavation of the various tunnels and open trenches to be carried on and continued without interruption, and to be completed in the most accurate manner in strict accordance with clauses 65, 66, and 67.

Night-shifts,

Night-shifts, between the hours of 10 p.m. and 6 a.m. can only be worked on receipt of a written permission, conditional or otherwise, to that effect from the Engineer, who, however, may withdraw such permission at any time in the same manner.

Blasting to be carried on by means of compressive air, percussive, or other rock-drill of approved pattern and manufacture, capable of excavating as each working face not less than 12 feet length of tunnel during every working week.

If required, all charges to be fired by means of electric fuse.

Approved blowing machines, with ventilating fans, &c., complete, capable of removing the foul air in one minute immediately after blasting at each working face of tunnel, to be provided, erected, and worked by contractor at all working shafts and tunnel faces where directed by the Engineer.

107. The excavation of shafts, where permitted to be sunk, and where sunk in rock and other ground to be executed in the same manner as specified for tunnels and open trenches in clauses 65, 66, and 67, and by means of the same appliances and machines as those specified to be used at the driving of the tunnels.

108. The whole of the excavations of tunnels and open trenches for sewers and storm-water channels, when ordered, to be executed with sumps and sump-ducts as above specified, and the tunnels to be commenced in the different lengths between working shafts, and to be carried on in each length from each end simultaneously, and the open trenches, unless otherwise directed, to be commenced in each length from each end simultaneously, and to be carried on in such a manner that the excavation on each end shall always be completed and approved of for a length of 40 feet in advance of the concrete, brickwork, &c., and that the total progress made on each working end during every working week shall not be less than 20 feet of open trench excavation complete.

*Existing Gas, Water, or Sewer Pipes, and Sewers.*

109. During the excavation and construction of these works, the contractor is to take every precaution to prevent damage or injury to existing gas, water, or sewer pipes, and sewers. Such pipes and sewers on being met with at sides, over, or crossing the excavations of these works, to be carefully and securely protected and supported, as the case may require, by chains, timbering, strutting, and underpinning, &c., to prevent said pipes or sewers from being shaken, bent, or broken, and the contractor to provide all materials, plant, and labour required for said timbering, strutting, and underpinning, &c., and maintain the same at his sole cost, until, in the opinion of the Engineer, the refilling of excavation and the general progress of the works render further precaution unnecessary. All damage to existing water, gas, or sewer pipes and sewers, to be repaired at once by contractor at his own cost, to the satisfaction of the Engineer.

*Sinking Cylinders for Piers, Buildings, &c.*

110. The cylinders for piers, buildings, &c., to be bolted up in the necessary lengths, to be accurately placed in position, lowered, and sinking proceeded with by weighting as long as cylinders continue to go down, the tops finishing at same level. As the cylinders are sinking into the ground the materials inside to be removed by such excavating appliances as may be approved. On completing the excavation of each cylinder down to the solid rock, the water to be expelled by pressure of air or other approved method, and on having ascertained the cylinders to be perfectly true in position and plumb, the bottom to be thoroughly cleaned and levelled, after which the concrete, as specified in clauses 156 to 182, to be filled in and walled up for the first 6 feet under air pressure, or as shall be directed, till twenty-four hours after having deposited same in position. Above this level the cylinders to be filled in with concrete, as specified, to level of top of cast-iron cap.

*Sinking to greater depths.*

111. The sinking of cylinders to be continued, if required, to greater depths than shown on drawings; such additional depths to be paid for at schedule rate, which is to include all charges, except cost of extra lengths of cast-iron cylinder. A corresponding deduction to be made if secure foundations are obtained at lesser depths.

*Rock, &c., in Cylinders.*

112. If rock, boulders, dead logs, &c., are met with in an irregular manner, or at one side, while sinking cylinders, the air-lock, or other approved method, must be applied, and the rock, boulders, dead logs, &c., removed, so as to ensure the cylinders to sink plumb and to rest on a perfectly flat and solid bottom; no powder or other explosives to be used in the removal of such obstacles. The sinking to be proceeded with as soon as possible after delivery of ironwork, as specified in clause 214, to ensure the erection of bridges, &c., without delay.

*Fitting lengths of Cylinders.*

113. The sinking to be so adjusted that, with the aid of fitting lengths, to be provided and cast at schedule rate, the tops of cylinders to be exactly up to the levels shown, as the wrought-iron bracing must be fixed precisely as shown on drawings.

*Permanent and Temporary Shoring, Timbering, Piling, Bridges, &c.*

114. *Shoring, Timbering, Piling, Temporary Bridges, &c.*—During the excavation for sewers, buildings, piers of aqueduct, abutments, storm-water channels, shafts, cast-iron cylinders, &c., the contractor to adopt every precaution, and provide all materials, as planking, strutting, shoring, timbering, piling, sheet-piling, all packing materials, as straw, asphalted felt, bags, tarred gasket, puddle, &c., and all labour, and carefully execute, at his own cost (unless where otherwise specified), all piling, sheet-piling, &c., as shown on drawings, and where ordered, and wherever considered necessary by the Engineer, and to his entire satisfaction, all sheet-piling, temporary scaffolding, staging, bridges (over rivers, creeks, water-courses, and open drains, underneath lines of railways, tramways, streets or footpaths, so as to ensure during the period of the contract the undisturbed traffic and flow of water as the case may be in all channels, drains, water-courses, creek, or river, and the undisturbed traffic along all railways, tramways, streets, &c.), and strong shoring, and in sandy, water-charged, or loose soil, close timbering, piling, and sheet-piling, and provide all appliances, and have all packing materials, as above enumerated, close to where they are required, and with the same carefully and securely close up and pack against the outside  
of

of the timbering all joints and open spaces between poling-boards, sheet piles, or wedges, wherever they occur, and caulk open joints where directed, and execute whatever may be required to prevent any buildings, or other superstructures, road and other services over and adjacent to the line of sewer, from settling, cracking, being shaken, slipping, or falling in, and to prevent any portion of the floors, sides, roofs, and end faces of excavation, beyond the exact cross sections and dimensions determined on, from slipping, falling, running in, or being forced through joints and open spaces in the timbering and sheet-piling, and maintain said timbering, piling, shoring, temporary bridges, &c., where and when directed, till completion of the works, to the entire satisfaction of the Engineer.

115. As the works proceed, all shoring, timbering, staging, temporary bridges, piling, sheet-piling, &c., shall be withdrawn, excepting all permanent timbering, planking, and piling below abutments, piers of aqueduct, storm-water channels, buildings, sewers, &c., as shown on drawings where ordered under other works, and in all other cases where, in the opinion of the Engineer, the withdrawing of the same is impracticable, or would endanger the safety of the works, buildings, streets, and other surfaces over and adjacent to the works, when the contractor must obtain an order in writing, signed by the Engineer, to the effect that piling, sheet-piling, shoring, timbering, &c., may be covered up.

116. The net quantities of all permanent timbering, planking, and piling below abutment, piers of aqueduct, storm-water channels, buildings, sewers, &c., as shown on drawing, and where ordered under other works, and all other shoring, timbering, piling, sheet-piling, which the Engineer has ordered to be covered up, shall be ascertained by measurement before any timbers are covered up, and paid for at schedule rates, which shall cover and include the cost of all timber, iron used in fixing same, wrought-iron shoes for piles, packing material, carriage, and all appliances and labour, complete, as fixed in position in the works.

117. The measurements to be taken to ascertain the net quantities of temporary and permanent timbering, planking, shoring, staging, sheet-piling, piling, shall be as under, viz.:—For all hewn and sawn timber in temporary shoring, staging, piling, sheet-piling, and timbering, ordered to be covered up, or, in permanent piling, wedges, planking, platforms over piles below piers of aqueducts, under storm-water channels, in bridges, buildings, sheet-piling, &c., as shown on drawings, and where ordered, in any situation in the construction of these works, the width multiplied by the depth and the actual length (tenons included), fitted, framed, and fixed in the works, shall be the net measurement. For all round timber used in temporary staging, shoring, timbering, and piling, but ordered to be covered up, the diameter given is to be measured, exclusive of bark, at the smallest end, and the area of such diameter multiplied by the actual length fixed in the works, shall be the net measurement. For all permanent piles under piers of aqueducts, storm-water channels, buildings, in bridges, &c., as shown on drawings, and where ordered, in any situation in the construction of these works, the diameter given on drawings or otherwise ordered, to be measured, exclusive of bark, at the smallest end of pile, and the net measurement shall be the actual number of lineal feet (tenons included) of each such pile as placed in position driven, and fixed in the works.

#### *Piling, Timbering, &c.*

118. The probable extent and quantities of piling is shown on longitudinal sections of works, and in the schedule of quantities and prices, but no guarantee is given that these quantities will correspond with those actually required. They may be more or less, as the actual quantities required can only be ascertained during the progress of the excavations, and as the trial piles are sunk.

119. *Delivery and Stacking Timber, &c.*—The whole of the timber which, in the opinion of the Engineer, is required for each part of the various works, or for such portion of the same as he may determine at the time, shall be cut and delivered barked on the ground prior to contractor commencing the excavation of such part or portion of said work. All timber when brought on the ground to be at once properly and carefully stacked on even plain surfaces, and all timbers to lay perfectly straight in the stacks; all timbers bent, split, unsound, or objected to on other grounds by the Engineer, shall be removed by the contractor from the ground within twenty-four hours after such objections have been made known to him, and if he neglects to do so they shall be removed without further notice by the Engineer at contractor's cost; all rejected timbers to be marked by a brand or axe-mark.

120. *Dimensions of Timbers.*—All timbers required and delivered for each respective part of works to be, when dressed, pointed, placed, and fixed in position, of the various lengths and dimensions indicated and shown on the drawings referring to such works, or of such other dimensions which the Engineer may deem suitable for the works; all holes for screw-bolts, drift-bolts, spikes, nails, &c., to be bored with the exact augers, and all mortise holes and tenons to be cut so as to fit exactly.

121. *Pointing Piles.*—All square or round piles shall be sharpened (pointed) at the lower end, the sharpened sides of which being cut to a batter of 1 to 6, finished at lowest end with a flatter diamond-cut point, as shown on drawings; the lowest point to be exactly in the straight line of the true axis of the pile, and the sharpened sides to be cut true to the axis of pile to prevent same from twisting and slanting when being driven.

122. All lower ends of sheet-piles to be sharpened on one side only to an inclined edge as shown on drawings, and as shall be directed, to ensure the pile when driven to drift towards the pile last driven; all sheet-piles of the same length and thickness within each respective panel to have their ends sharpened exactly the same as regards length of cut surface and inclination of bottom edge.

123. *Dressing Piles.*—All round, square, and sheet-piles to be straight-grown timber, and, before being driven, all square, angle, and guide-piles to be faced truly straight on the sides against which sheet-piles are to be driven and finished as shown on plans; all round piles for staging across rivers, against which planked sides for concrete filling are to be fixed, to be finished with a straight adzed face the depth required for reception of said planking.

All sheet-piles to be perfectly parallel, and, before being driven, to be truly faced and fitted to each other within each panel (between each pair of guide-piles), as shown on drawings, forming a straight close joint.

124. *Iron Rings and Shoes.*—All round and square and sheet piles, to prevent them from splitting when being driven, are to be hooped with wrought-iron rings at the top, such rings to be of not less than 2-in. x 1-in. iron for the square and round piles, and of not less than 2-in. x ½-in. iron for the sheet-piles; stronger rings to be provided and used when directed. All piles are to be pointed, as hereinbefore described, and where driven into hard ground, when directed and ordered, the points to be protected by wrought-iron

wrought-iron steel-pointed shoes, weighing, except where otherwise directed, 28 lb. each for the main and guide piles, and 8 lb. each for the sheet-piles. All shoes to be provided and made of such shape and workmanship as the Engineer shall approve of. They are to be carefully and truly fitted and fixed on to points of piles, and the lowest points of shoes for the round and square piles to be fixed exactly in a straight line with the axis of each pile.

125. *Staking out Lines and placing Piles.*—The exact lines and positions of all piles on land and in water, across rivers, at ends of storm-water channels, or, where ordered, in any situation in the construction of these works, shall be carefully and correctly ascertained and staked out by the contractor, to the satisfaction of the Engineer; and all stakes fixed in water or river-beds to extend above high-water level before any piles are placed and driven. After the staking out, piles to be placed vertically, truly plumb, or to such batters as may be directed, in their respective positions, between guide-wales provided and fixed on scaffold-staging which supports the pile-engine. All sheet-piles to be placed, truly plumb, between each pair of guide-piles, and lowered into their respective positions between two walings, as shown on drawings, fitted and fixed on both sides of guide-piles.

126. *Pile-driving.*—After the excavations for the various foundations have been completed, timbered, and approved, the pile driving as indicated on drawings, or where ordered, to be proceeded with as, viz.:—Prior to commencing the driving of piles at the various sites shown on drawings, in order to ascertain the lengths of same required for the foundations of the different piers and abutments, contractor to drive trial piles, in the manner specified hereinafter, in positions required for permanent purposes, one for each alternate pier, or as shall be directed. After the different lengths of piles required for the works have been in this manner ascertained, the permanent piles to be placed in their exact positions, and then to be driven perfectly plumb (or to any batters directed) into the ground, to the various depths indicated on drawings, or to such greater or lesser depths as the Engineer may direct during the progress of the works.

127. Long piles from 25 feet and upwards, of 12 inches and greater diameters, to be driven with a ram weighing from 20 to 30 cwt., having a drop over head of pile, after the latter has been placed in position, of not less than 5 feet, the drop, as shall be directed, to increase in height as the pile is driven. Any pile driven with a ram of 20 cwt. or more, as the case may be, falling 10 feet, to be driven until at the last strike it does not drive more than the specified depth; and any pile not standing this test to be drawn when ordered, and to be replaced by a longer pile. Shorter piles may be driven with a ram of less weight than 20 cwt., but in due proportion to the weight of the pile, and the weight the pile has to carry, as shall be directed. When rams of lighter weight are used over shorter piles, sheet-piles, &c., the height of drop to vary from 12 to 18 feet, as the Engineer shall direct.

128. All piles to be pitched at contractor's cost, of such lengths as will ensure good sound heads at the levels shown on drawings, or as may be given at the time by the Engineer. Tenons, 8 in. x 4 in. x 6 in. deep, to be neatly cut on pile-heads. Any pile which may be too short, or which may have been driven out of plumb, or out of the stipulated batter, or which may split below the level of the required height or otherwise when driven, to be at once drawn, and to be replaced by a sound pile, driven plumb, or battered, as the case may be, of the required length, at contractor's cost. The contractor must be careful not to pitch any pile which he is not satisfied will be long enough. Scarfing of piles is not permitted. The driving of piles to be commenced and carried on in such order of works as specified, and as shall be directed.

129. Where close piling is shown on drawings, all angle-piles and guide-piles to be driven first, after which the upper guide-wales are to be fitted and fixed on to heads of main piles, and then the whole of the sheet-plates of each panel, after being prepared and fitted, to be lowered and placed into position, with their lower ends into the mud, between each pair of guide-piles, after which they are to be driven each a few feet, more or less, at the time, so as to be driven to the specified depth with each other, thus completing the sheet-piling of each panel, one after another, unless otherwise directed.

130. *Timbering, Framing, Staging.*—As the sheet-piling and excavation between same proceeds, the lower guide-wales to be fitted and fixed together with all transverse, diagonal, and angle struts, as shown on drawings, and with such additional and intermediate struts as the Engineer may deem necessary during the progress of the works.

Capsills to be accurately mortised, placed upon bearing-piles, and to bear truly on pile-heads. Transverse sleepers, spaced as shown, placed upon capsills, halved out  $1\frac{1}{4}$  inches deep at points of intersection, and planks to be laid and close-fitted between sleepers upon the capsills. Sleepers and planks to be secured to capsills with wrought-iron  $\frac{1}{2}$ -inch square 9-inch spikes.

131. *Lewisings.*—Where piles are shown to be driven through soil overlying rock, and lewising has been specified or ordered, the ground for each pile to be excavated the depth shown on drawing, or to such greater or lesser depth as will, in the opinion of the Engineer, ensure the lewis-shaped hole being cut in solid rock, with its bottom, sides, and ends carefully rough-tooled to exact lines and dimensions. Wedges of well-seasoned hardwood, accurately shaped, to be then inserted, with their bevelled faces fitting as close as possible against the tapered side of hole. Foot of pile to be then stepped between the two hardwood wedges, in the exact position, and the whole driven tight home with a ram of approved weight, until foot of pile is perfectly rigid. Piles to be secured to projecting heads of wedges with screw-bolts, as specified.

Where square holes are directed to be sunk in solid rock for feet of piles, they are to be sunk of the dimensions and depths ordered, after which the feet of piles to be stepped into same and the spaces between foot of pile and rock sides of hole to be filled in with cement grout. On completion of lewising, the trenches to be filled in with the material excavated in 6-inch layers, well rammed.

#### *Carpenter's and Joiner's Work.*

132. The whole of the carpenter's and joiner's work for floors, door frames, doors, stairs, window frames and sashes, plates, uprights, girders, planks, working platforms, railings, &c., to be of the best well-seasoned approved sawn ironbark, or of the best Baltic or yellow deal, as the case may be, of the quality specified under clause 35, and as shall be directed, and of the best workmanship, to be framed, fitted and fixed, finished, cleaned off, rough parts sand-papered (where directed), and completed in the best possible manner, in strict accordance with drawings and measurements indicated and dimensions figured thereon, with all necessary nails, spikes, screw-bolts, drift-bolts, wood-screws, coach-screws, wrought-iron straps, stays and other fastenings of the best quality and approved workmanship. All

holes for bolts, spikes, nails, &c., to be bored with the exact augers, and all mortise holes and tenons, &c., to be cut so as to fit exactly, to prevent timbers from splitting. All timber split during the progress of the work and its term of maintenance to be at once replaced by sound timber. All scantlings requiring scarfing in places are to be joined together as shown on sections, and as shall be directed; all scantlings supporting floors, railings, &c., to be scarfed together only over approved supports.

#### *Sheathing.*

133. As soon as capsills are in position, the landward side of abutments to be sheathed with 4-inch sawn hardwood planking from at least 1 foot below natural formation to underside of capsill; the sheathing to be secured to piles and wings by  $7\frac{1}{2}$ -inch spikes,  $\frac{5}{8}$  inch diameter, two at each intersection.

#### *Ordnance Fencing.*

134. Ordnance fences to be provided, framed, fitted, and erected where ordered, of sawn hardwood timber, unless where otherwise specified, as, viz. :—Posts 6 in. x 4 in. x 6 ft. 6 in., top rail 4 in. x 4 in., intermediate and lower rails 4 in. x 3 in. Posts spaced 6 ft. 6 in. from centre to centre, sunk, in rock not less than 18 inches, and into other ground not less than 2 ft. 6 in. deep. On road embankments, where ordered, posts to be 7 ft. 9 in. long, mortised into sill 9 inches diameter x 5 feet long, secured by 1-inch diameter hardwood tree-nail, stayed to posts by 4-in. struts, secured to posts and sills by  $\frac{5}{8}$ -inch screw-bolts and  $\frac{5}{8}$ -inch diameter spikes  $7\frac{1}{2}$  inches long. Angle and end posts, 10 inches diameter at smallest end x 8 feet long, to be sunk 3 feet deep in the ground, mortised 6 inches deep for reception of ends of rails. Tops of round posts to be protected by caps of 6-lb. sheet lead, secured to posts by lead-headed nails 2 inches long and wrought-iron 2-inch x  $\frac{1}{4}$ -inch rings, secured each by four 3-inch wood-screws. Sawn posts to be notched at top for reception of top-rail and halved out for reception of intermediate and lower rails, spaced as shown. Top rail to be laid aris uppermost into notches, secured to posts with 2-inch by  $\frac{1}{2}$ -inch hoop-straps and four 2 inches long wood-screws to each strap. Intermediate and lower rails to be fitted flush with inner faces of sawn posts, and secured to each with two 4-inch wood-screws. All sawn timber above ground to be planed, all scarf-joints of rails to be made as directed, over posts only, and all sills, struts, and ends of posts underground to be charred thoroughly. The ground round posts to be well rammed, and the clearing spaces round ends of posts stepped in rock holes to be carefully filled in with cement grout.

#### *Split Hardwood Two-rail Close-paling Fence.*

135. Split hardwood two-rail close-paling fence to be provided, framed, fitted, and erected where ordered, as, viz. :—Angle-posts to be straight, not less than 10 inches diameter at smallest end, x 8 feet long, to be placed at all angles and ends, and sunk 3 feet in the ground. Common posts to be straight split, 9 in. x 3 in. x 7 ft. 6 in. long, spaced to admit of two panels to the rod, and sunk 2 ft. 6 in. in the ground. Ends of all posts, where underground, to be thoroughly charred. Wherever directed, posts to be mortised into 9 inches diameter x 5-foot sills, stayed by 4 in. x 3 in. struts, secured to posts and sills x  $\frac{5}{8}$ -inch screw-bolts, and  $\frac{5}{8}$ -inch diameter x  $7\frac{1}{2}$ -inch spikes. In rock, angle and end posts to be squared and sunk 1 ft. 6 in. deep, and common posts to be squared and sunk 12 inches deep, and to be run in with cement grout. Sills and struts to be well charred. All posts to be carefully mortised with a 2-inch auger, and all mortise holes to be 8 in. x 2 in. in the clear. Upper mortise-holes to be 6 inches below top of posts, and lower mortise-holes to be 9 inches above surface of ground.

Rails, clearly split and straight, 8 in. by  $2\frac{1}{2}$  in., to be of length to admit of two panels to the rod. Ends of rails to be truly adzed and dressed so as to fill mortise-hole exactly (no wedges being allowed), to overlap the posts, where passing each other in the mortise-hole, not less than 2 inches. The earth to be well rammed round posts at fixing same, to be rammed again from time to time, and at completion of work, so as to leave the posts firm in the ground.

Palings to be clearly split, straight, stout, of fairly uniform thickness; to be 5 feet long and 6 inches wide; to be placed plumb, close-fitted, on outside of fence; heads level with tops of posts, bounded on the outside with 1-in. x  $\frac{1}{8}$ -in. full galvanised hoop-iron, laid over centre line of rails, and secured to same with  $1\frac{1}{2}$ -inch galvanised wrought-iron clout-nails, one to each paling, at each rail.

Slip-panels, 10 feet wide, to be provided where directed; posts for slip-panels to be of the same length, diameter, and description as angle-posts; to be mortised for slip-rails as shall be directed. Where the fence has to cross creeks, the panels to be of the length directed. Rails for slip-panels and creek crossings to be of the same depth and thickness as common rails, but to be of the exact lengths required for these places, and to be braced, where crossing creeks, diagonally and vertically on both sides of fence, as shall be directed.

#### *Split Hardwood Fence.*

136. *Split Hardwood Three-rail Fence* to be provided, framed, fitted, and erected where ordered, as, viz. :—Angle-posts to be straight, not less than 10 inches diameter at smallest end x 8 feet long, to be placed at all angles and ends, and sunk 3 feet in the ground. Common posts to be straight split 9 in. x 3 in. x 7 ft. 6 in. long, spaced to admit of two panels to the rod, and sunk 2 ft. 6 in. in the ground. Where directed, posts to be mortised into 9-inch diameter x 5-foot sills, stayed by 4-in. x 3-in. struts, secured to posts and sills by  $\frac{5}{8}$ -inch screw-bolts and  $\frac{5}{8}$ -inch diameter x  $7\frac{1}{2}$ -inch spikes. In rock, angle and end posts to be squared and sunk 1 ft. 6 in. deep, and common posts to be squared and sunk 12 inches deep, and to be run in with cement grout. Ends of all posts, sills, and struts, where underground, to be thoroughly charred. All posts to be carefully mortised with a 2-inch auger, and all mortise-holes to be 8 in. x 2 in. in the clear. Upper mortise-holes to be 6 inches below top of posts, lower mortise-holes to be 9 inches above surface of ground, and the centre of mortise-holes to be spaced at equal distances between the two. Rails clearly split and straight, 8 in. by  $2\frac{1}{2}$  in., to be of lengths to admit of two panels to the rod. Ends of rails to be truly adzed and dressed so as to fill mortise-holes exactly (no wedges being permitted), to overlap the posts where passing each other in the mortise-hole not less than 2 inches. The earth to be well rammed round posts at fixing same, to be rammed again from time to time, and at completion of work, so as to leave the posts firm in the ground, upright, in the exact lines, and as shall be directed. Slip-panels, 10 feet wide, to be provided where directed, posts for slip-panels to be of the same length, diameter, and description as angle-posts, to be mortised for slip-rails as shall be directed. Where the fence

fence has to cross creeks, the panels to be of the lengths directed. Rails for slip-panels and creek crossings to be of the same depth and thickness as common rails, but to be of the exact lengths required for these places, and to be braced, where crossing creeks, diagonally and vertically on both sides of fence, as shall be directed.

*Split Two-rail and Wire Fence.*—Split posts in embankment to be 8 in. x  $2\frac{1}{2}$  in., mortised, where directed, into a sill 9 inches diameter x 5 feet long, and supported by two 4-in. x  $2\frac{3}{4}$ -in. struts, to be secured to posts and sills by  $\frac{3}{8}$ -inch bolts and  $\frac{1}{8}$ -inch spikes  $7\frac{1}{2}$  inches long, as shown; where embankments are less than 2 feet high, split posts to be sunk 2 feet in the ground, or squared and sunk 1 foot into rock, as may be required; the earth round posts to be well rammed; posts in rock to be run in with special mortar. Corner or end posts, 12 inches diameter, to be sunk 2 ft. 6 in. in the ground, or squared and sunk 1 ft. 6 in. into rock, as may be required; the earth round posts to be well rammed; posts in rock to be run in with special mortar. Top rail to be 7 in. x 2 in., lower rail to be 8 in. x 2 in. each x 9 feet long. Tenons at ends of rails to be 6 inches long, adzed carefully to fit into 6-in. x 3-in. mortises, shouldered square with the saw, and finished so as to butt close up to posts. Black fencing wire, No. 4 gauge, to be placed between rails, to pass through holes bored in posts, and to be properly strained in position. Posts to be set uniform and upright, and fencing to be erected to a true line at top, and not to follow the lesser irregularities of the ground, and all timber under or in contact with the ground to be charred thoroughly.

#### *Road-making.*

137. The different roads shown on drawings, leading under, over, and at sides of the line of sewers, storm-water channels, &c., and across the resumed land on either side of same, are to be formed on embankments, in cuttings, and as level crossings, as the case may be. Said roadways to be constructed 30 feet wide between edges of slopes, whether on embankments or in cuttings, and in either case the slopes, unless otherwise directed, to be trimmed to an inclination of  $1\frac{1}{2}$  horizontal to 1 vertical. The longitudinal gradients of approaches to be at an inclination of 1 in 20, or as shall be directed. The formation width of roadways to be formed with a convex curvature, the centre line of which to be 6 inches higher than the edges.

138. After the sites for road cuttings, embankments, or level crossings have been grubbed and cleared, the various cuttings, where ordered, to be excavated to the exact depths, gradients, and inclinations directed, and the materials obtained from each excavation to be dealt with as provided in clauses 47, 51, and 54.

139. All road embankments to be formed and carried up to the exact heights, widths, gradients, and inclinations, as specified in clause 87, and as shall be directed; and the whole traffic to be well distributed, and to pass over each succeeding layer as put on.

The materials for road embankments to be obtained from sewer excavations and from other sources, as specified in clause 87.

140. After the roadway, in cutting, embankment, or level crossings, has been formed and approved, it is to be carefully boxed out along centre line for the reception of the road material, 8 inches deep for ballast and 4 inches deep for metal—12 inches in all, by a width of 24 feet.

141. After the boxing out has been completed, its bottom surface to be covered by a layer of sand-stone ballast, as specified in clause 21, to be spread 8 inches thick throughout; and after completion of the ballasting, its surface to be covered with bluestone metal, as specified in clause 37, to be spread 4 inches thick throughout.

142. After the metalling has been completed and approved, the whole of its surface to be covered with about one-eighth of its own bulk of fine sandstone or bluestone chippings or quarry refuse of a uniform thickness, after which the whole road surface to be watered and rolled until approved.

143. On completion of cuttings and embankments, all slopes to be trimmed and dressed to even and straight faces to the specified inclinations, and then to be sown with couch grass seed, as shall be directed.

#### *Tarred Metal Deck.*

144. After the tarring of upper surface of metal flooring, and after the sand-filling over arches and abutments of aqueducts has been completed, levelled, and approved, or in any other situation in the construction of these works, the whole of these surfaces as shown on drawings, to the thicknesses figured or ordered at the time, to be covered with the tarred metal decking, as follows:—

The stone to be basalt, broken to a 2-inch gauge, as specified in clauses 37 and 38, free from dirt, the screenings to be crushed from the same stone, and to pass through a  $\frac{1}{8}$ -inch sieve. All stones and screenings to be perfectly clean and dry, to be heated before admixture with tar. The tar to be coal-tar, free from all adulterations, and boiled sufficient time to get rid of the light oils before being used.

The stones and screenings to be mixed with the boiled tar separately; to be then stacked where directed, so as to allow the surplus tar to drain away for at least three weeks before being laid on the bridge.

The 2-inch stone to be spread over the whole bridge, upon the concrete filling of roadway, and upon the 7-inch thick sand layer of footpaths, between kerb-logs, to such thicknesses and surfaces, and with such curvature to roadway, when rolled, as shown in drawing, and to be then covered with about one-eighth of its own bulk with screenings. Both layers to be well rolled and cross-rolled with a 30-cwt. roller, having not less than a 3-foot width of face, until they form solid compact surfaces to the required levels and curvature.

The sides along kerb-logs and all places where the roller cannot work to be well punned by hand with a flat-faced 42-lb. iron rammer. When approved by the Engineer, the whole of the surfaces to be brushed over with a coat of hot coal-tar, and a layer of heated fine bluestone screenings, with dust left in, spread over it.

#### *Coke Concrete Deck.*

145. Coke concrete to be provided, placed in position where directed in the manner specified for other concrete, and to be mixed as described in clause 32, but in the following proportions:—16 cubic feet of approved coke broken to a strict 1-inch gauge, 8 cubic feet of approved clean sand as specified in clause 23, and one full cask of cement (equivalent to four of coke, two of sand, and one of cement).

*Sewers,*

*Sewers, Storm-water Channels, &c.*

146. As the cross-section area of each respective length of tunnel and open trench for each respective length of sewer, storm-water channel, syphon, pipe-sewer, foundation for bridges, buildings, &c., has been excavated, cleaned, and approved, the sewers, storm-water channels, and other works of the dimensions specified to be built therein, with such pipes and with such concrete and brick-lining, backing, walls round pipe-sewers, masonry, brickwork, concrete work, &c., as shown on the various drawings referring to each respective work, and as shall be determined by the Engineer whenever the excavation has advanced sufficiently to enable him to do so.

147. In very wet ground and under buildings the lining of tunnel to be executed of an extra thickness, and in brickwork only with concrete backing were required right up to timbering or rock, as the case may be, as shall be directed.

148. In dry and compact rock excavation the concrete lining to be filled in solid between internal surfaces of sewer, storm-water channel, &c. (less  $\frac{1}{2}$ -inch space required for cement rendering), and surfaces of tunnel or open trench.

149. Under all shafts, when ordered, relieving arches of brick or concrete to be built of a thickness, form, and width as shall be directed at the time of occurrence. Under temporary shafts excavated by contractor for his own convenience, the extra brick and concrete work to be at the contractor's cost.

150. The thickness and description of the lining, whether concrete only, of brick and concrete, or of brick only, required for the different portions of tunnels and open trenches, depends upon the nature of the ground through which they are driven or excavated, as the case may be, and shall be determined by the Engineer as the excavation advances.

151. Junction chambers for sub-main and reticulating pipes, upper inlet-chambers in shafts for junctions with reticulating pipe-sewers, drop-shafts, penstock and gas-check chambers, flushing stations, weir-chambers with storm-water discharge pipes, ventilating shafts, aqueducts on arches, and on wrought-iron girders, syphons, buildings, bridges, culverts, storm-water channel junctions, intersections with existing roads, sewer and water-pipes, branch inlets, man-holes, gullies, road-work, &c., to be constructed in connection with main sewers, branch sewers, and storm-water channels of concrete, brickwork, masonry, rendering, iron, timber, stoneware, and cast-iron pipes, &c., of the exact sizes, heights, shapes, forms, curves, and with such ornamental red, white, and other bricks, panels, mouldings, piling, &c., as shown on drawings, and as may be ordered and directed at the time. Unless otherwise shown and directed, brick-shafts to be built of 9-inch and 14-inch brickwork, with four vertical or battered corners, as the case may be, and curved sides between same and freestone caps at top, pierced and prepared for seat of cast-iron frames of ventilating grates, &c. All inlet openings of branch sewers, reticulating pipes, branch inlets, inlet-bends, &c., to be securely closed for the time being with brickwork in cement, stoneware, or other covers, &c., to be provided by contractor, and set in cement mortar all round, or as shall be directed, and left water-tight. Curved junctions for branch, oval, or pipe sewers, as shown on drawings, and where ordered, to be constructed in concrete; to enter the main sewers at such levels above the invert, with such radius and longitudinal fall as shown, or as shall be determined at the time.

152. Cast-iron, flanged, oval, circular, or straight, junction, bent, plain, and faucet and spigot pipes, landing platforms,  $\perp$  bars, scupper boxes, gully gratings, girders over weir and shaft-chambers, or other castings, flushing-valves, gas-check frames, penstocks, man-hole covers, saddles, stop-board grooves, &c., to be walled and built in, as shown on drawings, at points of intersection, branch junctions, gas-check chambers, pipe ventilating shafts, were ordered, &c.

153. Step-irons, supports to wrought-iron ladders, holdfasts, ends of wrought and cast iron girders, bars, &c., to be built into side walls of shafts, and anchor bolts for fixing cast-iron frame for penstocks, gas-checks, &c., to be built into walls of shaft-chambers, as shall be directed. Flap-traps to be built in where ordered and directed. Permanent putlog holes in shapes of reveals, for temporary staging, are to be left in walls of gas-check, shaft-chambers, and shafts where directed; and, in all cases, unless otherwise ordered, the reveals are to be built round of the same thickness of brick or concrete, as shown on walls of shafts or chambers at the places referred to. Putlog holes to be included in the schedule price for brick-work. Stop-board grooves to be formed in concrete, where ordered.

154. In order to prevent the tunnel excavation, through rock for the various intercepting pipe-sewers, from becoming conductors of subsoil water, said headings, as described in clause 69, after the various lines of stoneware pipes have been laid in same and jointed, and as each 66-foot length of same has been approved and filled in again, to be closed up, when ordered, by a concrete wall 12 inches in thickness, to be built round pipe-sewer and across the heading, making in each case a water-tight joint with rock faces of floor, sides, and roof of heading.

155. In the event of it being deemed necessary by the Engineer during the progress of the works to omit, alter, or change any of the hereinbefore (clauses 151 to 154) described works, and construct and carry out other works of different design and construction instead, then the contractor shall be bound to omit or carry out, as the case may be, and execute any such works with the materials and *workmanship* so required at the various schedule rates referring to such items of works, and as shall be directed and specified hereinafter.

*Concrete Work.*

156. The different kinds of concrete described under clauses 29, 30, and 31, as bluestone concrete, special concrete, and sandstone concrete, respectively, shall be used in the various parts of these works as specified, and as may be ordered at the time.

157. After the excavation for foundation of each respective part of the works, and the piling, planking, timbering, staging, &c., for same have been completed, and after the bottom of excavations has been cleared and approved, the concrete work to be built thereon to be built thereon of the lengths, gradients, widths, heights, and with such square, circular, or other shaped openings, or chambers, recesses, arches, pilasters, batters, lines, curves, &c., of the exact dimensions and of such forms and shapes as shown on the drawings referring to each respective part of said works.

158. The contractor to find, provide, and make at his own cost, all concrete boxes, centres, staging, shoring, planking, &c., of the exact forms, shapes, curves, &c., required, in a proper, secure, and substantial manner, due allowance being made for  $\frac{1}{2}$ -inch thick cement facing over all internal exposed surfaces of concrete work; and great care being taken that all centering and concrete boxes can easily be withdrawn, except where otherwise directed. The designs for centering, concrete boxes, &c., are to be approved

approved by and to the entire satisfaction of the Engineer. After completion of any portion of the concrete or brickwork, the concrete boxes and the centering, as the case may be, shall not be removed until all provisions of the specification, and those contained in clauses 172 and 173 respecting centering, have been complied with, and until the Engineer or his Superintending Officer has given written permission to that effect.

159. The concrete, after it has been approved of, to be conveyed into cast-iron cylinders, shafts, excavations for piers, and other deep foundations, in skips of approved size, and to every other part of the work, as may be directed, and as shall be approved of, and tipped into same and upon the surface of each layer from a height not exceeding 18 inches, to be quickly spread out in layers not exceeding 9 inches in thickness. Commencing at each part of the work at lowest level of excavation or surface of work, the concrete to be brought up in horizontal and even layers, and on lines of sewer, side-entrance, pipe sewers, junctions, shaft chambers, abutments, piers, arches, over-arches walls, &c., unless where otherwise directed, in even layers, parallel with specified longitudinal gradients of works; each layer, when spread, to be 9 inches thick (or less where ordered or specified) throughout before ramming, and, after spreading, to be quickly and evenly rammed all over until approved of, and then allowed time to set before the succeeding layer is put on.

160. In circular, oval, elliptical, and open channels, the concrete to be filled first into central pads, or, in accordance with the transverse curvature of invert or bottom of channel, into central strips, not exceeding 2 feet in width for wide open channels, then into bottom layer right up to extreme width at sides, and then into the curved sides, as shown on drawings, up to top of side walls in open channels, or to level of springing in closed channels.

161. After the concrete has been carried up to the level of springing, all concrete arches to be commenced at both walls or abutments simultaneously, and carried on towards centre line in radiating parallel strips, spread 9 inches thick, of the whole width of arch, or in lengths as specified in clauses 168 and 169, and as shall be directed at the time, and rammed as before described, and, where the arch is thicker than 9 inches, the lower layer to be always completed throughout 12 inches in advance of the upper succeeding layer.

162. After completion of the closing arch all concrete work above springing of the same, at sides of arch, in man-holes, chambers, shafts, &c., to be carried up in the same manner as specified in clause 159, and of the exact dimensions, curves, and thicknesses, &c., as shown on drawings.

163. No portion of the concrete work described in the previous clauses (unless otherwise directed in writing) to be covered up with earth or brickwork until it has been examined and approved of by the Engineer. Any leakage that may appear in each layer to be carefully attended to and be made good and repaired at the time, as shall be approved, before each succeeding layer is put on.

164. All end faces of layers of concrete to be stepped back at each respective length of sewer or other work, as shall be directed, to be carefully washed clean with fresh water, and then to be grouted prior to each layer of the adjoining length being commenced and joined on to the same.

165. After the lower layer has set to the satisfaction of the Engineer, its top surface to be carefully washed until approved, and then to be grouted all over prior to each succeeding layer of concrete being put on. No traffic shall pass over any lower layer or fresh concrete work except where such is duly protected against injury by boarding, planks, or any other means approved of by the Engineer at the time.

166. *In the event of any stoppage* occurring to the work, from whatever cause, or in anticipation of rainfall, the contractor, before temporarily stopping work, shall finish it off at whatever level the work may be raised at the time, by thoroughly grouting the whole of the surface with cement grout. The contractor also to provide and have always on hand approved tarpaulins for the purpose of covering therewith, where and whenever directed by the Engineer to do so, all fresh concrete work and brickwork, when ordered, so as to protect the same, during all stoppages in the daytime and at night, from sun and rain, and during hot or dry weather, to keep said tarpaulins watered to prevent the concrete work from cracking and setting too quickly on the outside.

167. In all cases where a layer at mid-day or at evening is left incomplete, the said layer shall not be continued after any stoppage until the surface of the lower and the end of the upper layer have been washed clean and then grouted with cement grout.

168. The concrete and brickwork of main and branch sewers and storm-water channels in open trench to be commenced in accordance with clause 108, in the different lengths of open trenches, and to be carried up in each and from each end of same simultaneously, in not less than three continuous lengths of 40 feet each (unless otherwise directed). That is to say, when the arching-in of the first 40 feet commences, the next length of 40 feet must be completed up to the springing of arch, and the third 40-foot length must be in progress, and the latter so timed that the work is raised up to springing of arch by the time the closing-in of the adjoining length commences.

169. The concrete and brickwork of main and branch sewers and storm-water channels in tunnel to be commenced, in accordance with clause 108, in the different lengths of tunnels, and to be carried on in each, from the middle towards each end simultaneously, in not less than three continuous lengths of 16 ft. 6 in. each—that is to say, when the arching of the first 16 ft. 6 in. commences the next 16-ft. 6-in. length must be in progress from height of invert up to the springing of arch, the third 16-ft. 6-in. length must be in progress between floor of tunnel and level of invert of sewer, and in the fourth 16-ft. 6-in. length the excavation and timbering of tunnel must at this time be completed and ready to receive concrete foundation of sewer.

170. At all plinths for piers of arches and abutments, piers of arches, abutments, between wings of abutments, pilasters, foundations of buildings, culverts, &c., unless otherwise directed, each layer to be completed right through the whole length and width of the work before the succeeding layer is put on. Where concrete has to be walled or filled in against and between brick facings or masonry, the latter in each case to be well wetted and grouted, and then to be covered with a coat of cement mortar  $\frac{1}{2}$  inch thick before the concrete is built against it, and it is to be brought up simultaneously with same in layers 6 inches thick after ramming; the brick or masonry facings, however, being always kept 6 inches (or more, as the case may be) higher than the concrete work, up to level of string-course, or other defined limit, when the work has to be finished level all through.

171. The brickwork, masonry, and concrete-filling between all arches and at sides of end-arches to be carried up simultaneously over the whole length and width of every aqueduct, building, or other structure (unless otherwise directed), so that all arches or other structures shall be simultaneously and equally weighted as the brick, stone, and concrete work rises against and over same.

172. The concrete in piers of arches of aqueducts, abutments, and approaches to aqueducts, to be carried up in the first instance from bottom of excavations to level of top of plinths, in the second instance to level of top of skewbacks, in the third instance to level of underside of string-course, and in the fourth instance to level of top of coping of aqueducts.

173. When all piers and abutments of aqueducts have been built to level of springing of arches or to top of skewbacks, as the case may be, the concrete, brick, and stone arches, as specified, to be built one after another over the openings upon centres, cambered as shall be directed, of such number as shall be specified, strong enough in every part to carry the weight of the arch to be built thereon, till all openings of one aqueduct are arched over, after which the whole of the arches shall be allowed two weeks time to set and harden before the brick and stone facings, and the concrete, &c., between the arches and at sides of end-arches is commenced. In filling in between arches and at sides of end-arches the various layers of concrete, of the thickness specified in clauses 159 and 170, as the case may be, to be brought up extending on to extrados of arches till the thickness of each layer at its end is reduced to  $4\frac{1}{2}$  inches above extrados, when it is to be finished at the time with a radiating end-face before the succeeding layer is put on. The junctions of the new storm-water sewers to be constructed with such curves, shapes, forms, flat arches between wrought-iron rolled girders, &c., as shown on drawings. On completion of junctions, or any lengths of storm-water channel, as may be specified, to exact level of underside of iron girders, the latter to be laid transversely over side-walls of junctions or channels, bedded in and upon special cement mortar,  $\frac{3}{4}$  inch thick, truly parallel to each other, and spaced 4 feet from centre to centre, or as may be specified, after which the concrete filling along side-walls, between and over ends of girders, to be completed. The arches of 4-foot span, or thereabout, with a rise of 5 inches in centre, between the girders, to be commenced from lower end, and to advance to the upper end of the junction or channel in each case (all girders being carefully stiffened and held in position by props, as shall be directed), with not less than 12 centres, or as may be directed of the exact width of junction or channel between side-walls. The arches to be built as specified in clause 161, and on completion to form a level concrete decking 3 inches above level of top of girders.

174. The concrete lining round sewer on lines of aqueducts and approaches (between underside of string-course and underside of coping, unless where otherwise specified) to be brought up between brick and stone facings (where such occur) simultaneously with same, as specified in clause 170. The concrete to be finished transversely level with underside of copings. This work to be carried on along each line of aqueduct in the manner and in lengths as specified in clauses 172 and 173.

175. In conjunction with the concrete surrounding sewer, where the latter is built upon arches and in embankments, the contractor to provide, fit, place in position, and wall-in with the concrete, longitudinally in each corner at top and bottom of concrete lining  $\frac{3}{4}$ -inch diameter bond-rods in 16-foot lengths. The ends to overlap 12 inches, and tied together with binding-wire, and, transversely,  $\frac{3}{4}$ -inch diameter bond-rods  $4\frac{1}{2}$  inches above soffit of sewer of such lengths as to fit between the outer brick lining, or as shall be directed, spaced 10 feet from centre to centre. The cost of providing, fitting, placing, and walling-in said bond-rods, to be included in the schedule price per cubic yard of concrete.

176. Special care to be taken by contractor to prevent the concrete, &c., from cracking at ends of each respective and successive length of open, covered, or closed, sewer and storm-water channel in any situation in the construction of these works, in consequence of the draught in same, by providing and carefully closing up ends of sewers or storm-water channels with canvass or wooden shields or doors. Great care shall also be taken in the construction of sewers and storm-water channels on lines of aqueducts, in tunnels, and in open trenches by carrying the works on in continuous lengths, without delays and stoppages, so as to prevent air-cracks or shrinkage.

177. Should, however, cracks occur at ends of any length of sewer, storm-water channel, or other work, during its construction and time of maintenance, they shall be opened up for their whole length and depth, and of such width as may be directed at the time, and filled in with neat cement mortar and grout by the contractor at his own expense to the satisfaction of the Engineer, or he may order such cracked parts of the works to be taken down and rebuilt at the time of occurrence at contractors' cost.

178. The concrete work comprised in this contract to be completed of the exact dimensions shown on drawings, less  $\frac{1}{8}$  inch at all exposed inner and outer surfaces, and after the boxes and centerings have been removed, all exposed outer and inner surfaces shall present compact, solid, even, plain faces. All faulty and honeycomb portions, cavities, holes, or other defects to be at once repaired by the contractor, at his own cost, with concrete or mortar, as the case may require, to the satisfaction of the Engineer. No portion of the concrete work to be covered up with earth or brickwork until it has been examined and approved. In all cast-iron cylinders shown on drawings, the concrete shall be built in solid between cast-iron walls of same, and as hereinbefore described.

179. At the sites of all bed and bearing plates, penstock, sluice-gate, gas-check, stop-board, stop-plate, and valve frames, cast-iron man-hole covers, and all circular, oval, straight, or bent pipes, covers, landing platforms, gully-gratings, scupper-boxes,  $\perp$  bars, girders over weir and shaft-chambers, &c., after the concrete or masonry has been built to the exact height and gradient (leaving sufficient space for jointing), the whole of the cast and wrought iron work, after having been washed clean with fresh water, is to be truly laid and jointed or set perfectly plumb or otherwise, as the case may be, and as shall be directed, in the exact positions, lines and gradients, on fillets of mortar; and as the concrete rises against and around the castings, bond-rods, &c., leaving a space of not less than  $\frac{1}{2}$  inch all round between the concrete and iron, this space round the invert, or underneath bottom of plates and rods, as the case may be, to be filled in with special grout, or mortar, as shall be directed at the time, whilst above the springing line the outer surface of the castings, &c., to be grouted with special grout, and then to be covered with a coat of special mortar  $\frac{1}{2}$  inch thick before the concrete is built on to and around said pipes, castings, frames, &c.

180. All anchor-bolts in connection with cast-iron bed and bearing plates, wrought-iron ladders, landings, sluice-gate, gas-check, valves, and all other frames, &c., to be placed in the exact positions required; to be washed clean, wetted, bedded upon and surrounded with special mortar in each case before the concrete is built round the same.

181. All stoneware or cast-iron pipes, down-pipes, &c., where they are shown to be or ordered, to be surrounded with concrete, to be clean washed with fresh water, to be truly placed, laid, erected, and jointed in the exact lines and gradients on fillets of mortar, and to be grouted all round with special grout as the concrete is being built all round same.

182. The whole of the concrete work of main, branch, and pipe sewers, and storm-water channels, including all foundations, piers, abutments with wings, arches, buildings, gullies, weirs, with all string-courses, copings, ventilating shafts, chambers, gutters, side entrance, junctions, &c., to be completed in strict accordance with specification and drawings, and of the exact shapes, forms, projections, mouldings, curves, panels, pilasters, and dimensions shown thereon, and as shall be directed, and to be left complete and clean on all external and internal exposed faces.

#### *Cement Coating.*

183. The whole of the internal and external concrete surfaces, and brick surfaces where ordered, of sewers, storm-water channels, buildings, and other works, where such is shown on plans, and in any situation in the construction of these works where directed, to be protected by a cement coating to be put on in two thicknesses, excepting where otherwise directed; the coating throughout, when finished, to be  $\frac{5}{8}$  inch in thickness. All surfaces of concrete or brickwork to be well wetted before the cement coating is put on. The cement coating of all surfaces of works, including string-courses, caps, copings, cornicing, weatherings, chamfers, mouldings, &c., to be finished of the exact thicknesses, dimensions, forms, faces, lines, curved, straight, circular, or otherwise, and with joints struck in imitation of ashlar masonry, as shown on drawings, and as shall be directed.

184. The different kinds of cement coating with which the exposed surfaces of these works are to be protected, are:—Cement facing, prepared of cement and sand in the proportion of one of cement to two of sand, and special cement facing, prepared of cement and sand in the proportion of one of cement and one of sand. The cement and sand to be of the qualities specified in clauses 23 and 24 respectively. The different qualities of cement coating, as above described, to be executed in the various parts of these works as shall be specified, and as may be ordered at the time.

#### *Brickwork.*

185. The brickwork required in the construction of storm-water channels, ventilating shafts, buildings, main sewers, arches up to 12-foot span, piers, abutments, abutment-piers, and arches over 12-foot span, with spandrels, pilasters, parapet walls, and where ordered in any situation in the construction of these works, to consist of materials and mortar described in clauses 15, 16, 23, 24, 26, and 27, as shall be directed. All brickwork is tinted red on general plans; the areas on all elevations of aqueducts, arches over 12-foot span, parapets, abutments, piers, &c., which are to be specially faced with white and red and radiated bricks, are tinted white and red accordingly. All bricks to be thoroughly soaked in clean fresh water immediately before being used, and all work to be built with whole bricks (except where otherwise directed) of approved shape and dimensions, to ensure the bond of each particular part of the work being executed, in the manner as shown on drawings, and as may be ordered at the time, with  $\frac{1}{4}$ -inch joints, each brick to be set full and rubbed in cement mortar, and every course to be carefully and thoroughly grouted and well wetted before the succeeding course is put on, as shall be directed, care being taken to keep the inner and outer faces of work clean by placing fillet of mortar on outer and inner edges before grouting.

186. The brickwork in sewer lining, shafts, storm-water channels, and aqueduct arches up to 12-foot span, to be of the forms, shapes, thickness, dimensions, curves, and gradients shown on longitudinal and cross sections to be built in radiating courses, with radiated bricks where ordered, in  $4\frac{1}{2}$ -inch rings, in approved bond, the bricks of each course to break joint over the centre of those above or below. Where the brickwork consists of two or more rings, said rings to be built simultaneously, the lower ring to be always completed throughout  $4\frac{1}{2}$  inches in advance of the upper succeeding ring, each brick to be set full upon and rubbed in cement mortar, and each ring to be keyed in centre, and to be covered with a coat of cement mortar  $\frac{1}{2}$  inch thick, to ensure the thorough bonding between the different rings. All arches up to 12-foot span to be built as specified in clause 173, and to be commenced at both abutments simultaneously, the full width of same, and all closing arches of main sewers to be built in lengths of 40 feet, and 16 ft. 6 in. respectively, in conformity with clauses 168 and 169. At completing any length of brick closing arch of main sewer, storm-water channels, &c., the courses at end of same to be stepped back, as shall be directed, and the end face of each ring or course to be well wetted, and then grouted, prior to each ring of the succeeding length being commenced.

187. The brickwork in arches over 12-foot span, to be built as hereinbefore specified, in conformity with clause 173, not in  $4\frac{1}{2}$ -inch rings, but in radiating through-courses, of rubbed and gauged bricks, if directed, in approved bond; to be commenced at both abutments simultaneously, the whole width of same, and to be completed in the most perfect manner throughout the full width and thickness of arch, keyed in centre.

188. The brickwork in abutments, abutment-piers, wings, parapets, pilasters, spandrels, piers, face-walls, &c., to be built of the various heights, thicknesses, and other dimensions, together with all recesses, projections, panneling, &c., and carried up at each special part or length of work, simultaneously with the concrete and masonry, in English or other approved bond, in alternate courses of headers and stretchers, unless otherwise directed, each brick to break joint with the one above and underneath, in truly level courses or in courses truly parallel with longitudinal gradient of work, and in such other lines and curves as shown on drawings, or as may be ordered at the time. All outer and inner faces, where directed, of walls, to be carried up straight, square, and plumb, with perfectly fair and even faces.

189. All pilasters, projections, recesses, circular and other panneling, abutments, piers, wings, spandrels, parapets, arches, &c., in outside faces of work, to be built neatly and accurately of plain, radiated, moulded, and formed white and red bricks, as shown on drawings. All inner faces of walls and arches, and where directed, to be finished with a neat flat joint, and pointed; and all arches and other brickwork to be finished on all exposed faces with a neatly struck and cut joint. All pointing up home to all copings, cap-stones, string-courses, key-stones, projections, and recesses, to be carefully executed; and all freestone and bluestone ashlar, in connection with the brickwork, to be carefully bedded and set in cement mortar and walled-in where shown. All cement pointing, wherever directed, to be executed, and  
everything

everything to be made good where necessary, and all external faces of brickwork to be thoroughly cleaned at completion of work. Weep-holes of the sizes shown, to be left through the brick walls where directed.

190. The brick-on-edge flooring of inverts of storm-water channels on steep gradients, as shown on drawings, and where ordered, in any situation in the construction of these works, to be laid in approved bond; each brick to be set full and rubbed in special cement mortar, after which the whole of the surfaces of the brick-on-edge flooring to be carefully and thoroughly grouted with special grout.

191. The  $\frac{1}{2}$ -inch thick mortar covering (pargeting) of outside faces of brickwork or concrete of ventilating shafts, man-holes, sewer-chambers, and sewers, as shown on drawings, shall not be measured and paid for as cement facing, but simply as mortar covering  $\frac{1}{2}$ -inch thick; the cost of which to be provided for, and included in the schedule prices per cubic yard for brickwork and concrete.

192. *Brickwork in Buildings, Chimneys, &c.*—The whole of the brickwork of external walls of buildings, chimneys, &c., of the various thicknesses, heights, and other dimensions, together with all door and window openings, reveals, recesses, projections, bracketing, corbeling, &c., as shown on drawings, to be at each building carried up together, in truly level courses, (no portion of the brickwork of each building at any time to be raised higher than 12 inches above any other portion, excepting at the gables above level of eaves of roofs), in old English, or other similar approved bond; four courses to 1 foot in height, well bedded and grouted as before specified, care being taken to keep the inner and outer faces of the work clean, by placing fillet of mortar on outer and inner edges before grouting.

Both outer and inner faces of walls to be carried up straight, square, and plumb, with fair even faces, and all inner faces to be finished with flat neatly pointed joints.

All pilasters, projections, recesses, reveals, cornicing, bracketing, corbeling, panels in outside faces of walls to be built neatly and accurately of white, red, plain, formed, and moulded bricks, as shown on drawings.

193. *The arches over all openings* to be built in a similar manner as specified for arches under clauses 186 and 187, and for the buildings especially they are to be built of rubbed and gauged bricks in radiating courses with  $\frac{1}{4}$ -inch joints throughout, abutting against rubbed skewbacks; every brick to be set full and rubbed in cement mortar, to be turned in the most perfect manner of the full thickness of walls, in single rings of  $4\frac{1}{2}$  inches, in two rings, and of such bond and of such thicknesses as shown on drawings, and as shall be directed; all arches to be commenced from both skewbacks simultaneously and keyed in centre. All inner faces of arches, and where directed, to be finished with a neat flat joint and pointed.

194. *General.*—All putlog holes to be filled in, taking particular care to match the bricks and the mortar. All pointing up home to all copings, sills, and other projections to be executed. All splays, rakes, and chasings, whether for lead flashing or otherwise, to be executed. All freestone and bluestone ashlar, and all ironwork in connection with superstructures, to be carefully bedded in cement mortar, and walled-in where shown, and as shall be directed. All wood bricks to be provided, bedded, and walled-in for fixing door frames, and where directed. All cement pointing at lead flashings, round ironwork, freestone ashlar, stones under iron shoes of rafters, iron girders, round ends of purlins, &c., to be executed, and everything to be made good where necessary and directed. All floor-joists to be bedded in cement mortar where directed.

All external faces of brickwork to be thoroughly cleaned, all joints to be raked  $\frac{3}{4}$  inch deep; to be pointed with special cement mortar, and to be finished off with a neatly struck and cut joint.

195. Prior to commencing any concrete or brickwork, which has to be built on to and against rock faces, all shaken and loose rock to be removed; all rock surfaces to be well cleaned, washed, and wetted, and all beds, open joints, and spaces between concrete or brickwork and rock faces to be carefully filled in with cement mortar, and flushed and grouted every course as the brickwork proceeds; and the cost of thus preparing rock faces, washing, grouting, flushing, &c., to be included in, and covered by the schedule price per cubic yard for the concrete and brickwork herein referred to.

#### *Power to get Bricks elsewhere.*

196. Should the contractor, at the commencement or during the progress of the contract, at any time fail to provide the specified bricks in any or in such quantities as in the opinion of the Engineer shall be deemed necessary to ensure the progress of the works as specified, then in all such cases the Engineer shall have the power to supply the same from any other sources; and all additional costs and charges thereby occasioned, over and above the contract prices for brickwork, shall be incurred solely by the contractor, who shall only be paid for the net quantity of brickwork actually ordered at Schedule rates, less the cost of the bricks so delivered on the works by the Engineer; and the contractor shall have no claim for loss, damage, or compensation, on account of the exercise of such power by the Engineer.

#### *Masonry.*

197. All freestone and bluestone ashlar of the exact sizes, forms, and shapes, to be built in where shown on drawings and where directed simultaneously with the concrete and brickwork; said stones to be washed clean and to be well wetted with fresh clean water immediately before being used, to be set upon their natural beds full upon and in cement mortar in approved bond, in the exact positions required, truly level, or as may be directed at the time; after which all joints between stones, between stones and brickwork, and between stones and concrete, to be carefully filled in with grout when directed. Prior to each succeeding course being put on, the surface of the previous course to be well wetted and washed clean, as shall be directed. All ashlar stones to be properly lifted by lewisings, or as shall be directed when being placed in position. All beds and joints to be punched, axed, and picked, so as to form  $\frac{3}{8}$ -inch joints throughout. All exposed joints of masonry and between masonry and brickwork, &c., to be carefully raked out,  $\frac{3}{8}$  inch deep, and filled in solid with special mortar, neatly pointed, finished flush with outside faces of work. All masonry to be left perfectly clean at completion of works.

198. *Freestone Ashlar.*—Freestone ashlar, of the quality specified in clause 20, to be provided for plinths, abutments, skewbacks, and piers of aqueducts, keystones of arches, voussoirs, string-courses, capstones for abutments and pilasters, newels, pilasters on corbels, parapet copings, steps for spiral stairs in shafts, and other steps where shown on drawings, cornicing for pedestals of chimneys, coping for gables of buildings, window sills, bedstones under bearing points and iron shoes of rafters, corbels under girders, cover stones over gullies, stones on top of ventilating shafts, curb stones round bases of buildings, flagging over

over drains in filter beds, kerbing and channeling, &c., and where ordered in any situation in the construction of these works, of the exact dimensions, moulded, sunk, weathered, throated, checked, grooved, radiated, curved, channiced, fine-axed, battered, hammer-dressed, worked, rubbed where directed, and finished off in the best possible manner, as shown on Drawings, and in accordance with any details which the Engineer may provide during the progress of the works. All stones to be in lengths, as shown, and shall be directed, with truly squared and axe-dressed beds, joints, and backs. All joints from exposed surfaces of stones, and from faces of concrete work, as the case may be, to be axed in 2 inches deep. The plinths, where shown on Drawings, to be weathered with 2-inch parallel drafted margin, under edge of weathering and at all external angles of same. All external faces of plinths, skewbacks, abutments, piers, wings of abutments, &c., to be pitch-faced, no part of which to project more than approved of beyond true line of wall, with a true pitched line along each exposed arris, and with 2-inch parallel drafted margin as shown. Capstones of abutments and piers to be of the dimensions shown, unless otherwise directed; the centre stone to be of bluestone. All capstones over pilasters to be of one stone. Holes for lewis bolts to be sunk where directed, of the depth and size required. All quoins, of the exact sizes specified, to be set in and out bond to all angles.

199. *Bluestone Ashlar*.—Bluestone ashlar of the quality specified in clause 38 to be provided for all abutments, piers, abutment piers, stones at bottom of sump-holes of precipitating wells, bedstones, under cast-iron bedplates or bearing points, semi-circular stones forming weir crests of precipitating wells, door sills, and where ordered in any situation in the construction of these works, of the exact dimensions, forms, shapes, moulded, weathered, throated, fine-axed, sunk for reception of cast-iron bearing-plates; and faces of weir-crest stones to be radiated, and to have vertical bird's-mouth grooves sunk along centre line of joints, as shall be directed; to be built in with the concrete, brickwork, and freestone masonry, as the case may be, and as the latter rises, where shown on Drawings and as may be directed; to be lewis and set as specified in clause 197. All stones to be washed clean and to be well wetted before being used. Holes for lewis and anchor bolts to be sunk, where directed, of the depth and size required.

200. *Squared Freestone Rubble Masonry*.—Squared rubble masonry in side walls of open channels, retaining walls, and where ordered in any situation in the construction of these works, to be built of squared hammer-dressed through stones, unless otherwise directed, in from 10 to 14 inch level courses, as may be directed at the time, or on lines of open channels in courses parallel with longitudinal gradient. Said masonry to be built straight, curved, battered, or sloped, every stone to be set full up on and in cement mortar, as specified in clause 26. When the exposed face of wall is battered, the surface of each course to be at right angles with line of batter, the top course to be built of larger stones, level at top and squared at back. All stones to be punched, dressed, and picked to the exact thicknesses, sizes, and forms required, and set in the most approved bond, with joints throughout not exceeding  $\frac{1}{2}$  inch in thickness. All stones to be washed clean and wetted with clean fresh water before being used. Every course to be carefully grouted as directed before the succeeding course is put on. All masonry to be finished with a neatly struck and cut joint as the work proceeds, and to be left perfectly clean on completion.

#### *Squared Bluestone Pitching.*

201. Squared bluestone pitchers, in channel bottoms, round manhole covers, ventilating grates, valve covers, and where ordered, in any situation in the construction of these works, to be set in sand, in regular 9-inch courses, lengthwise across the channel, in the most approved bond, and in single ring or course round manhole covers, &c. All stones to be dressed and picked so as to ensure the joints all through not to exceed  $\frac{1}{2}$  inch in thickness. No stone to be less than 9 inches x 9 inches x 9 inches, but to be longer, curved, and radiated as shall be directed.

#### *Squared Freestone Pitching and Channeling.*

202. Squared freestone pitchers, in bottom of open channels, or in any situation in the construction of these works, to be set upon their natural beds in sand or in cement mortar, as may be specified, in regular 12-inch courses, lengthwise across the course of the channel, in approved bond, with  $\frac{1}{2}$  inch wide joints throughout. No stone to be less than 12 inches deep, 12 inches wide, and 12 inches in length, but to be longer, curved, and radiated as shall be directed, to insure a good bond. If the pitchers are set in cement, all stones to be washed clean and well wetted with clean fresh water before being used, to be set full up and in cement mortar, and on completion of pitching all joints to be carefully filled with cement grout. All pitching in road channels to be set in sand in regular courses parallel with kerb-stones, in approved bond, with  $\frac{1}{2}$ -inch joints, no stone to be less than 12 inches wide, 8 inches deep, unless otherwise specified, and 18 inches long, but to be longer, curved and radiated as may be directed. On completion of pitching set in sand all joints to be carefully filled in with sand.

#### *Freestone Kerbing.*

203. Kerb-stones in such lengths, picked and axe-dressed to such widths, depths, shapes, and forms, with squared and axed ends, insuring  $\frac{1}{4}$ -inch joints throughout, to be set upon their natural beds in sand along edges of footpaths, edges of road embankments, and over sewers, round bases of buildings, and where ordered in any situation in the construction of these works, along such lines, levels, gradient, and curves as shown on Drawings, and as may be directed at the time.

#### *Pipelaying and Jointing.*

204. *Glazed Stoneware Pipes*.—After the trenches have been executed, as specified in clauses 60 to 63, to the exact depths, levels, and gradients, and after the foundation layer of concrete has been filled in where ordered, as the case may be (leaving sufficient room for jointing), glazed stoneware pipes of the quality specified in clause 17, and of the required diameter, to be laid thereon, along such lines, curves, and inclinations, as shown on general plans and longitudinal sections, as may be ordered at the time, true, straight, and solid (for all vertical branch pipe-sewers and ventilating pipe-shafts, the pipes to be set true, straight, and plumb).

*Foundation*.—In clay or similar soil the pipes to rest direct and solid upon the soil. In rock they are to be laid on a 1-inch bed of poor mortar, as shown on Drawing, cost of same to be included in items for pipe-laying. In loose sand and other soil liable to be scoured out or easily shifted, they shall, if directed by the Engineer, be laid on sandstone concrete, as shown on Drawing.

*Laying.*—In every case they shall be laid in such a manner that their barrels shall bear firmly and evenly on their bedding material, the sockets being entirely free from pressure in the joint-hole, and the spigots concentric with the sockets. The pipes are to be jointed as, viz. :—

205. The 6-inch pipes with tarred gasket  $\frac{1}{2}$  inch deep after setting, and special cement mortar  $1\frac{1}{4}$  inch deep within socket of pipe; the 9-inch pipes with tarred gasket  $\frac{1}{2}$  inch deep after setting, and special cement mortar  $1\frac{3}{8}$  inch deep within socket of pipe; the 10-inch pipes with tarred gasket  $\frac{1}{2}$  inch deep after setting, and special cement mortar  $1\frac{1}{2}$  inch deep within socket of pipe; the 12-inch pipes with tarred gasket  $\frac{5}{8}$  inch deep after setting, and special cement mortar  $1\frac{3}{8}$  inch deep within socket of pipe; the 15-inch pipes with tarred gasket  $\frac{5}{8}$  inch deep after setting, and special cement mortar  $1\frac{1}{2}$  inch deep within socket of pipe; the 16-inch pipes with tarred gasket  $\frac{3}{4}$  inch deep after setting, and special cement mortar  $1\frac{1}{2}$  inch deep within socket of pipe; the 18-inch pipes with tarred gasket  $\frac{3}{4}$  inch deep after setting, and special cement mortar  $1\frac{3}{4}$  inch deep within socket of pipe; the 21-inch pipes with tarred gasket  $\frac{3}{4}$  inch deep after setting, and special cement mortar  $1\frac{3}{4}$  inch deep within socket of pipe; the 24-inch pipes with tarred gasket  $\frac{3}{4}$  inch deep after setting, and special cement mortar 2 inches deep within socket of pipe.

206. After the tarred gasket has been placed in position and set tight round the pipe, and after the joint above has been cleaned and wetted, stiff special cement mortar, as specified in clause 27, to be packed in solid, splayed off outside and finished with a carefully struck and cut joint, after which the inner joints between two pipes to be likewise carefully filled with the same cement mortar all round, neatly wiped off as a finish. Each pipe length when thus finished to be carefully cleaned out before another pipe length is added. No length of pipe-trench to remain open more than eight days from the time of commencement of excavation to the time of the trench being filled in again to level of surface of street or other ground.

Junction pipes of any desired size are to be laid into the line of pipe-sewers wherever required by the Engineer. The socket ends of all junction pipes, junction blocks, junction holes, and dead ends are to be protected against the ingress of foreign substances, and made easily accessible for effecting future connections, by being closed with earthenware discs having a temporary watertight joint all round, the cost of fixing same to be included in items for pipe-laying.

207. *Cast-iron Spigot and Faucet Pipes.*—After the pipe-trenches have been excavated, as specified in clause 64, the exact depths, levels, and gradients, cast-iron pipes of the diameters shown or ordered to be laid along lines, curved or straight, and solid upon the bottom of the trench, or upon a foundation layer of concrete, as the case may be (all vertical ventilating and sewer-pipes to be placed in their exact positions, and to be set true, straight, and plumb, or as shown on Drawings), leaving sufficient room for jointing each pipe-joint in the trench, and to be jointed with well caulked New Zealand flax spun-yarn and soft pig-lead, as viz. :—

208. The 6-inch and 7-inch diameter pipes with spun-yarn  $2\frac{1}{2}$  inches and 3 inches deep respectively after setting up, and soft lead  $1\frac{1}{2}$  inch deep after setting up; the 8-inch, 9-inch, and 10-inch diameter pipes with spun-yarn 3 inches,  $3\frac{1}{2}$  inches, and  $3\frac{1}{2}$  inches deep respectively after setting up, and soft lead  $1\frac{1}{2}$  inch deep after setting up; the 11-inch, 12-inch, 14-inch, 16-inch, and 18-inch diameter pipes with spun-yarn 3 inches, 3 inches,  $3\frac{1}{2}$  inches,  $3\frac{1}{2}$  inches, and  $3\frac{1}{2}$  inches deep respectively after setting up, and soft lead  $1\frac{1}{2}$  inch deep after setting up; the 20-inch, 22-inch, 24-inch, 26-inch, 28-inch, 30-inch, 32-inch, 34-inch, and 36-inch diameter pipes with spun-yarn 3 inches,  $3\frac{1}{2}$  inches, and  $3\frac{1}{2}$  inches deep respectively after setting up, and soft lead 2 inches deep after setting up.

209. Should the faucets of pipes used in these works, in places, be of greater or lesser depths than indicated in the previous clause, then the spun-yarn packing is to be of greater or lesser depths as may be required, the depths of the lead joints to remain as specified. Expansion joints to be made in the same manner, but of such special depth of lead joint, with or without spun-yarn packing as shown on Drawings, and as may be ordered at the time. All curves on lines of pipe-sewers to be accurately formed with the spigot and faucet joints of the pipes without any abrupt horizontal and vertical dip, rise, or bend. The spun-yarn to be tightly platted or laid round each spigot end, so as to fill the socket of each pipe after setting up to the exact depth specified, leaving in each instance the remaining depth of faucet for the specified lead joint, the latter to be made at each joint in the trench with one running, and when cold to be set up with proper irons to one smooth, even, plain surface all round the pipe, and  $\frac{1}{8}$  inch within socket of same.

210. The setting up of all lead joints to be made with a proper set of setting irons, commencing from outer surface of spigot end with  $\frac{1}{8}$ -inch thick setting irons, and continuing towards outer edge of lead joint with setting irons, advancing gradually by  $\frac{1}{8}$  inch in thickness at the time. Special setting irons to be used for setting up expansion joints. After the pipes have been laid and the joints of every description made, examined, and approved, they are at once to be covered up, as shown on Drawings, and as specified in clause 88, but in no case are they to remain longer than twelve hours uncovered after they have been approved of.

#### *Faulty Joints.*

211. Faulty and objectionable lead joints to be immediately and carefully chiselled out (they are not allowed to be burnt out) and fresh lead joints to be made and set up until approved of. Attempts to repair defective joints are under no consideration to be permitted.

#### *Lead.*

212. The lead required to all spigot and faucet joints, and where directed, to be of approved quality, of the best description of soft pig lead, and to be delivered in pigs as they leave the mines in Great Britain and Ireland. The pigs must show the brand or mark of the home manufacturer or company.

#### *Spun-yarn.*

213. The spun-yarn required to all spigot and faucet joints to be of the best description of  $\frac{1}{4}$ -inch New Zealand flax, and as per sample approved.

*Ironwork to be ready when required.*

214. The whole of the cast and wrought ironwork of every description required in the construction of storm-water channels, main and branch sewers, &c., as shown on Drawings, and described in the specification, shall be provided, prepared, completed, and ready at the various sites of the works as it is required, so as to be erected, walled in, jointed, placed in position, and fixed at the various places shown simultaneously with the concrete work, masonry, brickwork, carpenters' work, earthwork, &c., to ensure the whole of the works rising in level layers, and progressing without interruption, and in such order as specified, and as may be directed from time to time.

215. In all cases where the necessary ironwork, &c., is not in readiness when required, the works or portions of same thereby effected, shall be stopped until all materials and articles necessary have been provided, approved, tested, and delivered at the site of the works, and any delay in the prosecution of the work so caused, and any damage or injury ensuing to the works and adjacent works, streets, lands, fences, buildings, &c., in consequence of such stoppage and delay, shall be entirely and solely at the risk and cost of the Contractor.

216. Should the Contractor fail to provide and deliver the whole or any portion of the foregoing cast-iron, gun-metal, and wrought-iron work, or straight and curved pipes, special castings, grates, valves, cover-plates, brackets, thimbles, plates, &c., where and when required, as specified in clauses 214 and 215, then the Engineer shall have the power to supply the same from any other source at Contractor's risk and cost; and all additional costs and charges, including cost of patterns, over and above the Contract prices shall be borne solely by the Contractor.

*Wrought Ironwork, Gun-metal Work, and Cast Ironwork.*

217. The works under this heading comprises all cast and wrought ironwork required in the construction of all storm-water channels, main and branch sewers and outfall works, as:—Lattice wrought-iron girder bridges, oval and circular wrought-iron aqueduct tubing, cast-iron hinge-bearings on rollers, cast-iron cylinders for bridges, buildings, precipitating wells, &c.; wrought-iron bracings, wrought-iron saddle-girders, cast-iron bearing plates, expansion joints, thimbles, cast-iron oval and circular, spigot and faucet and flanged, straight and bent pipes, wrought-iron roofs, steam engines, air-compressors, pumps, ejectors, steam-boilers, air-vessels, tanks, shafting, pulleys, brakes, gearings, winches, travelling cranes, penstocks, street-boxes, wrought-iron platform gratings, valves, gas-checks, wrought-iron hand-railings, cast-iron ventilating grates, manhole covers, flushing flaps, cast-iron grooves for stop-plates, landing plates, wrought-iron ladders, gully-gratings, scupper-boxes, &c. The whole of the wrought ironwork and castings to be provided with all gun-metal work and castings of any other description, pig lead, spun-yarn, and other jointing materials, all rivets, screw-bolts, anchor-bolts, lewis-bolts, together with all carriage, plant, hoisting tackle, &c., as specified in clause 40, and all labour required in testing, fitting, fixing, setting, erecting, placing in position, laying and jointing the whole of the hereinbefore described ironwork complete, in strict accordance with the specification and the dimensions and patterns shown on the Drawings, and any details which the Engineer may provide during the progress of the Contract; and the Contractor shall only be entitled to payment of the weights returned in the Schedule of Quantities at the various prices set forth therein, and payments will not be made for any excess on such weights.

*Wrought Ironwork.*

218. All wrought-iron spindles, bolts, L, T, and U irons, flat and round bar, plates, straps, axles, pins, anchor-bolts, rolled girders, nuts, washers, rods, rivets, holding-down bars, gratings, frames, keys, chains, &c., to be of the best description and quality, free from scales, blisters, laminations, and all other defects, of approved manufacture and workmanship, with square arrises, and of the exact dimensions and forms shown on Drawings. The greatest care to be taken in any welds to ensure perfect soundness, and the Contractor to be at the expense of any test which the Engineer shall require to test such welds as being made perfect. All plates, bars, channel-irons, rods, &c., to be perfectly true and of even uniform thickness; all angle irons and bars to be sound, uniform, and regular on edges; all joints and edges to be truly planed to the dimensions on Drawings; all portions fastened with rivets, screws, or bolts, to fit closely together; all wrought-iron parts to be rolled or forged out of one piece, unless otherwise specified and directed; all covering-plates, wrappers, angle, T, L, and plate, bar irons, &c., to be truly cut at ends, to ensure a perfect fit; all screw-bolts and screws to flanged pipes, valve spindles, and wrought ironwork of every description, to be of the exact diameters and lengths required and shown on Drawings, with hexagon heads and nuts, unless where otherwise directed. Ends of spindles, shackles, &c., to be forged with eye-holes, and holes for male and female joints of the exact forms. All bolts, handles, hand-rails, spindles, keys, chains, pins, axles, bars, crosses, &c., to be forged with protecting necks, and welded with ends of enlarged diameters or otherwise for screw-ends, and made of the exact shapes, forms, dimensions, lengths, widths, and diameters shown on Drawings, with angular and square threads, as the case may be, to all bolts, spindles, &c., with the correct pitch, angle, and depth, all portions fastened with bolts and rivets to fit closely together. The chains attached to blades of penstocks, and the whole of the wrought-iron gratings, channel-irons, &c., connected therewith, wrought-iron girders to working platforms, handrails to platforms and stairs, to be galvanized before being fixed in the works. All lewis and anchor-bolts to be fixed in walls in the exact positions shown on Drawings, and as shall be directed. Wrought-iron galvanized 1 inch diameter tubing for hand rail at mouth of shaft, where shown on Drawings, and round spiral staircase in shaft, to be fitted and fixed in position, bent, screwed at ends, between cast-iron standards and holdfasts let into circular brick wall, joined together with union screws as shown. Handrails of the same tubing and make to be fixed and fitted between wrought-iron standards along working platform for raising and closing penstocks in shafts.

219. Wrought-iron platform gratings over wells of manholes at inlet and outlet ends of syphon to be made of 2½-inch x 1-inch hinge bars, forged with circular projecting necks, and 1½ inch diameter hinge-pins, of ½-inch x 2½-inch flat bar iron framing at sides and ends, forged and bent and riveted on to ends of hinge bars, as shown. The two longitudinal bars to be pierced for reception of ¾-inch square cross bars, the latter to be spaced as shown, and riveted on to longitudinal bars. The gratings to rest on channel-iron girders, hinge brackets, &c., built into walls of wells, and riveted and spaced as shown.

220. *All joints in plate, angle, T irons, &c.*, to be made only in such positions as shown on Drawings and where directed; and all covering plates, wrappers, T, and angle irons to be truly cut at ends to ensure a perfect fit.

221. *All screw-bolts and screws* to flanged pipes, penstocks, valves, all other castings and wrought ironwork of every description, to be of the exact diameters and lengths shown on Drawings, with hexagon heads and nuts, and to be angular threaded with the correct pitch and angle of the Whitworth screw.

222. *Joints of shafts*, spindles for penstocks, axle shafts for strainers and traveller, engines, &c., to be made by said shafts being truly turned and cut at ends, and cast-iron flanged and turned sockets, with turned spigot and faucet, the internal diameter of socket turned exactly and slightly of less diameter than ends of shafts. Sockets and ends of shafts to be grooved, as shown, for steel key. Sockets to be heated and then fitted on to ends of shafts with keys, after which the flanges to be bolted together, forming coupling as shown on Drawings.

223. *All joints and working parts* of wrought-iron on penstocks, valves, strainers, standards, engines, travelling cranes, travellers, gratings, troughs, louvre shutters, brackets, &c., to be turned, scraped, or ground and glazed bright, as the case may require, and as shall be directed.

224. *All handles and levers* for working penstocks, valves, strainers, travellers, travelling cranes, &c., to be ground and glazed bright.

225. The rivets and bolts to be made of the very best quality of iron, and to be tested both for direct tension and hot shortness. The rivets throughout to be made from  $\frac{1}{2}$ -inch,  $\frac{3}{4}$ -inch,  $\frac{1}{2}$ -inch,  $\frac{7}{8}$ -inch, 1-inch,  $1\frac{1}{4}$ -inch iron respectively, with heads and necks, as shown on Drawings. All screw-bolts and screws to flanged pipes, other castings, and wrought-iron work of every description to be of the exact diameters and lengths shown on Drawings, with hexagon heads and nuts, the threads to be accurately screwed to Whitworth's standard. The Engineer may require any holes to be drilled and the bolts turned for same, or he may order bolts to be substituted for rivets, or other changes of the kind, in such places as he may consider necessary, without extra charge.

226. All rivet, bolt, and screw-holes, to correspond as to diameter and position with the Drawings, and to be carefully drilled parallel and at right angles with face of work. All the holes in booms of main girders, bearing plates, lattice bars, wrought-iron aqueduct pipes, rolled L, channel, T, and flat bar irons to be drilled—the respective pieces being clamped in their proper positions and secured under drill and bored right through; holes in cylinder bracing, cross girders, and wind bracing girders may be punched. No drifting or rimering to be done without the consent of the officer in charge, and then rimering only when the plates can in no other way be made to coincide. Holes which are directed to be punched or drilled at the building site to be about  $\frac{1}{16}$ -inch narrower than the diameter of the rivet required, so as to insure a good fit after its being enlarged with the rimer. Where several holes meet each other in the parts to be united, a horizontal dislocation of not more than 5 per cent. of the diameter of the hole is allowable, the hole then to be made perfectly equal with the rimer, and not by filing on one side, and rivet bolts of proportionately large size to be used in holes thus enlarged.

227. All rivets to be inserted at a bright heat, after being carefully freed from scales, into the duly cleared holes, to be quite firm after the head is completed. If not firm, rivets to be at once removed and replaced by others, and of larger size when directed. In putting together parts, care to be taken that none of them are forced into one-sided tension; any portions distorted in riveting the connections to be at once loosened and the faults remedied. All rivets to be finished with cup heads, and when countersunk the sinking to be drilled and the heads to be finished perfectly flush. All rivets and heads of bolts to be countersunk where plates when fixed will bear on other work, and where they form the inner surfaces of aqueduct pipes. All riveting to be done in the neatest and most workmanlike manner.

228. Wrought-iron gratings to be of the exact dimensions, straight or curved, as the case may be, the bars spaced and riveted as shown, all bars to have rounded-off top surfaces. All hooks, rings, and chains attached to flushing valves, &c., to be galvanized before being fixed in the works.

229. Wrought-iron ladders in lengths shown on Drawings, and as may be ordered, consisting of  $2\frac{1}{2}$ -inch x  $\frac{5}{8}$ -inch uprights, spaced  $13\frac{3}{4}$  inches apart, and  $\frac{7}{8}$ -inch round bar rungs spaced 12 inches from centre to centre. Joints of uprights to occur only at supports, where directed. Supports, spaced as shown, to consist of two 6-inch x 3-inch x 3-inch x  $\frac{3}{4}$ -inch channel irons fixed to uprights with  $\frac{3}{4}$ -inch screw-bolts, stiffened off at ends, at top and bottom, with  $\frac{1}{4}$ -inch plates varying from 12 inches to  $13\frac{1}{2}$  inches in length, riveted on to top and bottom flanges of channel irons, as shown. Projecting ends of supports are for walling into sides of shafts.

230. *The whole of the wrought ironwork* hereinbefore specified to be of first-rate quality and workmanship, of the exact forms and dimensions shown on Drawings, and any details which the Engineer may provide during the progress of the Contract. Wrought ironwork not to be more than 3 per cent. below the estimated weight; if below the 3 per cent. margin, wrought-iron work will be condemned, and if above the estimated weight, the excess weight will not be paid for.

#### *Gun-metal Work.*

231. All portions on Drawings in nuts, bolts, shackles, bearings and working parts, nuts and naves of wheels, seatings of valves, penstocks, standards, hangers and brackets, and all other brasses in working and lifting gear, &c., tinted yellow, to be made of gun-metal. The gas-check flaps to be of Muntz or Delta metal.

232. *The gun-metal required* throughout these works to be an alloy composed of eight parts of copper to one part of tin, unless otherwise specified. The whole of the castings to be solid and perfectly sound, and free from all honeycomb, holes, or other defects.

233. All spindles to be cast on end, having a riser on top of each not less than 3 ft. in height, after which they are to be turned and finished to the exact lengths and diameters; to be straight, and work true in stuffing boxes, nuts, glands, &c.

234. *All screw ends and nuts*, unless where otherwise specified and directed, to be angular, threaded with the correct pitch and angle; and all naves of wheels, nuts for lifting gear in standards, and for offset valves, bearing nuts of end brackets for shafts, &c., where shown, to be turned with the square thread and correct pitch and angle of the Whitworth screw.

235. *All nuts, naves, pins, lubricators, shackles, cycholes, sockets, hinges, hinge-bolts, guide and other brasses in plummer blocks, brackets, standards, valves, penstocks, &c., to be truly bored, turned, faced, and finished to the exact lengths and diameters, shapes, and forms, and to be straight and work true on all bearings and working faces.*

236. All projecting rims, straps, eyehole brackets, &c., to be provided and fitted on to gas-check flaps; to be cast of the sizes, shapes, and forms as shown on drawings; to be faced on surfaces of contact, and to be soldered on to the flaps with zinc, after having been placed truly in position, and then riveted as shown. All gas-check flaps to be of the exact thickness shown on drawings. When the rims and straps for each flap are not cast in one casting, then they are to be cast in parts as shall be directed; and prior to fixing such parts in position, they are to be truly fitted and jointed together. All such joints to be scarfed and braced, as viz.—the edges filed or scraped clean and bright, covered with spelter and powdered borax, and exposed in a clear fire to a heat sufficient to melt the solder, which, for all scarf-joints, to be an alloy composed of four parts of copper to three of zinc. All scarf-joints to be placed where directed. All hinge axles to be truly turned. All links of shackles to be made with one joint, scarfed, brazed, and riveted together.

At expansion joints of large cast-iron pipes, where shown, a gun-metal packing ring,  $2\frac{1}{2}$  inches deep and  $\frac{1}{4}$  inch thick, or any other size as may be specified, to be provided, placed, and fitted round spigot end of pipe, carefully set up flush with end-face of inner recess of faucet.

237. All portions of castings, as exposed surfaces of nuts, hinge-bolts, hinges, shackles, rims, straps, brackets, hooks, links, &c., to be left as they leave the mould, but to be cleaned, and all irregularities to be removed. All other portions of gun-metal work to be truly faced on all surfaces. All gun-metal facings and fittings to be truly turned and faced on all surfaces, to fit exactly, to be forced into positions, screwed where shown, and to sit perfectly firm and true.

238. All gun-metal work to be of the exact forms and dimensions shown on drawings, and all workmanship to be of first-rate quality, and satisfactory to the Engineer.

#### *Cast Ironwork.*

239. The whole of the castings of pipes, inlet and outlet pipes, thimbles, short, flanged, and plain ends, couplings, standards, bends, branches, junctions, guide-pipes for valve spindles, socket-pipe-frames with grooves, for penstocks, landing plates and frames, and gratings, valves, grooves, covering plates, street-boxes, gas-check frames, girders, guide brackets, cylinders, hinge-bearings on rollers and without rollers, bearing plates, bed plates, sliding plates, expansion joint-pipes, faucet and spigot and flanged short pipes, saddles, flap-valves, man-hole covers with ventilating grates, scupper-pipes with gratings and cover-plates, &c., to be cast of No. 2 pig-iron, or of a proper mixture of No. 1 and No. 3 pig-iron according to the quality of the iron and the nature of the pattern; said iron to be of the best quality, tough, close-grained, and capable of being chipped and drilled without difficulty, perfectly sound, free from all cold shuts, honeycomb, holes, or other defects; to be cast in dry sand moulds, unless where otherwise directed; and the whole of the castings of the pipes, plates, ventilating grates and frames, penstocks, flushing valves, junctions, branches, bends, street-boxes, circular-plates (excepting penstocks, valves, gas-check frames, and where otherwise specified), as soon as they have been cast, to be properly cleaned and then heated, and whilst hot to be dipped or coated in gas-tar.

240. All castings to be true in sectional form, straight longitudinally where shown to be so, or of such shapes, projections, curves, angles, and forms as shown on drawings; and each portion of such castings to be of equal strength and of the specified thickness throughout its respective length.

241. The external and internal surfaces of all castings to be perfectly clean and smooth and in strict accordance with sections.

242. All cylinders and pipes to be cast vertically, with the socket or flanged end downwards; to be straight longitudinally, and of equal strength and thickness throughout the entire body of the pipe; all straight pipes with faucet, or flanged, and with spigot ends, to have the latter cast 9 inches longer than shown on drawings, all cylinders to be cast with such head of metal as shall be directed; and, after the castings have been cleaned and coated, the head of metal over the cylinders, and the 9 inches at spigot ends of pipes to be cut off, so as to leave same perfectly square on section and true and equal in circumference, so as to fit the socket, leaving an equal space all round of the exact thickness shown on drawings for lead joints.

243. The faucet of each pipe or casting to be perfectly square and true, of the exact dimensions shown on drawings, and to be cast with a groove of the size and depth as required by the Engineer. The faucet of large circular and oval pipe and thimble for expansion joints to be cast as shown with an inner narrower faucet and projecting rim, and both inner sides of narrower faucet and of projecting rim to be truly turned and polished.

244. The feathers and flanges, where such are shown, to be of the exact widths, forms, and thicknesses, and all surfaces of contact to be planed and turned to true and even faces. All flange-joints, unless where otherwise directed, to be made tight with red lead. All bolt-holes to be drilled of the exact sizes, and spaced as shown.

245. All spigot ends for expansion joints, where shown on drawings, to be cast with a recessed end for reception of wrought-iron ferrule on inner face, and a corresponding projecting face on the outside, said recessed inner and projecting outside faces to be truly turned and polished to the exact cross-section for reception of lead joint, gun-metal packing ring, and wrought-iron cover-plate, as the case may be.

246. The thimbles for expansion joints for large, circular, and oval pipes, to be cast with faucets as described in clause 243, and, with web-plates, ribs, and bed-plates cored out, with bosses truly bored for heads of anchor-bolts; the whole to be of the exact shapes, forms, and dimensions, as shown on drawings.

247. The flanges of gas-check frames to be provided with a projecting face, planed and turned to true and even faces, of the exact dimensions shown on drawings.

248. All holes in hinge-brackets at top of gas-check frames to be truly bored to the diameter required for the reception of hinge-bolts.

249. All bolt-holes to be of the exact sizes, spaced as shown, and to be truly bored and turned.

250. All flange-joints, unless where otherwise directed, to be made tight with red lead.

251. Frames of penstocks to be of the different parts, and of the exact shapes, forms, and dimensions, with all screw and bolt-holes, and the exact circular valve openings, with flanged end at back, projecting rim round opening in front and at sides of same, with cap-pieces on top, upright slide frames, flanged, bolted together, cored out with bosses and web-plates between, to receive front guide-plate, with inner projecting faces screwed into bosses of upright frames. Guide-pieces, with flange and web, faced on surface of contact, with boss in centre, the latter truly bored and turned for reception of brasses and spindle to pass through, fitted with bolt-holes, and screwed on to guide plates.

252. All landing and other plates and grates to be complete with ribs, flanges, hinged and other lids, close or ventilating covers, girders of the exact shapes, forms, dimensions, projections, recesses, &c., as shown on drawing.

253. Valve blades to be of the exact diameters, forms, shapes, and dimensions, with circular projecting faces back and front, and vertical projecting faces corresponding with and bearing on projecting faces of guide-plates and framing, and vertical racks or brackets, with eye-holes truly bored for fixing foot of valve spindle as the case may be. All seatings to be truly faced and bored out to receive gun-metal faces, and all stuffing boxes, glands, foot-step bearings, and journal-boxes, to be bored and turned and polished where directed.

254. All girders, brackets, standards, wheels for chains, and balance weights, tubes, boxes, glands, plummer-blocks, and boxes for lifting or turning spindles, as the case may be, foot-brackets for upper spindles, flanged pipes for spindles, street-boxes, &c., of the different parts, and of the exact lengths, forms, and dimensions, to be truly faced, turned, and polished at all joints, bored and turned for reception of screws, nuts, and brasses, with all bolts and screw-holes of the sizes shown, bolted at all joints, and all faces of flange-joints and working parts and other faces, where directed, to be truly planed, turned, faced, scraped, to the necessary surfaces.

255. All penstocks, scour-valves, &c., to be carefully and truly fitted and fixed together, with all lifting and turning-gear, gun-metal facings, spindles, wrought-iron work, street-boxes, screws, bolts, nuts, &c., complete, in strict accordance with drawings and dimensions figured thereon, and all valves to close watertight.

256. The frame and flap-valve of flushing valve, with bracket, pulley, &c., to be complete, with wrought-iron galvanized chain, to be cast of the exact diameter, shapes, forms, and dimensions; the flushing valves to have a projecting rim all round, the inner face truly faced and turned to a "V shape" of the exact dimensions, so that when the flap is placed in position the edge of the V rim to lie exactly against the centre line of the square tuck or lead-packing of opposite groove in frame, planed out to a dovetail for the purpose.

257. Couplings, flanged, turned, bored, faced, with turned and bored spigot and faucet, and bolt-holes of the exact diameters, to be of the exact forms and dimensions for making joints of valve-spindles, &c.

258. Cast-iron frame with 22-inches diameter opening, with ventilating or non-ventilating lid to fit into easily, complete with sawn and tarred ironbark wood-bricks fitted into panels, and cast-iron circular dirt-box 8 inches deep, the whole to be in strict accordance with drawings and dimensions shown thereon.

259. Scupper-pipes, with cistern-heads, and grating-cover for inlets of scupper-pipes, and plain cover-plates over inlets of scupper-pipes, as shown, to be cast to the exact shapes, forms, with the exact openings, and to the dimensions figured on drawings.

260. All grooves for stop-boards to be cast with a connecting ledge at top, to be cut off when casting is completed. All grooves to be cast true, of the exact dimensions, shapes, and forms; and all working parts of frames and slide-valves, grooves, and stop-plates, to be truly planed and faced so as to fit, but not too tight. All stop-plates to be complete with wrought-iron shackle, 12-feet galvanized chain, hook and rings.

261. The whole of the cast-iron work hereinbefore specified to be completed in the most workman-like manner, in strict accordance with the drawings and dimensions figured thereon, and such directions and other details which the Engineer may provide during the progress of the works; and all gas-checks, penstocks, valves, man-hole covers, landing and other grates, pipes, bends, standards, brackets, couplings, street-boxes, grooves, &c., with all working, turning, and lifting gear, and with all wrought-iron and gun-metal work, after having been fitted and fixed together, to be fixed truly in position as shown on drawings, and to be left in perfect working order, and all lifting and turning-gear to work freely without shake.

262. Castings not to be more than 3 per cent. below the estimated weight; if below the 3 per cent. margin, castings will be condemned, and if above the estimated weight, the excess weight will not be paid for.

#### *Tests of Wrought-iron and Steel.*

263. The tests for rolled iron shall be as follows:—A piece of iron of such width as shall not exceed 2 inches, or exceed 1 square inch in cross-section for a sufficient length, to have 10 inches under actual tension, shall be cut, as directed by the Engineer, from any plate or bar about to be used on the work, and the following tensile stresses shall be applied:—

	Stress per sq. in. without fracture.	Ultimate elongation.	Ultimate contraction of area.
Rolled girders... ..	20 tons	8 per cent.	10 per cent.
Plates—across grain ... ..	18 "	4 "	6 "
with grain ... ..	22 "	10 "	12 "
T, L and bulb T bars ... ..	22 "	10 "	15 "
L bars... ..	23 "	12 "	18 "
Square, flat, and round bars, and bolts over 4 inches sectional area ...	23 "	12 "	18 "
Square, flat, and round bars, and bolts up to 4 inches sectional area ...	24 "	12 "	25 "

Iron within 10 per cent. of above specified stress will be accepted if the contraction of area and elongation are proportionally higher.

The wrought-iron to be further tested for ductility, as follows:—

A plate planed and rounded on both edges, about 4 inches wide and 1 foot long, shall bend cold over a slab, the corner of which is rounded to  $\frac{1}{4}$ -inch radius, for the following angles, without showing any sign of injury or fracture:—

1-inch plate for	...	...	...	With grade.	Across grade.
				15 degrees	5 degrees
$\frac{3}{4}$	"	...	...	25 "	10 "
$\frac{1}{2}$	"	...	...	30 "	12 "
$\frac{1}{4}$	"	...	...	35 "	15 "
$\frac{3}{8}$	"	...	...	52 "	20 "
$\frac{1}{2}$	"	...	...	70 "	30 "

264. Rivet-iron must be capable of being bent cold, until the sides are in close contact without sign of fracture on the convex side.

265. The tests for rolled steel shall be as follows:—

The steel to be of a mild quality, having an ultimate tensile strength, either lengthways or crossways, of not less than 26 tons, and not more than 31 tons per square inch, on a test bar, cut in a similar manner to those for rolled iron, with a minimum elongation of 20 per cent., and a minimum contraction of area of 40 per cent.

Strips cut from any steel plate, angle, or bar, to be heated to a low cherry red, and cooled in water of 82 degrees Fahrenheit, must, when cold, stand bending double round a curve, of which the radius is not more than one-and-a-half times the thickness of the plates tested, without showing any sign of injury or fracture.

#### *Tests for Cast-steel.*

266. The tests for cast-steel shall be as follows:—

Bars turned to  $\frac{3}{4}$  inch diameter for a sufficient length to have 5 inches under actual tension, shall have an ultimate tensile strength of not less than 26 tons per square inch, and a minimum elongation of 18 per cent.

#### *Testing Cast-iron.*

267. During the progress of the works, the Engineer, or any Inspector of Works appointed by him, shall be authorised at any time to examine all operations carried on at the foundry or other place where the wrought and cast ironwork, &c., comprised in this contract, are made; and during the progress of the works, at any time the Engineer or his inspector shall be authorised to cause, from the iron of any cupola, used for casting these works, a straight bar to be cast vertically 3 ft. 6 in. long, and 2 inches deep, by 1 inch in width, to be placed on bearings 3 feet apart, and to be submitted in the centre to a weight not exceeding 28 cwt., with a deflection not less than  $\frac{3}{4}$  inch before fracture, and if said bar does not stand this test to the satisfaction of the Engineer, or his inspector, then the whole of these castings which have been cast of iron of the same quality, shall be at once condemned and rejected.

268. All castings of every description, before they leave the foundry, to be carefully examined and weighed, to be slung on chains above ground, and to be sounded with a hammer, and they are again to be carefully examined, slung, and sounded with a hammer when delivery of same is taken at the site of the works.

269. All straight pipes required in the contract, before delivery of same is taken on the works, shall be, at the foundry or at the site of the works, as shall be directed, duly proved under hydrostatic pressure equal to a column of water of 200 feet, and when under pressure to be thoroughly sounded quickly all over with a hammer of not less than 4 lb.

#### *The Cost of Tests of Wrought and Cast Iron.*

270. The whole of the expense incurred in testing the wrought and cast ironworks, &c., hereinbefore described, including testing machine, carriage, plant, and labour of every description, shall be borne solely by the contractor; and any part of the wrought-iron and gun-metal work, and any of the pipes, castings, &c., injured or broken by the testing, shall be immediately replaced by new and sound wrought-iron, gun-metal, cast-iron pipes, or other castings, to be again tested as before described, until the whole have been tested to the entire satisfaction of the Engineer.

#### *Weights.*

271. The contractor, at his own expense, to provide means of accurately ascertaining in the presence of the Engineer, the weights of all pieces of the metal-work, and all portions to have weights legibly marked thereon in white paint.

#### *Security or Safety of Ironwork provided by Government or Contractor.*

272. Should any engines, cylinders, pipes, valves, penstocks, gas-checks, bends, special castings, gratings, wrought-ironwork, &c., comprised in this contract, and provided either by Government or the contractor, be lost, stolen, destroyed, broken, or otherwise injured during the loading, transit from the foundry to the works, unloading, after delivery has taken place at the various sites of the works, placing, building in, erecting and laying same into position in the works of every description, as the case may be, in consequence of careless or incautious jointing, or cutting out of joint, insufficient sheds or other covering to protect said articles of ironwork from the weather or from theft, or from any other cause while in the possession of the contractor; or should, in consequence of any breakage of plant, carriage, staging, &c., any accident occur to the works, public or private property, to any person engaged on the works or otherwise, the contractor shall, in all these cases, be held solely responsible; and the Engineer, whose decision shall be held final and binding on the contractor, shall have the power of valuing the cost of such breakage, accident, injury, loss, theft, &c., and deduct same from any moneys that may be, or may become due to the contractor on account of this contract.

273. Contractor shall likewise keep all ironwork in good and sufficient repair, and renew all moving and working parts, which may have become worn out, to the satisfaction of the Engineer during the whole time it is under his care.

274. All ironwork supplied by Government to the contractor to be delivered free of charge at the various sites of the works where they are required. For each article so delivered the contractor shall give

give a written receipt, after which he shall be held solely responsible for same; and shall, if any such article be lost, stolen, damaged, or destroyed, refund the cost to the Government, as specified above in clause 272.

275. All ironwork, &c., provided by the Government, which, at the completion of the contract, by direction of the Engineer, has not been built or permanently fixed in the works, shall be conveyed by the contractor to the site of the Field Office, or as may be directed.

*Painting.*

276. *Wrought-ironwork.*—All wrought-ironwork (except where otherwise specified and directed) before leaving the foundry to be scraped and cleaned, and well coated with boiled linseed oil; and, prior to being fixed in position, excluding internal surfaces of circular and oval wrought-iron tubing, and excepting all working parts, after it has been cleaned and scraped free from scales, &c., and inspected, to receive two coats of anti-corrosive paint over all surfaces, and after being fixed in position, to be finished with two coats of best oil-colour, in approved tints.

All bolt-heads, washers, nuts, straps, and all other exposed ironwork of timber bridges above level of kerbs, ordnance fencing, &c., to be finished with two coats of black varnish instead of oil-colour.

277. *Cast-ironwork.*—The whole of the cast-ironwork to be properly cleaned immediately after completion; and, after being inspected, except where otherwise specified, to receive over all surfaces two coats of anti-corrosive paint (except working parts and joints), and to be finished afterwards with two coats of best oil-colour, in approved tints.

This includes all parts of cylinders above water-level or surface of the ground, as the case may be, outside exposed surfaces of cast-iron thimbles, expansion joint castings, short and long pipes, and any other castings on lines of aqueducts.

278. *Carpenter's and Joiner's Work.*—All carpenter's work of timber bridges above level of kerbs, and all ordnance fencing above ground, handrails, travelling cranes, &c., and all joiner's work in frames, transoms, doors, windows, stairs, &c., to be properly prepared, knotted and primed, and painted with best oil-colour four coats, finished with approved tints. All tenons, mortises, notches, halvings, joints, scarfs and butting surfaces, to receive two coats of approved paint before being fixed in position. Frames, transoms, windows, and entrance doors to be finished bronze or as may be directed.

No paint to be applied during or immediately after wet weather, or while surface of timber or metal-work is wet; and an interval of forty-eight hours must elapse between each application.

*Tar Varnish.*

279. The whole of the interior surfaces (working parts and joints excepted) of the wrought-iron circular and oval tubes, cast-iron thimbles, expansion joint castings, short lengths of cast-iron circular and oval pipes, &c., for lines of aqueducts, after having been placed in position in the works, to be thoroughly cleaned of all scales, rust, and previous coating of linseed oil or paint, &c., and then to be coated twice with a tar-varnish composed of 30 gal. of coal tar, fresh, with all its naphtha retained, 6 lb. tallow, 1½ lb. resin, 3 lb. lamp-black and 30 lb. fresh-slacked lime finely sifted; all materials to be approved of and then to be intimately mixed, as shall be directed, and applied hot, like paint.

*Tarring.*

280. All cast-iron cylinders, pipes, short lengths, bends, junctions, and any other casting, &c., which will be placed or layed under water, or which are to be covered up in earth, concrete, &c., and all ventilating and non-ventilating man-hole covers, street boxes, flushing-flaps and frames, scupper-pipes, precipitating tanks, groves, landing plates and frames, grates, cover-plates, gully-grates, &c., as soon as they have been cast and inspected, to be properly cleaned and then heated, and whilst hot to be dipped or coated in hot gas-tar twice, unless otherwise directed.

281. All flat, segmental, and buckled plates, rolled girder, bulb T irons, &c., of decking of culverts, bridges, &c., over storm-water channels and sewers, before being placed in position, to receive one coat of tar, and after erection is completed, to receive a second coat; the tar to be coal tar, mixed with kerosene in the proportion of three of tar to one of kerosene, and applied hot.

Kerbs, flooring planks, timber in girders, longitudinal stringers, cross-girders, corbels, capsills, sills, piles, pier-bracing, abutment platforms, ends of handrail posts below level of tops of kerbs, to receive three coats of tar and composition; the first coat to be all tar, laid on hot, the second and third coats to be composed of seven parts coal tar, four parts of Stockholm tar, and one part of pitch, thoroughly melted together and applied hot, the last coat on top of deck to be well sprinkled with a layer of clean sharp sand and lime. All joints and butting surfaces to be well paved with the hot composition before fixing, and in finished work the composition to be poured into interstices and joints. Any timber inaccessible for tarring when fixed, to receive three coats before being placed in position.

No tar to be applied during or immediately after wet weather, or while surface of iron or timber is wet; and an interval of forty-eight hours to elapse between each application.

*Notice for Inspection.*

282. The contractor shall give notice to the Engineer of the commencement or completion of the undermentioned work, and formally submit it for inspection before proceeding to place, execute, or cover it up, viz. :—

Excavation of trenches and tunnels in hard and soft rock, shale, ironstone, earth.

Piling, sheet-piling, timbering.

Excavation for foundations, pipe-trenches, cylinders, tanks.

Withdrawing of timber in excavation, and cutting off piling and timbering under water.

Laying of foundations.

Laying of pipes and placing, building in, and fixing in position all ironworks.

Placing centering in position, and removing centering.

Keying of arches.

Striking of centres.

Placing concrete boxes in position, and shifting of concrete boxes.

Filling in round all works, into pipe trenches, and all other excavations.

Filling in low ground at sides of storm-water channels into embankments.

Commencing concrete work, brick work, masonry, carpenter's work, and commencing cement facing.

233. The contractor shall also keep a register, and give daily written notice to the Engineer of, viz. :—

- Number, length, and dimensions of sawn piles put on the ground.
- Number, length, and minimum diameter of round piles put on the ground.
- Actual length of piles before ramming.
- The day each pile is set.
- Weight of ram used for pile-driving.
- Depth of each pile driven at the last stroke.
- Total depth to which each pile is driven.
- Number of men employed at pile-driving.
- Number and weight of all prepared items of wrought ironwork brought on the ground.
- Number and weight of all prepared cast ironwork, valves, penstocks, travelling cranes, frames, &c., put on the ground.
- Number and weight of all cast-iron pipes, bends, T pieces, distance pipes, inlet and outlet pipes, &c., put on ground.

*Testing the Whole of the Works.*

234. It is to be distinctly understood that, on completion of the works, the Engineer shall have the power of ordering and having the main sewers, or portions of same, &c., closed in such order as he shall direct, and the whole of the sewers and aqueduct tubes, &c., filled with water for such a time as he may deem necessary, for the purpose of testing the works; and any injuries, faults of whatsoever description, leakage, breakage, &c., of valves, tubes, pipes, iron, masonry, brickwork, concrete-work, &c., caused by or detected in consequence of such testing, to the work of every description, joints, &c., shall be at once repaired, replaced by new work where ordered, and made good; the whole expense incurred in plant, materials, and labour required to replace with new work, effect repairs, and make good any faults, leakage, damage, or injuries to any portion of the works, shall be borne solely by the contractor; and, after the completion of these repairs, replacing with new works, and making good any damages, injuries, faults, &c., the whole of the works shall again be tested, as before described, until they shall have been proved perfectly watertight, sound, clean, and in first-class working condition, to the entire satisfaction of the Engineer. If the result of the test or examination be satisfactory the work will be formally taken over by the Engineer, who will issue a certificate to that effect, whereupon the period of maintenance shall begin.

*Junctions with other Contracts.*

235. If two different contractors execute simultaneously two adjoining sections of the works, they shall be held jointly and severally responsible for effecting a proper junction of the sections.

*Correctness of Information Supplied.*

236. It is hereby expressly understood that the contractor is bound to completely and thoroughly inform himself of every circumstance connected with or relating to the work, and of the correctness or otherwise of any information contained in or supplied by the drawings or specification; as he shall have no claim on account of any errors, omissions, or inaccuracies, that may be found in these documents after the contract shall have been signed, and since he has to provide in his tender for every contingency that may arise.

The contractor must himself compare the copies of drawings and specifications supplied to him, under clause 4 of the general conditions, with the original, as no claim will be allowed for any errors therein.

*Suspension of Works.*

237. On receiving a written notice to that effect from the Engineer, contractor shall suspend the whole or any portion of the works, as may be directed in such notice. He shall have no claim for loss or damage on this account, unless the suspension exceeds one month; and such suspension shall in no wise vitiate the contract, but a commensurate extension of time for completing the works will be granted to the contractor.

*Compensation for Alteration of Design.*

238. Contractor shall not be entitled to claim or receive any compensation whatever over and above payment for the actual increase of quantities at schedule rates, and, where there are no schedule rates, at such rates as shall be determined at the time by the Engineer for any additions to, deviations from, or alterations of the various designs comprised in this contract, as viz. :—

Variations in manholes, junctions, flushing chambers, &c., and in consequence of meeting with any existing gas, water, or sewer pipes or sewers, as referred to and in accordance with clause 109, the position of which it is impossible to ascertain until the ground for the construction of the works comprising this contract is opened up,—

- Variations in the extent and quantity of piling.
- " lengths of piles.
- " inclination of slopes and gradients.
- " lines of sewers and stormwater channels.
- " lengths of open trenches.
- " lengths of tunnels.
- " depth, shape, or size of excavation for sewer, storm-water channels, intersecting arrangements, &c.
- " depth, shape, or size of concrete or brick work of sewers, storm-water channels, intersecting arrangements, &c.
- " internal diameter of pipe-sewers.
- Any decrease in quantities to be deducted as provided for.

*Schedule Prices to include Contingent Services.*

239. That the price for providing, making, fitting, painting, coating, testing, and delivering, placing, and erecting each respective item of work enumerated in the schedule of quantities and prices hereto annexed shall mean and include the cost for each item respectively of all materials, excavation, filling, piling, carpenter's work, concrete, brickwork, masonry, cast-iron, wrought-iron, and gun-metal work, &c., patterns,

patterns, labour, carriage, workmanship, tools, painting, tarring, scaffolding, and plant of every description necessary for constructing, completing, coating, painting, tarring, testing, delivering, placing in position, erecting, &c., where specified, and maintaining each respective item of work in strict accordance with specification and drawings.

*Measurements and Payments.*

290. The contractor shall be present at all measurements, and, if required, assist in making the same. If he fail to attend after twenty-four hours' notice in writing has been delivered to him of the superintending officer's intention to take measurements, and clearly setting forth the locality of such intended operation, the measurements made by the superintending officer shall be binding on the contractor.

291. On satisfactory completion of any portion of the works, and at all other suitable times, the dimensions of such work shall be measured by the superintending officer, and recorded in a book kept for that purpose; and these quantities shall serve as the basis for arriving at the contract sum on completion of contract.

292. For the purpose of making progress payments, the dimensions of still unfinished portions of the work will be measured in a summary way monthly, or as near as may be, but without prejudice to the ultimate acceptance or rejection of such unfinished portion of work.

293. The contractor shall sign the measurement book each month, before the monthly progress payments are made, accepting the detailed quantities, prices, and amounts. Should he, however, disagree with the detailed quantities, prices, and amounts, he is at once to state in the measurement book in what particulars he disagrees, and the grounds of his disagreement; and unless this is done it is to be distinctly understood that the detailed quantities, prices, and amounts, as recorded in the measurement book, shall be binding.

294. The final measurements, based upon the measurements made during the progress of the works, will be prepared within thirty days, or as nearly as may be after the completion of the work, as provided in clause 284; and the contractor will be required to accept such measurement before any part of the retention money will be paid, or the fixed deposit returned.

295. As provided in clauses 217, 230, and 262, the contractor shall only be entitled to payment for ironwork, &c., as per weights in schedule of quantities annexed hereto, at the rate of prices set forth therein; and payment will not be made for any excess over such weights.

*Duties.*

296. In the event of any materials being imported by contractor for use on this contract, no refund will be made of any duties which may be legally chargeable on such materials; and the contractor shall bear and pay all duty stamps, licenses, building or surveyor's fees, or other charges or fees whatsoever, legally demanded by any municipal or other authorities.

*Payments of Royalties and Testing Fees.*

297. Before final payment is made the contractor must satisfy the Engineer that all claims for patent rights or royalties and testing fees have been paid.

*Jobbing.*

298. When desired by the superintending officer so to do, contractor shall furnish to said officer any skilled artisans, labourers, or carts with horses and drivers for the performance of such services as the aforesaid officer may desire to be performed in connection with, for, on, or near the works under the contract.

299. Contractor shall supply those artisans, labourers, &c., with the necessary plant and lighting, and shall be paid for all services thus rendered the full amount provided therefor in the schedule of prices under the head of "jobbing," at the end of every month, or as nearly as may be thereafter. The accounts for this "jobbing" shall, however, be rendered by contractor to the superintending officer or overseer in half-weekly intervals, that is to say, during the forenoon of every Monday and Thursday, failing which he shall lose all claim to payments for the jobbing performed by him during the preceding three days.

300. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

*Maintenance.*

301. During the whole time of construction and during the "period of maintenance" referred to in clauses 46, 50, 52, and 96 hereof, and in clause 32 of the General Conditions, contractor shall keep and maintain in good and sufficient repair all the works executed or in course of execution, and make good all injury or loss which may happen or occur to them, or to any materials, or plant, or anything else in connection with the works under this contract.

302. Even after the expiration of the period of maintenance, contractor will still be held liable for all defects in the works which were not visible, or which may have been kept secret at the time of the works being taken over by the Engineer, since he is, and hereby distinctly agrees to be, *responsible for all faults or neglects of, or all deception practised by his agent, overseers, or workmen, irrespective of the time at which such faults, neglects, or deceptions may be detected.*

This is the schedule to specification marked "B," referred to in our annexed bond to Her Majesty the Queen, dated the 22nd day of January, A.D. 1894.

Witness—HAROLD F. NORRIE.

CHAS. J. HENTY.  
R. L. SCRUTTON.

This is the schedule to specification marked "B," referred to in our annexed agreement with Her Majesty the Queen, dated the 22nd day of January, A.D., 1894.

Witnesses—  
T. C. LUMSDAINE.  
HAROLD F. NORRIE.

JOHN CARTER.  
FRANK MOORHOUSE GUMMOW  
(By his attorney, JOHN CARTER).  
D. G. SNODGRASS.  
GEORGE MADDISON.  
PETER EWING.

"C."

## GENERAL CONDITIONS.

*Interpretation of Terms.*

1. WHENEVER the terms hereafter explained in the present clause occur in these or any special conditions or in the contract or specification, they shall be held to mean, and shall mean, as follows:—

"Government" shall mean the Government of New South Wales promoting this undertaking.

"Minister" shall mean the Secretary for Public Works of the Colony of New South Wales for the time being.

"Engineer" shall mean the Engineer-in-Chief having the principal charge of the works, or the person acting as such for the time being.

"Superintending Officer" shall mean any person or persons who may from time to time be entrusted with the superintendence of the works on behalf of the Government.

"Contractor" shall mean the person or persons who contracted to execute the works.

"Special conditions" shall mean any "special conditions" hereto attached and forming part of the contract; and such special conditions shall be read with the general conditions as part and parcel of the contract.

"Schedule of prices" shall mean the rates at which the contractor has offered or agreed to execute the contract, where the same is based on a schedule of prices; and be the basis on which the value of any extra works or of any deductions shall be calculated, and progress payments made, whether the contract be one of a schedule of prices or a bulk sum.

"Plans" shall mean and include all drawings referring to the works and explanatory of, or supplementary to, the specification.

"Works" shall mean the works set out in the specification and plans, or, in the event of there being no plans in the specification only.

"Net claim" shall mean the sum claimed by the contractor after deducting therefrom the sum acknowledged by the Department to be due.

"Net award" shall mean the sum awarded on arbitration, after deducting therefrom the sum acknowledged by the Department to be due.

*Supply of Labour, Materials, and Plant.*

2. The contractor shall, except in so far as the specification may expressly state to the contrary, provide at his own cost and expense all labour, materials, and plant, and everything which the Engineer may consider necessary for the proper and complete performance of this contract. No materials or plant placed on the site of the works shall be removed therefrom, or otherwise disposed of, without the consent of the Engineer.

*Plans, Specifications, &c.*

3. The plans and specifications represent generally the form, dimensions, and description of the several works. Where any discrepancy exists between the dimensions as indicated by the scale and those marked in figures, the figures are to be considered as correct, and are to be taken in all cases in preference to the measurements by scale. Or if there be any discrepancy between the figures or dimensions, or the form of construction, or the material as indicated in the plans, and the dimensions and materials given in the specification, the directions of the specification shall be adopted; and in all cases of defective description, or any ambiguity, the explanation given by the Engineer shall be binding upon the contractor. Also, anything contained in the plans, and not in the specification, or anything contained in the specification and not shown in the plans, shall be equally binding as if it were contained in both. If neither specification nor plans contain any mention of minor parts, which, in the opinion of the Engineer, are reasonably and obviously necessary for the satisfactory completion of the works, such parts are to be provided by the contractor without any extra charge, as if they were specially mentioned, and shall be deemed to be, and hereby are, included in this contract.

All works described in, or implied by, the specification or shown in any of the plans, or set forth in any lists or tables thereon, or attached thereto, as well as those expressly provided for, are to be made and executed in every detail conformably to the several plans already prepared or which may be prepared hereafter for the purpose of this contract, in strict accordance with the provisions of the specification and conditions, and to the entire satisfaction of the Engineer.

*Copies of Plans, &c.*

4. A copy of all plans and specifications required by the contractor for carrying on the works will be provided by the Government, but must be returned before a final certificate for the work can be given. Any additional copies which may be required and are supplied by the Department shall be paid for by the contractor at a rate to be fixed by the Engineer.

*Setting out Works.*

5. The works will be set out—that is to say, all necessary centre lines and levels will be given to the contractor—except in the case of buildings, when in the absence of setting out, a block plan will be supplied, from which he must work; but the contractor must satisfy himself of the accuracy of the setting out, as no work incorrectly set out or improperly executed will be paid for.

*Protecting and maintaining Signals and Marks.*

6. All bench marks, pegs, and signals on the surface, and all alignments, and level marks underground put in by the Engineer or Superintending Officer for the purpose of checking the contractor's work, will be confided to the care of the contractor. He shall, at his own expense, take all proper and reasonable precaution and care to preserve and maintain them in their true position; in the event, however, of their being disturbed or obliterated by accident or from any other cause whatever, they may, if necessary, be replaced by the Engineer or Superintending Officer at the contractor's expense, and the cost thereof deducted from any moneys then due or thereafter becoming due to the contractor.

*Possession*

*Possession of Ground.*

7. In giving the contractor possession of the site it shall not be deemed that he is to have the exclusive possession, but only a limited possession, that is to say, such possession as will enable him to perform the works comprised in this contract. The Minister may at any time take possession of any portion of the works or ground or intended site of the works for the purpose of carrying on any other works or for any purpose whatsoever. The contractor must procure for himself all other land which he may deem requisite for any temporary purposes or for his own convenience.

*Access to Works.*

8. The Engineer, or any other person authorised by him, shall have free and uninterrupted access at all times to the works, and during working hours to any workshop or premises, not on the site of the works, where materials may be in preparation or stored for the purpose of this contract. The contractor shall give the Engineer all particulars as to the mode and place of manufacture of any of the materials proposed to be used in connection with this contract, and shall facilitate in every way the inspection of the same.

*Contractor's risk.*

9. The contractor shall take upon himself the whole risk of executing the works to the satisfaction of the Engineer, and in accordance with the plans, sections, and specifications.

*Contractor to be represented.*

10. The contractor at all times during the progress of the works, when he is not personally superintending them, must have a responsible agent or overseer in charge to receive instructions from the Superintending Officer or Engineer, and to represent the contractor for all purposes of this contract.

Any notice or any written instructions to be given or delivered to the contractor under this contract shall be deemed to have been so given or delivered when given or delivered to the contractor or his representative at the work, or left at the contractor's usual or last-known place of abode or business.

*Order of Procedure.*

11. The Engineer shall have full power to decide in what order in point of time the various parts of the work or works comprised under this contract shall be carried out.

*Power of Entry.*

12. The Engineer shall have the power, at his discretion, without vacating this contract, to enter upon, by himself or his agents, and make use of any part or parts of the work comprised under this contract, and his doing so shall in no wise be held as a waiver of the responsibility of the contractor in respect of this contract, except in so far as any injury may accrue to such work so entered upon, by reason of any proved carelessness, to the satisfaction of the Engineer, of any employee of the Government, in which event the contractor shall be free from liability on account thereof, but not otherwise.

*Instructions to be obeyed.*

13. Should the contractor refuse or neglect to carry out the instructions of the Engineer or the Superintending Officer, the Engineer shall have the power of suspending the usual monthly certificate until such instructions have been complied with.

*Power to dismiss men.*

14. The Engineer may require the dismissal within twenty-four hours by the contractor of any agent, overseer, foreman, workman, or other person employed on the works, and in the event of the contractor refusing or neglecting to comply with such requisitions, all further payments on account of the work may be stopped until such dismissal is effected.

*Bad Materials or improper works to be removed.*

15. The contractor shall be bound to remove within twenty-four hours, if written notice from the Engineer or Superintending Officer to that effect be given, any materials or work, whether fixed or not, which may appear to the Engineer to be of an inferior or improper description; and in case of refusal, the Engineer shall have the power to get such materials or work removed at the contractor's expense, and to withhold all payments until such instructions have been complied with.

*Extra Works—Omissions of Works.*

16. If at any time whilst the works are in hand it shall be deemed expedient by the Engineer to order material or work of a different description to that specified, or to increase or diminish the dimensions or extent of any works to be done under this contract, or to alter their situation or vary the form or dimensions of any of the said works, or of any part thereof, or to make any deviation or to substitute one class of work for another, he shall have full power to do so, and to order and direct any such increase, diminution, alteration, deviation, or substitution, and the works involved in any such increase, alteration, deviation, or substitution, shall be executed by the contractor if of the class of works provided for in the schedule of prices, at such schedule prices; and no such increase, diminution, alteration, deviation, or substitution of works shall in any way annul or set aside this contract, or extend the time for the completion thereof, unless the Minister shall see fit to grant such extension; but such additions or alterations shall be measured and paid for, or deducted from the contractor's account as the case may require, according to the schedule of prices. Provided that if any portion of the works so ordered to be done shall not be, in the opinion of the Engineer, of the same value or class of works provided for in the schedule of prices, the same shall be executed by the contractor at such prices as may be agreed upon with the Engineer; but if the contractor and Engineer cannot agree as to the price to be paid, the Engineer may order and direct the same to be done by such person or persons as he may think fit. Before any extra work, or work of an altered value or class, is undertaken by the contractor, it shall be imperative for him to procure an order in writing from the Engineer for carrying out such extra or variation of work, and the contractor shall not be entitled to any payment for such extras or variations unless he produce the written order for the same, as aforesaid, and he shall not be entitled to plead that the Engineer omitted to give such written order,

order, as it is to be distinctly understood that the onus of obtaining such order shall be on the contractor. The contractor shall not be entitled to any other rate than the schedule rate on any plea that the work was in a different position or of a different class from, or in a more difficult position than that shown on plan or specification, or carried out under circumstances not contemplated in the specification, unless an agreement entitling him to payment by other than the schedule rates shall have been previously made and signed by the Engineer and the contractor.

*Valuation of Omissions.*

17. The Engineer shall have the power to direct the omission of the carrying out of any part or parts of the said works, but not amounting to the omission of the whole; and the value of such work so omitted in such case, calculated at the schedule rates, or in the event of there being no schedule rates, calculated on the basis of the proportionate value which such work bears to the lump sum, as ascertained by the Engineer, whose decision on that point shall be final, shall be deducted from the contract sum, subject, however, to arbitration clauses Nos. 36 to 41.

*Net Measurements.*

18. The whole of the work shall be executed and paid for according to the contract dimensions, and no allowance will be made for any excess of dimensions above those found on the working plans now exhibited, or which may be afterwards supplied, notwithstanding any general or local custom to the contrary, unless such excess has been expressly ordered. In the case of dressed masonry all cubic measurements will be taken at the extremes, and in the case of rock-faced masonry all measurements will be taken to the draft. With regard to timber, all framed work will be paid to extremes, but in no case will scarfs in hewn or round logs be paid for.

*Contractor liable for injury to adjoining Lands, Properties, &c.*

19. The contractor shall not commit any act of trespass, and shall effectually protect all adjoining properties and owners thereof against any loss, damage, or injury that may occur through the carrying on of the works, whether to buildings, goods, property of any kind, or to persons, and in case any such trespass be committed, or any such loss, damage, or injury occur, the contractor shall make full compensation, and shall make good all or any such loss, damage, or injury, and if any such compensation for trespass, or any such loss, damage, or injury be recovered against the Government in the first instance, it may be deducted from any money due or coming due to the contractor under this contract, or may be recoverable from the contractor or his sureties as liquidated damages in that respect incurred.

*Damages, &c., to be paid for by the Contractor.*

20. All damage, injury, or loss that may happen to the works from any cause whatever during their progress must be made good by the contractor at his own expense; and the whole of the works must be delivered up, complete in every respect, according to this contract, and the care and maintenance of all works under this contract shall remain with the contractor until the Engineer shall, by notice in writing under his hand, inform the contractor that he has taken charge thereof; and until such notice shall have been given, the contractor shall be responsible for all accidents, from whatever cause arising, and shall make good all damages thereto.

*Contractor not to Sublet Works or Assign Moneys.*

21. The contractor shall not assign or underlet this contract, or any part thereof, or assign or mortgage, charge, or encumber all or any of the moneys payable or to become payable under this contract, or any other benefit whatsoever arising, or which may arise, under this contract, to any person without the consent in writing of the Minister being first obtained. The contractor for each and every breach of this condition shall be liable to pay to the Government the sum of £50 as and for liquidated damages; and the sum or sums payable as such damages may be deducted from any sum or sums due to the contractor under this or any other contract with the Government. And any permission to assign or underlet works to be done under this contract shall not discharge the contractor from any liability in respect of this contract, and shall extend only to the permission actually given, but not so as to prevent any proceedings for any subsequent breach of this condition; and all rights under these conditions shall remain in full force, and shall be available as against any such subsequent breach.

*Truck System not allowed.*

22. The workmen and labourers of every class employed on the works shall be paid their wages in full, in money, current coin of the Colony, at least once in every month, and no ticket or other system of payment by provisions, liquors, or goods will on any pretence be allowed; nor shall the contractor, or any person or persons employed by him, or in any way connected with him, establish any shop for the supply of provisions, liquors, or goods; nor shall the contractor oblige his workmen to take provisions, liquors, or goods of any kind from any person in particular. The workmen and labourers of every class shall be paid on the works if it be possible, or in some building in the vicinity; and in no case shall they be paid at a public-house or other place where liquors or refreshments are sold. The contractor for each and every breach of this condition shall pay to the Government the sum of £50 as and for liquidated damages; and the sum or sums payable as such damages may be deducted from any sum or sums due to the contractor under this or any other contract with the Government.

*Power of the Government to pay Workmen and Tradesmen.*

23. Before the payment of any money to the contractor, the Engineer may require from him a statutory declaration that the tradesmen supplying materials for or incidental to the works, and the workmen and labourers of every class employed on the works, have been paid their claims of every kind in full, in current coin of the Colony, and to the latest date at which such wages or claims are due; and the Engineer may withhold the payment of any money that may be due or become due to the contractor until such declaration has been made and delivered to him.

If the contractor shall fail or omit to pay the claims of any such tradesmen, workmen, or labourers, in the current coin of the Colony, it shall be lawful for the Minister, or the Engineer, as often as the same shall

shall happen upon complaint of such failure or omission made by any such tradesman, workman, or labourer, and upon proof to the satisfaction of the Minister or Engineer of such failure or omission to pay the amount of such claim to such tradesman, workman, or labourer, and to deduct the same amount from any money then due or owing, or thereafter to become due or owing, to the contractor under this contract.

*Delay by Minister.*

24. If the contractor shall not be able to obtain possession of any portion of the ground required for the execution of the works to be done in connection with this contract, or if from the non-delivery, or any delay in the delivery to the contractor, of any materials which under this contract the Minister is to supply, or from any cause whatever arising out of the acts or defaults of the Minister, or any officers or servants in his employment, or from any accident happening to the said works during their progress not arising from the neglect or default of the contractor or his servants or workmen, the contractor shall be delayed or impeded in the execution of his contract, the contractor may from time to time within seven days of the happening or occurring of such act, default, or accident, apply in writing to the Engineer for an extension of time on account of such act, default, or accident, setting forth the cause of such application, and the Engineer shall, if the Minister think the cause sufficient, but not otherwise, allow by writing under his hand such an extension of time as the Minister shall think adequate; and the penalties, sets-off, and deductions to which under this contract the contractor is liable shall not attach until the expiration of such extension of time, but shall attach, and the contractor shall become liable to the same, from the date of the expiration of such extended time or times. And unless the contractor shall make such application within the time and in the manner aforesaid, and unless and until the Minister shall allow such extension or extensions of time as aforesaid, the contractor shall not by reason of any delay arising from the cause or causes aforesaid, or any of them, be relieved in any way or to any extent of his liability to finish and complete the works within the time in this contract specified; and, in default of his so doing, to pay and be subject to the liquidated damages, deductions, and sets-off as in these conditions provided; nor shall the Minister be deprived in any way or to any extent of his right to deduct or recover any sum or sums as liquidated damages, and not as or in the nature of a penalty or to make deductions or sets-off which under this contract he is entitled to make, deduct, set-off, or receive from the contractor for or by reason or on account of any delay in the completion of the work or any portion of the same, nor shall the rights, powers, and authorities by these conditions given to or vested in him be in any way affected.

*Patent Rights to be included.*

25. The contractor is to include in his tender the amount of all patent rights and royalties which may be claimed by any patentee or patentees for the manufacture and use of any portion of this work, and must undertake to liquidate the same when required to do so.

*Free Passes, &c.*

26. No free passes on any of the Government Railways will be granted either to the contractor or his agents, nor will any materials or articles of any description be conveyed free of charge.

*Conditions not to be waived.*

27. None of the conditions of this contract shall be varied, waived, and discharged, or released either at law or in equity, unless by the express consent of the Minister, testified in writing under his hand.

*Progress Payments without Prejudice.*

28. No progress payment given to the contractor shall prevent the Engineer from at any future time before the final settlement rejecting all unsound materials and improper workmanship discovered subsequently to the giving of any previous payment; and notwithstanding any approval given or made by the Superintending Officer that portions or the whole of the works have been satisfactorily performed, the Engineer may require the contractor to remove or amend at any future time previously to the final payment on account of the work any work that may be found not in accordance with this contract; and the contractor must remove and amend at his own cost all such work when so required; and if he refuse or neglect to do so, the Engineer shall have the power to carry out such work, and to deduct the whole cost thereof from any moneys that may be due, or that may become due to the contractor.

If, in the opinion of the Engineer, further inquiry is necessary or desirable before any progress payment is made, he shall have the power to withhold the certificate on which such payment would have been made, for any period which he may consider necessary for the purpose of such inquiry.

*Security.*

29. Within fourteen days after the notice of the acceptance of his tender shall have been given to the contractor, or posted to the address of his last known place of business or residence, he shall deposit with the Minister, or at the option of the Minister in some bank or banks in Sydney, upon fixed deposit in the name of the Minister, a sum calculated at the rate of £5 for every £100 or part thereof on the amount of his tender up to the sum of £100,000, and at the rate of £1 for every £100 or part thereof in addition, for any amount over that sum, to be held by the Minister as security for the due and proper performance and completion of this contract until the Engineer has certified that the whole of the work in the said contract has been completed to his satisfaction, or until this contract has been cancelled by the Minister under the power given to him in that respect under clause 32 of these conditions, in which last-mentioned event happening the money so deposited shall become forfeited to the Crown, and shall be held by the Colonial Treasurer, for and on behalf of Her Majesty the Queen, as liquidated damages. If, however, this contract shall not have been cancelled under the said clause, and if the works comprised in this contract are not completed within the time mentioned in clause 31 of these conditions, the liquidated damages which, under the last-mentioned clause are made payable to the Minister, may be deducted and taken from the money so deposited.

If the contractor fail to deposit the sum as hereinbefore provided within fourteen days from the acceptance of the tender, or if he fail to execute the contract for the due performance of the works mentioned in the said tender, the Minister shall have the option of and full power and authority to declare such acceptance to be annulled, in which case the amount of the preliminary deposit will be absolutely forfeited to the Crown, as provided by the regulations of the Tender Board.

No

No tenderer will be authorised to proceed with the work tendered for until he has made the deposit as aforesaid, and has executed the required contract for the due performance of the said works, it being hereby declared that for all or any work done or materials found and provided by the contractor before the due execution of the said contract, or the said moneys being deposited as aforesaid, he shall not have any right of action, claim, or demand against the Minister.

The contractor will be entitled to receive any interest that may be payable upon the fixed deposit of the money, if the money be placed in a bank at fixed deposit, as such interest becomes payable, but it is expressly declared that the Minister is not to be held liable or answerable in any way for any loss on the money so deposited or for any loss of interest from the fixed deposit not being renewed.

#### *Payments.*

30. Progress payments may be made once in every month, unless the same shall become not payable by reason of anything contained in these conditions, on the certificate of the Engineer, as the work proceeds, in the proportion of 80 per cent. of the value of the work returned, until the sum retained reaches the amount of the deposit provided for in the preceding clause, when no further deductions will be made. The amount of the retention money will be held by the Minister, in addition to the cash security, unless otherwise provided for in the specification, until the Engineer has certified that the whole of the works have been satisfactorily completed, and the period specified for the maintenance of the said works has expired, and all accounts finally adjusted when the retention money, in addition to the cash security, will be paid to the contractor; and it is expressly declared that until a certificate has been given by the Engineer to the Minister that the work done by the contractor has been executed and completed to his satisfaction, the contractor shall have no right or claim in respect of any work done or materials provided, nor to the payments from time to time to be made under this contract, or to the final payment upon the whole of the works being finished.

#### *Delay or Bad Work, Bankruptcy, &c.*

31. In case the Engineer shall be at any time dissatisfied with the mode of proceeding, or at the rate of progress of the works or any part thereof, or in case the contractor shall at any time neglect or omit to carry out the instructions of the Engineer, or to dismiss any person employed when required, or shall neglect or omit to remove any materials or work which he is required to remove under condition 15, or in case the contractor shall assign or underlet this contract, or any part thereof, or assign or mortgage, charge or encumber, or attempt to assign, mortgage, charge or encumber, all or any of the moneys payable or to become payable under this contract, or any other benefit whatsoever arising or which may arise under this contract, without the consent in writing of the Minister being first obtained, or in case the contractor shall make default in insuring and keeping insured, in cases where insurance is specified, and depositing the policies and receipts for premiums in accordance with these conditions, or in case the contractor shall become bankrupt, or shall make an assignment of his estate for the benefit of creditors, or shall make an arrangement or composition with his creditors, then and in every such case the Minister shall be at liberty, without vitiating this contract, and without prejudice to any right that may have accrued to liquidated damages under any of these conditions, to take the works wholly or partially out of the hands of the contractor and to employ or contract with any other person or persons to execute the same, and for that purpose to take possession of and use all horses, materials, plant, tools, implements and things on or about the said works, without making any allowances for the same, and all damages and expenses thereby incurred shall be ascertained and certified by the Engineer, and together with any sum payable as liquidated damages under these conditions shall be deducted from any money that may be then due or may thereafter become due to the contractor or may have been deposited by him; and if the money then due, or thereafter becoming due to the contractor, or deposited by him, be not sufficient for that purpose, the balance remaining unpaid shall be a debt due by the contractor to the Minister, and may be recovered accordingly,

#### *Cancellation of Contract.*

32. In any or either of the events mentioned in the last preceding clause of these conditions, the Minister shall have the option and full power and authority in lieu of proceeding under such clause, and without prejudice to any right that may have accrued to liquidated damages under any of these conditions, to cancel this contract whether there are any works remaining to be done or not; and in such case the moneys which shall have been previously paid to the contractor on account of the works executed, shall be taken by him as full payment for all works done under this contract; and upon notice in writing under the hand of the Minister that he, under the authority of this condition, cancels this contract, being given to the contractor, this contract shall be cancelled, and thereupon all sums of money that may be due to the contractor, or unpaid, together with all implements in his possession, and all materials provided by him, upon the ground upon which the work is being carried on, or adjacent thereto, shall be forfeited, and all sums of money held as security or named as liquidated damages for the non-fulfilment of this contract within the time specified shall also be forfeited and become payable to the Government, and the said implements and materials shall become and be the absolute property of the Government, and with the moneys so forfeited and payable as aforesaid shall be considered as ascertained damages for breach of contract.

#### *Insurance.*

33. The contractor shall from time to time, when required to do so by the terms of the specification, insure the works against loss or damage by fire, in an office to be approved in the name of the Minister for the amount of the full value of the work completed, as determined by the Engineer, and shall lodge with the Engineer the policies and receipts for the premiums for such insurance, and shall continue such policies until possession is given up to the Government; in default of which the Minister shall be at liberty to insure and deduct the amount of the premiums paid from any moneys payable to the contractor, and may refuse payment of any certificate until such policies and receipts are handed in as aforesaid; but this insurance is to be no limit or bar to the liability and obligation of the contractor to deliver up the works to the Minister completed in all respects according to the contract. In case of loss or damage by fire the moneys payable under any such insurance shall be received and retained by the Minister until the works are finally completed, and shall then be credited to the contractor in the final settlement of accounts in the event of the contract not having been previously cancelled under these conditions.

#### *Time*

*Time of Completion, &c.*

34. The contractor shall complete the whole of the works comprised in this contract within seventy-eight weeks from the date of the acceptance of his tender, and in the event of their non-completion at the specified times, should the Engineer not have proceeded under clauses Nos. 31 and 32 of these conditions, or either of them, the contractor shall pay, by way of liquidated damages, and not as or in the nature of a penalty, the sum of twenty pounds sterling for every week, or for every part of a week that shall elapse after such specified time, until their completion, and which sum or sums may be deducted from any money payable to the contractor under this or any other contract. The contractor shall have no right to a certificate for payment after the date specified in these conditions for the completion of this contract until the whole of the works shall have been properly completed to the satisfaction of the Engineer, unless the time for the completion of this contract shall have been extended by the Minister, in which case such extended time shall become the time for the completion of this contract, and it is to be expressly understood that the fact of the time having been so extended shall not in any way be taken as a waiver of this contract, or as annulling or setting aside this contract in any respect, nor be taken as releasing the contractor from any of the responsibilities or obligations of this contract, which, in all other respects, shall remain the same as if the time had not been extended.

The like liability also shall hold good as to the obligation of the contractor in the event of any advance being made to him from the retention money, or on material on the ground and not *in situ*.

*Maintenance.*

35. The contractor will be bound to maintain the works for a period of three months after their final completion and use by the Government; and if any part should within that period show signs of weakness, or of giving way, or if any defective workmanship or materials be detected, the contractor, when called upon to do so, shall make good the same at his own expense, to the satisfaction of the Engineer, before any moneys held by the Government on account of this contract will be paid. It is also to be distinctly understood that the Government shall have the full, free, and unrestricted use of the said works, without any interference whatever on the part of the contractor, during the currency of this period of maintenance; and such use of the said works on the part of the Government shall not be held as relieving the contractor of any liabilities or obligations whatever in respect of his contract.

*Arbitration.*

36. The following matters shall be decided by the Engineer, whose decision shall be absolute and final:—(1) All questions or disputes which shall arise respecting the true construction or meaning of the plans or specification, or the quality of the workmanship, or quantity or quality of materials necessary for the whole or any part of the contract. (2) All questions and disputes when the net claim shall not amount to the sum of five hundred pounds.

37. All questions and disputes not hereinbefore provided for shall, if the net claim be five hundred pounds or upwards, upon the completion of the works under the said contract, and before payment of the retention money and the money deposited as security for the due carrying out of the contract, be fixed and determined by arbitration as hereinafter provided.

38. If either party consider that he has claims in respect of any matter in which arbitration may be claimed, he shall, within one month of the date of the final certificate, furnish to the other party full particulars in writing of such claims, breaches, doubts, disputes, and differences in respect of which he desires arbitration, giving distinct and separate items, and the amount, if any, claimed under each item; and the other party may thereupon furnish particulars of all claims he has in respect of such matters, irrespective of the aggregate amount of such claims; and the party furnishing the same shall be bound by such particulars; and no claim not included in such statement shall be taken into consideration at such arbitration, or become subject of arbitration or action; and the claim or respective claims so made as aforesaid shall be determined by arbitration, in the manner as hereinafter provided.

39. If both parties concur in the appointment of a single arbitrator, then the reference shall be to such single arbitrator; but if the parties for twenty-one days after the particulars first mentioned in the last preceding clause shall have been furnished, cannot concur in the appointment of a single arbitrator, the reference shall be to two arbitrators, one to be appointed by each party, or their umpire to be appointed in writing by such arbitrators before they commence the business of the reference; and the arbitration shall, subject to the express provisions herein contained, be made and held pursuant and subject to the Arbitration Act of 1892 or any statutory modification or re-enactment thereof for the time being in force.

40. The costs of and incidental to the arbitration shall be paid or borne by or between the parties in manner hereinafter mentioned, that is to say:—

1. If the sum awarded does not exceed the amount acknowledged by the Department to be due, the contractor shall pay all the costs of and incidental to the arbitration.
2. If the sum awarded shall amount to the sum claimed by the contractor, the Government shall pay all the costs of and incidental to the arbitration.
3. If the sum awarded exceeds the amount acknowledged by the department to be due, but is less than the sum claimed by the contractor, the costs of both parties shall be added together and the total cost so ascertained shall be paid by the parties in the proportions following, namely:—The Government shall pay such sum as bears the same proportion to the total cost as the net award bears to the net claim, and the balance shall be paid by the contractor.

The award shall direct to and by whom and in what proportions the costs shall be paid, in accordance with the provisions hereinbefore contained; but the award need not specify the amount of such costs. Such amount shall, in the event of disagreement, be taxed or settled by the arbitrators or umpire, as between party and party, after the award is made. No costs shall be allowed as between solicitor and client. If either party shall be dissatisfied with the costs allowed by the arbitrators or umpire, the same may be taxed by the Prothonotary or other proper officer of the Supreme Court.

41. It is to be distinctly understood that all claims by either party to have any of the matters which may be submitted to arbitration so dealt with, must be made upon the whole of the work being completed, and before payment to the contractor of the retention money or of the money deposited as security for the due performance of the contract, and that the acceptance by the contractor of payment of the retention money in cases where a bond to secure the completion of the works has been given, and

and in other cases of the retention money or of any balance thereof, and of the money deposited as security for the due performance of the contract. shall be conclusive proof that the contractor has no such claim or claims.

Roads and Bridges and Sewerage Branch,  
Department of Public Works.

ROBT. HICKSON,  
Commissioner and Engineer-in-Chief,  
Roads, Bridges, and Sewerage.

These are the general conditions marked "C" referred to in our annexed bond to Her Majesty the Queen, dated the twenty-second day of January, A. D. 1894.

Witness—HAROLD F. NORRIE.

CHAS. J. HENTY.  
R. L. SCRUTTON.

These are the general conditions marked "C" referred to in our annexed agreement with Her Majesty the Queen, dated the twenty-second day of January, A. D. 1894.

Witnesses—  
T. C. LUMSDAINE.  
HAROLD F. NORRIE.

JOHN CARTER.  
FRANK MOORHOUSE GUMMOW,  
(By his Attorney, JOHN CARTER).  
D. G. SNODGRASS.  
GEORGE MADDISON.  
PETER EWING.

Sureties—Contract No. 69, Western Suburbs Sewerage.

Sir, Box No. 14, North Sydney, 29 January, 1894.

With reference to the above we have to inform you that Mr. Frederic Lassetter will be unable to sign the necessary documents in connection with the same owing to his immediate and permanent removal to England.

We have, therefore, to ask you to be good enough to allow the name of Mr. Robert LeNere Scrutton, of R. L. Scrutton & Co., Merchants, City, to be substituted for that of Mr. Lassetter.

We are, &c.,  
CARTER, GUMMOW, & CO.

Under Secretary for Public Works, Sydney.

Is name satisfactory?—D.C.M'L. (pro U.S.), B.C., 30/1/94. Commissioner for Roads. Yes.—  
R.R.P.H., 1/2/94. Mr. Norrie.—D.C.M'L. (pro U.S.), 1/2/94.

No. 7.

Supervising-Engineer Davis to The Engineer-in-Chief for Sewerage.

Minute Paper.

Department of Public Works, Roads and Bridges and Sewerage Branch,  
Sydney, 18 January, 1894.

Subject:—Contract No. 69. Eastern Branch, Western Suburbs, cross-sections of sewer to be adopted.

Provision has been made in this contract for constructing the sewers and shafts wholly in concrete, or in brick and concrete. With a view of ascertaining which would be the cheaper method to adopt, I have had comparative estimates prepared at the contract schedule rates, which I attach.

I beg to recommend that the following sections for sewers be adopted:—

- (a) For open cutting—No. 2 cross-section.
- (b) For tunnels where timber is required—No. 3 cross-section.
- (c) For tunnels in soft ground where timbering is not required—No. 5 cross-section.
- (d) For tunnels in hard ground—No. 6 cross-section.

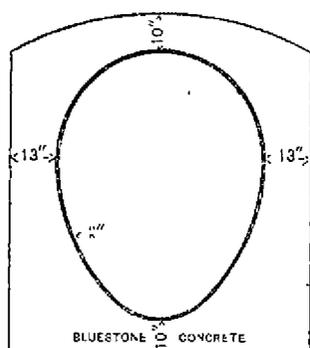
It will be seen that the cheaper shafts are those built with brick, and I recommend that this description of shaft be adopted.

Approved.—R.R.P.H., 19/1/94. Messrs. Carter, Gummow, & Co., 20/1/94. Mr. Millner to note.—J.D., 20/1/94. Noted.—W.J.M., 21/1/94. File.—J.D., 1/2/94. The Engineer-in-Chief has decided that in the case of Sydenham-road sewer, in open cutting, the No. 3 section, may be adopted instead of No. 2, on the understanding that the No. 2 is put in other open cuttings, and that in the case of Sydenham-road specially selected material be put in the sides and round the arch up to the level of crown.—J.D., 9/3/94. Mr. Millner. Noted.—W.J.M., 9/3/94. File.—J.D., 13/3/94.

J. DAVIS.

COMPARATIVE estimate for constructing sewers and shafts wholly in concrete or in brick and concrete.

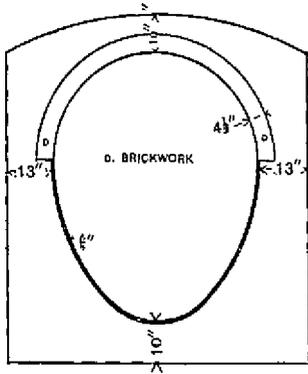
		<i>Shafts.</i>		
Cost of (9-inch) brick shaft per 100 lineal feet	.....			£78 14 7
Cost of { Concrete, 9-inch, do	.....	£65 17 1	}	87 12 1
Cost of { Cement facing, 2-inch, do	.....	21 15 0		
5' 1" x 4' 1"				



*Sewers.*

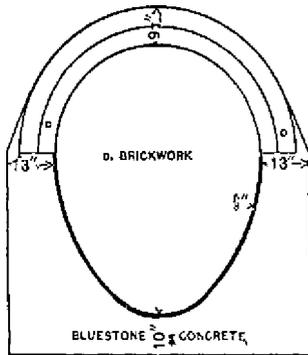
(1.) In open cutting.

	£	s.	d.
53.96 cubic yards per chain at 43/-	126	15	3 concrete.
105.60 square yards per chain at 5/-	26	8	0 rendering.
Cost per chain	£153	3	3



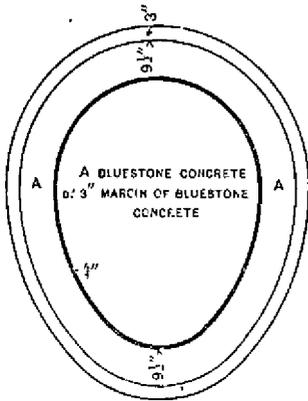
(2.) In open cutting.

	£	s.	d.
52.28 cubic yards per chain at 43/-	112	8	1 concrete.
6.42 " " " 55/-	17	13	1 brickwork.
58.60 square yards " 5/-	14	13	0 rendering.
Cost per chain	<u>£144 14 2</u>		



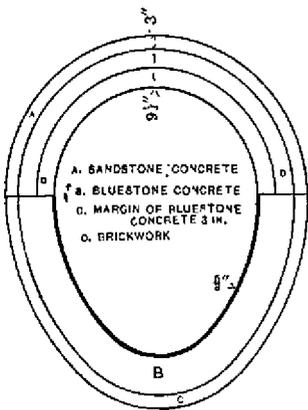
(3.) In tunnel where timbering is required.

	£	s.	d.
36.18 cubic yards per chain at 43/-	77	15	9 concrete.
14.81 " " " 55/-	40	14	7 brickwork
58.60 square yards " 5/-	14	13	0 rendering.
Cost per chain	<u>£133 3 4</u>		



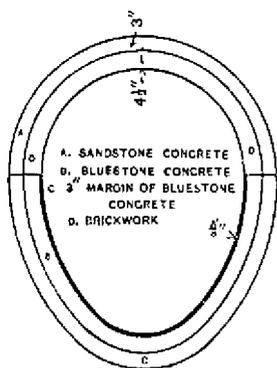
(4.) In tunnel, soft ground.

	£	s.	d.
43.14 cubic yards per chain at 43/-	92	15	0 concrete.
105.60 square yards " 5/-	26	8	0 rendering.
Cost per chain	<u>£119 3 0</u>		



(5.) In tunnel, soft ground.

	£	s.	d.
23.48 cubic yards per chain at 43/-	50	9	7 bluestone concrete.
5.67 " " " 40/-	11	6	10 sandstone concrete.
14.81 " " " 55/-	40	14	7 brickwork.
58.60 square yards " 5/-	14	13	0 rendering.
Cost per chain	<u>£117 4 0</u>		



(6.) In tunnel, hard ground.

	£	s.	d.
12.67 cubic yards per chain at 43/-	27	4	10 bluestone concrete.
4.88 " " " 40/-	9	15	2 sandstone concrete.
6.42 " " " 55/-	17	13	1 brickwork.
58.60 square yards " 5/-	14	13	0 rendering.
Cost per chain	<u>£69 6 1</u>		

J.D., 19/1/04.

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No. 8.

## Supervising-Engineer Davis to Messrs. Carter, Gummow, &amp; Co.

Gentlemen,

Department of Public Works, Sydney, 20 January, 1894.

I have the honor to enclose, for your information, a tracing showing the different cross-sections of sewer lining which the Engineer-in-Chief has decided to adopt on your Sewerage Contract No. 69.

With regard to cross-sections Nos. 5 and 6, you will receive instructions as the work proceeds which of these sections will be used.

The shafts will be built of bricks where such are shown on contract drawings.

I have, &amp;c.,

J. DAVIS,

Supervising Engineer for Sewerage.

(Through Mr. Millner.)

No. 9.

## Supervising-Engineer Davis to Messrs. Carter, Gummow, &amp; Co.

Gentlemen,

Department of Public Works, Sydney, 18 January, 1894.

I beg herewith to enclose a list of the sizes of shaft excavation. The sizes are to the inside of the timber, and do not include the extra excavation required for the chambers, down pipes, &c. This additional excavation may either be done at the time you are sinking the shafts, or afterwards, as it suits your convenience. Where sumps are required they are to be sunk the size of the shafts, Mr. Millner will decide at the time a shaft is excavated whether a sump will be necessary, and give you instructions accordingly.

With reference to the excavation in tunnels in "more or less hard material," which in the opinion of the engineer requires blasting, I have to inform you that any ground of this description in the lower part of the tunnels where timbering is used in the upper part, must be taken out for two ring lining without the use of blasting by means of guttering and gadding and will be paid for under schedule item No. 6.

With regard to other lengths of the tunnels requiring blasting, special instructions will be issued for each length.

As to tunnels in "more or less hard material" which require timbering, I have to request that you will excavate the same to the cross-sections shown in the margin.

The tunnels in "solid rock" are to be excavated for one ring lining by means of 4-inch charges of compressed powder.

I have, &amp;c.,

J. DAVIS,

Supervising Engineer for Sewerage.

LIST of Shafts on Contract No. 69.

Shafts, &c.	Position.	Chainage at centre of Manholes.	Size of Shafts.
Penstock chamber .....	Premier-street .....	M. c. 1. 2 16 87.57	Enlarged, as shown on contract drawings.
Ventilating shaft .....	Illawarra-road, Canterbury Branch .....	2 24 87.33	6' x 5'
" " pipe shaft .....	Carey-street, Northern Branch .....	2 23 90	6' x 5'
" " shaft .....	" " " " .....	2 23 80	6' x 5'
" " " " .....	Renwick-street, Eastern Branch .....	2 28 0	6' x 5'
" " " " .....	" " Suburban Main .....	2 34 0	6' x 5'
" " " " .....	" " " " .....	2 38 60	Opening cutting.
" " " " .....	" " " " .....	2 41 45.8	"
" " pipe shaft .....	Warren-road .....	2 33 5	6' x 5'
" " shaft .....	Grove-road .....	2 40 50	6' x 5'
" " " " .....	Illawarra-road .....	2 43 83.47	Not to be sunk.
" " " " .....	" " " " .....	2 53 0	Opening cutting.
" " " " .....	Petersham and Illawarra Roads .....	2 57 64.05	"
" " pipe shaft .....	Illawarra-road .....	2 61 70	"
" " shaft .....	Calvert-street and Illawarra-road .....	2 65 80.68	"
" " pipe shaft .....	Illawarra-road .....	2 69 70	6' x 5'
" " shaft .....	Marrickville and Illawarra Roads .....	2 73 86.3	6' x 5'
" " pipe shaft .....	Illawarra-road .....	2 78 0	6' x 5'
" " shaft .....	" " " " .....	2 2 30	Opening cutting.
" " " " .....	" " " " .....	3 13 57.71	"
" " " " .....	Sydenham-road .....	"	"
" " " " .....	Silver-street and Sydenham-road .....	3 17 74.69	"
" " " " .....	Albert-street and Sydenham-road .....	3 24 6.59	"
" " " " .....	Illawarra-road .....	3 20 40	"
" " " " .....	Council and Illawarra-road .....	3 23 90	6' x 5'
" " " " .....	Woodland and Illawarra-road .....	3 30 23.13	6' x 5'
" " pipe shaft .....	Illawarra-road .....	3 33 85	6' x 5'
" " shaft .....	Charles-street and Illawarra-road .....	3 37 53	Opening cutting.
" " " " .....	Agar-street .....	3 52 20	"
" " pipe shaft .....	" " " " .....	3 57 0	6' x 5'
" " shaft .....	Agar and Emily Streets .....	3 62 54.20	7' x 6'
" " " " .....	Emily-street .....	3 69 0	6' x 5'

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No. 10.

Supervising-Engineer Davis to Messrs. Carter, Gummow, &amp; Co.

Gentlemen, Department of Public Works, Sydney, 19 January, 1894.

I have the honor to inform you that you are at liberty for the present to dispose of the surplus material as you find it convenient, and that you will be paid for same under schedule item No. 43.

I have, &amp;c.,

J. DAVIS,

Supervising Engineer for Sewerage.

(Through Mr. Millner.)

No. 11.

Supervising-Engineer Davis to Messrs. Carter, Gummow, &amp; Co.

Gentlemen, Department of Public Works, Sydney, 24 January, 1894.

Referring to clause 6 of the specification, I have the honor to inform you that you may excavate shafts No. 4 at 2 m. 33 chs. 5 lks. from 9 feet below the surface, No. 5 at 2 m. 40 chs. 50 lks. from 6 feet below the surface, and No. 14 at 3 m. 69 chs. from 18 feet below the surface, with the use of 4-inch charges of compressed powder.

I have, &amp;c.,

J. DAVIS,

Supervising Engineer for Sewerage.

(Through Mr. Millner.)

No. 12.

Supervising-Engineer Davis to Messrs. Carter, Gummow, &amp; Co.

Gentlemen, Department of Public Works, Sydney, 3 February, 1894.

Referring to clause 6 of the specification, I have the honor to inform you that you may excavate shafts No. 2A at 3 m. 23 chs. 90 lks. from 3 feet below the surface, No. 3 at 2 m. 38 chs. from 7 feet below the surface, No. 3A at 2 m. 34 chs. from 3 feet below the surface, No. 11 at 3 m. 33 chs. 85 lks. from 27 feet below the surface, and No. 10 at 3 m. 30 chs. 28-13 lks. from 26 feet below the surface, with the use of 4-inch charges of compressed powder.

I have, &amp;c.,

J. DAVIS,

Supervising Engineer for Sewerage.

(Through Mr. Millner.)

No. 13.

Supervising-Engineer Davis to Messrs. Carter, Gummow, &amp; Co.

Gentlemen, Public Works Department, Sewerage Branch, 19 February, 1894.

Referring to clause 6 of the specification, I have the honor to inform you that you may excavate shafts No. 2 at 2 m. 22 chs. 80 lks. from 10 feet below the surface, and No. 6 at 2 m. 69 chs. 70 lks. from 18 feet below the surface, with the use of 4-inch charges of compressed powder.

I have, &amp;c.,

J. DAVIS,

Supervising Engineer for Sewerage.

(Through Mr. Millner.)

No. 14.

Supervising-Engineer Davis to Messrs. Carter, Gummow, &amp; Co.

Gentlemen, Public Works Department, Sewerage Branch, 12 March, 1894.

I have the honor to forward herewith an additional drawing, showing slight modification in the details of shafts at 2 m. 73 chs. 863 lks. and Emily-street, and the upper portion of the pipe-shafts. You will notice that the cast iron plates shown on the drawing attached to the contract, on the ledges at the bottom of the shafts, are substituted for boards, that the sandstone-ashlar at the top of the shafts is substituted for concrete, and that the top of the pipe-shafts is altered. Will you please bear in mind that these alterations apply to the whole of the shafts in your contract.

I have, &amp;c.,

J. DAVIS,

Supervising Engineer for Sewerage.

(Through Mr. Millner.)

No. 15.

Supervising-Engineer Davis to Inspector Millner.

*Minute Paper.*Department of Public Works, Roads and Bridges and Sewerage Branch,  
Sydney, 2 May, 1894.*Subject* :—Contract No. 69.—Substituting tunnelling for open cutting.

I UNDERSTAND that the contractors wish to substitute tunnelling for open cutting in two or three instances. They must write, asking permission to do this, before any excavation is paid for in such cases, as it will be necessary to clearly understand on what conditions the concession is granted. Will you please see contractors with reference to this matter. J.D.

I have seen contractors and verbally informed them of this.—W.J.M., 14/5/94. Mr Davis. This might now be filed.—J.D., 22/5/94.

No. 16.

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## No. 16.

## Supervising-Engineer Davis to Messrs. Carter, Gummow, &amp; Co.

Gentlemen, Department of Public Works, Sewerage Branch, 23 June, 1894.

I understand it is your intention to substitute tunnelling for open cutting in the Illawarra-road for a portion or the whole of the length between 2 m. 54 chs. and 2 m. 87 chs., and I desire to inform you that there will be no objection to this course, but it must be distinctly understood that you will be paid as though the excavation had been done in the manner shown on the drawings attached to the contract.

I have, &amp;c.,

J. DAVIS,

Supervising Engineer for Sewerage.

## No. 17.

## Supervising-Engineer Davis to The Engineer-in-Chief for Sewerage.

*Minute Paper.*

Department of Public Works, Roads and Bridges and Sewerage Branch, Sydney, 9 May, 1894.

*Subject* :—Contract No. 69, Eastern Branch, Western Suburbs—Pitching round Man-hole Covers.

As some of the man-holes on this contract are being constructed, I should like the Engineer-in-Chief's decision as to the kind of pitching, if any, which is to be put round the man-hole covers.

Twelve square yards of squared bluestone pitching were included in the schedule of quantities, which the contractors have priced at £50 per square yard. The quantity likely to be used if the whole of the man-holes are to be pitched will be 35 square yards, which, at schedule rates, will amount to £1,750.

Special bluestone concrete will answer the same purpose as bluestone pitchers, and will only cost 9 cubic yards, at 50s. = £22 10s.

The fair price for bluestone pitching is about 25s. per square yard, and, as the schedule rate is so much higher than the market rate, the question arises whether the pitching should not be omitted. If, however, this course is considered to be unfair to the contractors, then only the quantity included in the schedule of quantities need be carried out.

J.D.

We cannot in fairness omit an item for which, no doubt, the price is absurdly high, while we know that on other items the price is equally low. Where bluestone pitchers are shown on drawing contractors must be paid for same at schedule rates.—R.R.P.H., 11/5/94.

Mr. Millner to note.—J.D., 11/5/94. Noted.—W.J.M., 14/5/94. Mr. Davis. File.—J.D., 15/5/94.

## No. 18.

## Inspector Millner to Supervising-Engineer Davis.

Sewerage Office, Arncliffe, 21 August, 1894.

Contract 69, *re* extra lining of Tunnel, between 2 miles 38 chains and 2 miles 45 chains.

I THINK that it will be advisable that the extra lining of tunnel (ordered between 2 miles 40½ chains and 2 miles 45 chains) should start at 2 miles 38 chains. The ground in this extra 2½ chains is of a very similar nature to the other.

W. J. MILLNER.

Register.—J.D., 23/8/94. Will Mr. Piper please attach the paper referred to?—J.D., 25/8/94. Has Mr. Millner these papers?—J.D., 28/8/94. Previous papers, 94-1,078, Mr. Davis, 25/6/94. I have not got these papers.—W.J.M., 29/8/94. Mr. Davis. What will the extra cost be?—J.D., 31/8/94. Mr. Adams. The extra cost from 2 miles 38 chains to shaft at 2 m. 40 chs. 50 lks. will be £206 3s. 9d.—W.E.A., 31/8/94.

Will the Engineer-in-Chief please approve of 10 inches of lining for this length of tunnel? It was driven for 5 inches in the first instance. The ground has proved to be of a soft nature, and therefore requiring an extra thickness of lining. This additional work is fully provided for in the contract, and included in schedule of quantities.—J.D., 31/8/94. Engineer-in-Chief.

Approved.—R.R.P.H., 1/9/94. Contractors informed. Mr. Millner to note.—J.D., 7/9/94. Noted.—W.J.M., 11/9/94. File.—J.D., 17/9/94.

## No. 19.

## Supervising-Engineer Davis to Messrs. Carter, Gummow, &amp; Co.

Gentlemen, Public Works Department, Sewerage Branch, 28 June, 1894.

I have to request that you will please excavate the tunnel between 2 miles 40½ chains and 2 miles 45 chains, to admit of two ring lining being put in. The excavation you will be paid for under item No. 9, and the bluestone concrete and additional brickwork under items Nos. 32 and 33 respectively.

I have, &amp;c.,

J. DAVIS,

Supervising Engineer for Sewerage.

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No. 20.

Messrs. Carter, Gummow, &amp; Co. to The Under Secretary for Public Works.

Sir, North Sydney, 6 July, 1894.

With reference to our contract No. 69, Sydney Sewerage, we are willing that the Government shall exercise the option of paying us all sums now due or to accrue due in respect of this contract, either in cash or Funded Stock, as may be thought fit.

We have, &amp;c.,

JOHN CARTER.  
FRANK MOORHOUSE GUMMOW  
(By his Attorney, JOHN CARTER).  
D. G. SNODGRASS.  
GEORGE MADDISON.  
PETER EWING.

Witness,—ROBERT MILLER, J.P.

We, the sureties named in the bond in connection with the above contract, consent hereto.

Witness,—FRED. WOOLCOTT-WALEY, J.P.

CHAS. J. HENTY.  
R. L. SCRUTTON.

Treasury informed, 9/7/94. For approval.—J.B., 10/7/94. Approved.—W.J.L. Accountant  
Roads to note.—F.C.P., 24/7/94. Seen;—Mr. II. to note.—O.C., 24/7/94. Mr. Wallwork,—Please  
place with Bond Ct. 69.—E.H., 24/7/94.

No. 21.

The Council Clerk, Marrickville, to The Commissioner for Roads.

Sir, Borough of Marrickville, Town Hall, 24 August, 1894.

I am directed by his Worship the Mayor to draw your attention to the enclosed letter, received by him from the borough engineer, and to request that the Department will cause such steps to be taken in this matter as may be deemed necessary, so as to avert what would be an intolerable and continuous nuisance.

I have, &amp;c.,

HENRY H. BROWN,  
Council Clerk.

For report.—R.R.P.H., 27/8/94. Report herewith.—J.D., 6/9/94. Council Clerk.—J.D., 13/9/94.

Sir,

I have the honor to bring before your notice the following:—The Government Sewerage Department is taking up a culvert on the Illawarra-road, near Addison-road, and intend substituting one that will act as a syphon. It is needless for me to point out the nuisance and trouble this will be to the Council. But I wish to bring under your notice the fact that it is quite unnecessary to have a syphon. Below the culvert there is a fall of 4 ft. 6 in. in 7½ chains, which if worked out would give sufficient fall for the drain, and clear the culvert altogether. As it is a matter of great importance, I have brought it before your notice without loss of time.

I am, &amp;c.,

J. P. WEBSTER.

No. 22.

Supervising-Engineer Davis to The Engineer-in-Chief for Sewerage.

*Minute Paper.*

Department of Public Works, Roads and Bridges  
and Sewerage Branch, Sydney, 6 September, 1894.

*Subject*:—Contract No. 69, Eastern Branch Sewer, Western Suburbs, Culvert under Sewer near Addison-road.

This culvert is shown on the contract drawings to be built as a syphon under the Eastern Branch Sewer. Syphons are always objectionable, and should, if possible, be avoided, especially where, as in this case, there will be large quantities of heavy silt carried with the water, which will undoubtedly settle in it.

With a view of finding out whether the syphon in this instance could be dispensed with, I have had levels taken of the stream below the culvert, and I find that by lowering the bed of the creek for a length of 287 feet, and carrying the culvert 75 feet to the east of the Illawarra-road, to support a cottage which is built on the edge of the creek, the syphon need not be constructed.

The cost of lowering the creek and extending the culvert will be about £125, and I would strongly recommend that this extra be incurred.

J. D.

Longitudinal section of creek and drawing of proposed culvert submitted with this report.  
Approved.—R.R.P.H., 6/9/94. Mr. Davis. Contractors informed.—J.D., 13/9/94. Mr. Millner to  
see. Seen.—W.J.M., 14/9/94. File.—J.D., 17/9/94.

No. 23.

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No. 23.

Supervising-Engineer Davis to Messrs. Carter, Gummow, &amp; Co.

Gentlemen, Public Works Department, Sewerage Branch, 12 September, 1894.  
Referring to your Contract No. 69, I have the honor to inform you that the Engineer-in-Chief has decided to dispense with the syphon culvert under the sewer near Addison Road, and to substitute a culvert, as shown on the sketch handed to you by Mr. Millner. Will you please also extend the culvert as shown to support the cottage built on the edge of the creek, and deepen the creek to give an outlet for the culvert.

You will be paid at schedule rates for this work.

I have, &c.,  
J. DAVIS,  
Supervising Engineer for Sewerage.

No. 24.

Messrs. Carter, Gummow, &amp; Co. to The Engineer-in-Chief for Sewerage.

Contract No. 69, Western Suburbs Sewerage.

Sir,

North Sydney, 20 September, 1894.

Having now completed a considerable portion of the above contract, for the performance of which your Department hold security to the extent of about £6,800, being £4,500 as guaranteed by our sureties and £2,300 retention money for work already done, we have the honor to ask you to allow the payment to us of £1,000 from the latter amount, leaving £5,800 still remaining as security for the due fulfilment of the remaining portion of the work.

We would remind you that our sureties are two of the most reliable firms in the city, viz., Parbury, Henty, & Co., Pitt-street, and R. L. Scrutton & Co, Clarence-street; and also that the amount of security required had the contract been accepted in the ordinary way would not have exceeded £4,500.

We have, &c.,

CARTER, GUMMOW, & CO.

Personal security has been given on this contract for double the usual amount of cash security; so that, in addition to the retention money, which amounts to nearly £2,300, the Department has security for £4,520, making a total of personal and cash security for the due performance of the contract of £6,820. The amount of the contract is £45,207, of which there has been about £30,000 worth of work done. This being the case, and the personal security being Messrs. Henty & Co. and Mr. R. L. Scrutton (firms, I suppose, which are safe), I think £1,000 of the retention money might be returned.—J.D., 21/9/94, Commissioner and Engineer-in-Chief for Roads, Bridges, and Sewerage.

Recommended.—R.H., 21/9/94. Under Secretary. For approval.—J.B., 21/9/94. Approved.—J.H.Y., 21/9/94. Mr. Millner to include in next progress return.—J.D., 21/9/94. Included.—W.J.M., 24/9/94. Accountant.—J.D., 26/9/94. Voted.—O.C. (per E.H.), 2/10/94. Mr. Piper.

No. 25.

Supervising-Engineer Davis to The Engineer-in-Chief for Sewerage.

Department of Public Works, Roads and Bridges and Sewerage Branch,

Sydney, 21 September, 1894.

*Minute Paper.*

*Subject*:—Western Branch, Western Suburbs, recommending that a single sewer be substituted for the two sewers originally proposed.

In the original scheme for the drainage of the western suburbs two sewers are provided to run side by side from Premier-street to a point in the Terrace Road where the Canterbury sewer branches off to that suburb, a length of 70 chains. Over twelve months ago the survey was completed for the two sewers, and in anticipation of them being continued the length of tunnelling and lining from Premier-street to the Illawarra Road was included in the contract for the eastern branch. The tunnel is now driven for the two sewers for this length, and the lining will be proceeded with in a few days.

With a view of seeing how the cost of a single sewer would compare with that of a double one, estimates have been prepared which I attach. They show that the double sewer—

For the length from Premier-street to Terrace Road, exclusive of shafts and aqueduct, to be ... ..	£	s.	d.
And the single sewer, 7 ft. 8 in. x 6 ft. 8 in., to be, on same basis ... ..	22,867	3	9
	13,758	13	9
Saving in favour of one sewer ... ..	8,108	10	0
To this must be added saving in shafts ... ..	1,000	0	0
And saving in cost of aqueduct ... ..	1,500	0	0
Total saving in favour of one sewer... ..	10,608	10	0

The

The only objection to the single sewer is in the fact that the flow line will be raised 5½ inches, and this will affect the area drained by the Canterbury branch to that extent.

I have consulted with Mr. Bagge as to the desirability of making the proposed change, and he quite agrees with me that it should be made.

I beg, therefore, on the score of economy that the single sewer should be substituted for the double sewer.

I have seen Messrs. Carter & Co. with reference to making the change in the length between Premier-street and Illawarra Road, and they are willing to build the single in place of the double sewer, provided they are recouped for any expense they may have gone to in making centering for this particular length. If the Engineer-in-Chief so decides, the two sewers could be built, and a chamber and shaft built at Illawarra Road to connect the single and double sewer, as shown on attached tracing.

J. DAVIS.

One sewer from Premier-street approved.—R.H., 24/9/94.

Will Mr. Millner please note and report what expense the contractors have been put to in preparing centering. I will then write contractors, instructing them to carry out the single sewer in lieu of double one.—J.D., 24/9/94. Mr. Millner.

Noted and report herewith.—W.J.M., 29/9/94. Contractors informed.—J.D., 11/10/94. Will Mr. Bagge please have drawings prepared for Illawarra Road shaft, providing for inlet from east, and also of any alteration he wishes made in invert of Premier-street chamber.—J.D., 11/10/94. Mr. Bagge. Mr. Baltzer for details.—W.C.O.-B., 11/10/94. Details are nearly finished.—W.C.O.-B., 15/10/94.

Resident Engineer's Office, Arncliffe, 9 October, 1893.

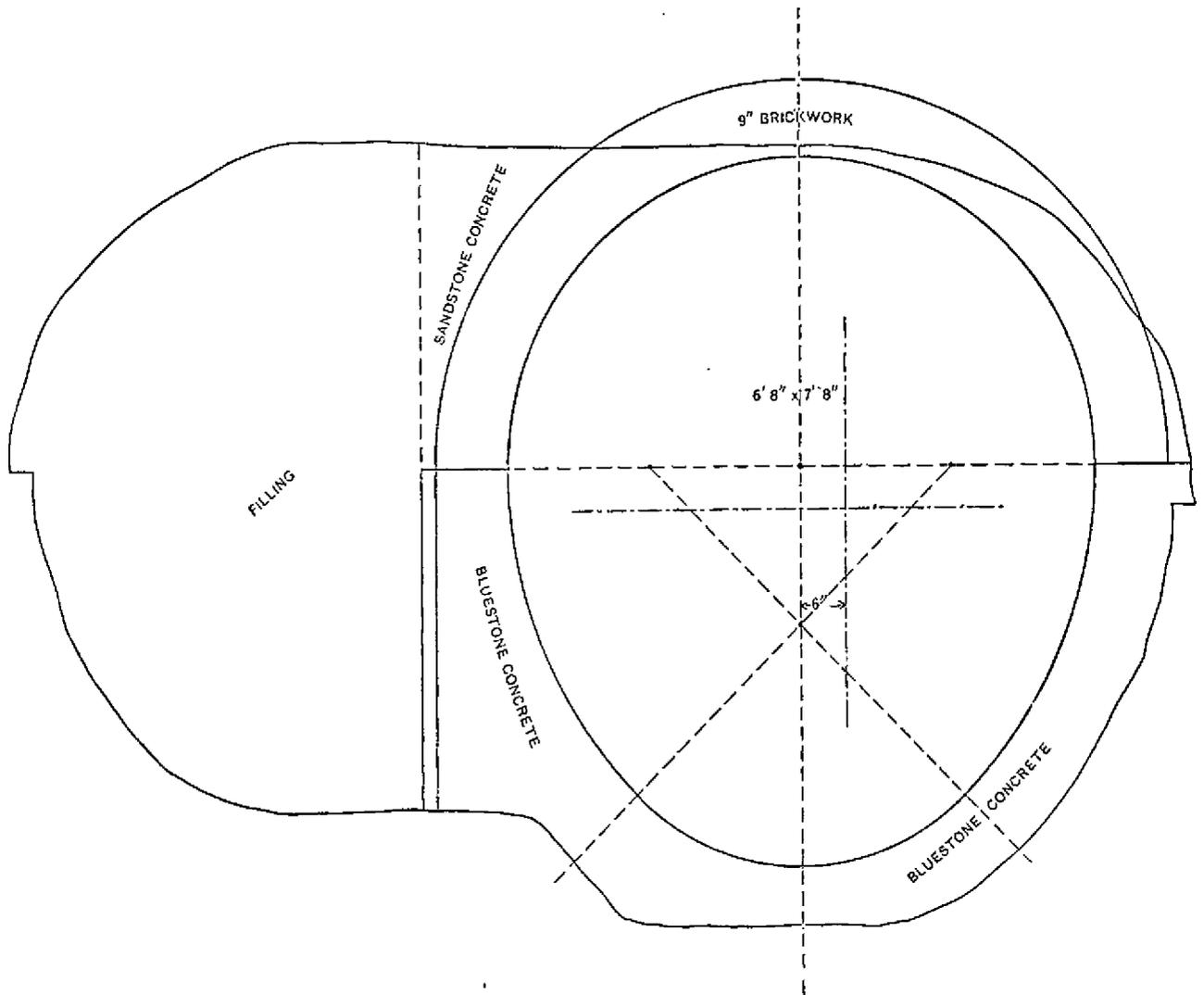
CONTRACT No. 69.—Alteration of Sewer, Premier-street to Illawarra Road.

THE attached tracing shows the cross section of tunnel excavation between Premier-street shaft and Illawarra Road, and the distance the centre line will require to be moved to substitute the 7 ft. 8 in. x 6 ft. 8 in. sewer for the duplicate sewer.

W. J. MILLNER.

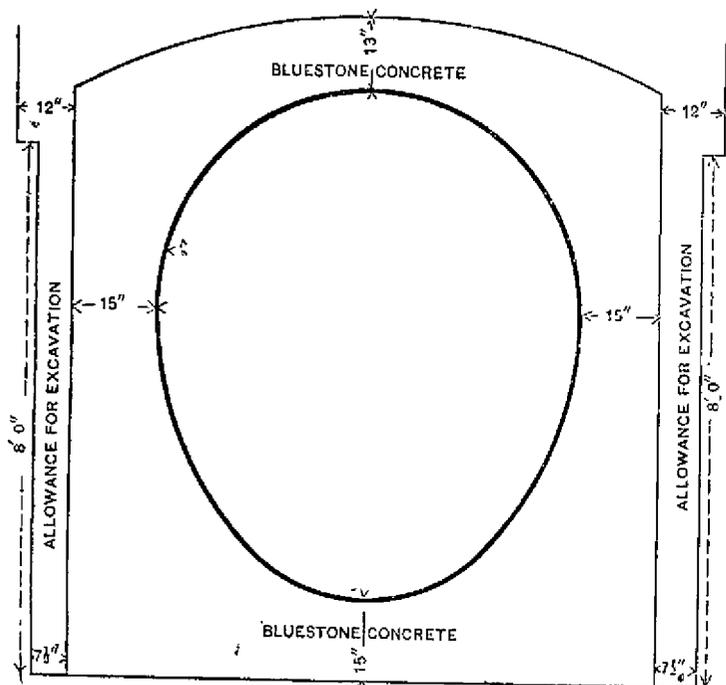
Mr. Davis.

WESTERN BRANCH—Cross Section, Tunnel Excavation. Scale, ½ inch,



PROPOSED

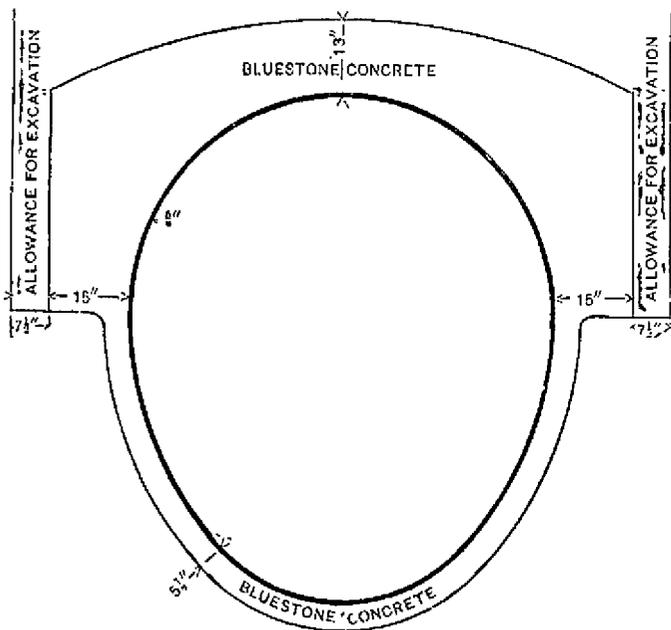
PROPOSED SEWER (7 ft. 8 in. x 6 ft. 8 in. SEWER).



*In open cutting (in soft ground).*

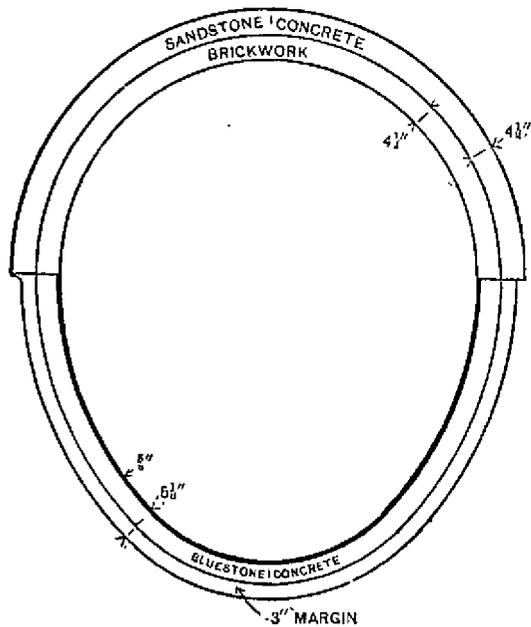
Quantities per foot run of Sewer.

Excavation .....	3.27 cubic yards.
Concrete (bluestone)..	1.75 " "
Rendering .....	2.50 square yards.



*In open cutting (in rock).*

Excavation .....	2.41 cubic yards.
Concrete (bluestone)..	.89 " "
Rendering.....	2.50 square yards.



*In tunnel (in rock).*

Excavation .....	1.833 cubic yards.
Concrete (bluestone)..	.30 " "
" (sandstone)..	.111 " "
Brickwork .....	.154 " "
Rendering.....	1.337 square yards.

## 7 ft. 8 in. x 6 ft. 8 in. Sewer.—Estimate per chain of Sewer.

Description of Work.	Unit.	Quantity.	Rate.	Amount
<b>In open cutting, in soft ground—</b>				
Excavation .....	cubic yards	216	£ s. d. 0 2 0	£ s. d. 21 12 0
Concrete (bluestone).....	"	115.76	2 0 0	231 10 0
Rendering .....	square yards	165	0 2 9	22 13 9
				275 15 9
<b>In open cutting, in rock—</b>				
Excavation .....	cubic yards	159.2	0 5 0	39 16 0
Concrete (bluestone).....	"	58.8	2 0 0	117 12 0
Rendering .....	square yards	165	0 2 9	22 13 9
				180 1 9
<b>In tunnel, in rock—</b>				
Excavation .....	cubic yards	.....	1 7 6	166 7 6
Concrete (bluestone) .....	"	.....	2 0 0	39 12 0
" (sandstone) .....	"	.....	1 8 0	10 6 0
Brickwork .....	"	.....	2 15 0	27 18 6
Rendering .....	square yards	.....	0 2 9	12 2 6
				256 6 6

## COMPARATIVE Estimate for Construction of Sewers, Western Branch, Western Suburbs Sewerage.

Description of Work.	Unit.	Quantity.	Rate.	Amount.
<i>7 ft. 8 in. x 6 ft. 8 in. Sewer.</i>				
Open cutting, in rock, 1 chain .....	chains	1	£ s. d. 180 1 9	£ s. d. 180 1 9
Tunnel, in rock.....	"	25	256 6 6	6,408 2 6
Open cutting, in soft ground .....	"	26	275 15 9	7,170 9 6
				13,758 13 9
<i>6 ft. 10 in. x 5 ft. 10 in and 5 ft. 2 in. x 4 ft. 2 in. Sewers.</i>				
Open cutting, in rock .....	chains	1	277 5 6	277 5 6
Tunnel, in rock.....	"	25	498 4 3	12,455 0 3
Open cutting, in soft ground .....	"	26	376 7 0	9,785 2 0
Extra excavation—difference in width between double and single sewers.....	cubic yards	3,495	0 2 0	349 10 0
				22,867 3 9
<b>In open cutting, in soft ground—</b>				
Excavation .....	cubic yards.	279	0 2 0	27 18 0
Concrete (bluestone) .....	"	154.4	2 0 0	308 16 0
" (sandstone) .....	"	3.43	1 8 0	4 16 0
Rendering.....	square yards	253.44	0 2 9	34 17 0
				376 7 0
<b>In open cutting, in rock—</b>				
Excavation .....	cubic yards.	216.5	0 5 0	54 2 6
Concrete (bluestone) .....	"	91.75	2 0 0	183 10 0
" (sandstone) .....	"	3.43	1 8 0	4 16 0
Rendering.....	square yards	253.44	0 2 9	34 17 0
				277 5 6
<b>In tunnel, in rock—</b>				
Excavation .....	.....	197.14	1 7 6	271 1 0
Concrete (bluestone) .....	.....	45.54	2 0 0	91 1 6
" (sandstone) .....	.....	20.46	1 8 0	28 12 9
Brickwork.....	.....	31.75	2 15 0	87 6 3
Rendering .....	.....	146.5	0 2 9	20 2 9
				498 4 3

## COMPARATIVE Estimate—Western and Canterbury Branches—from Chamber, Premier-street, to Shaft, Illawarra Road—8 ft. x 7 ft. Sewer.

Description of Work.	Quantity.	Rate.	Amount.
		£ s. d.	£ s. d.
Excavation.....	cub. yds. 2,188.4 + 388 x 516	1 7 6	1,828 1 6
Bluestone concrete.....	1,329.43	2 3 0	351 13 6
Sandstone .....	163.57	2 0 0	182 12 0
Brickwork .....	66.3	2 15 0	509 2 6
Rendering .....	185.14	0 5 0	180 2 6
Sandstone concrete (filling) .....	720.5	2 0 0	1,186 16 0
New gas-check .....	539.4	.....	85 0 0
			£4,273 8 0

COMPARATIVE Estimate—Construction of Sewers, Western and Canterbury Branches, from Chamber, Premier-street, to Shaft, Illawarra Road—8 ft. x 7 ft. Sewer.

Description of Work.	Quantity.	Rate.	Amount.
Excavation .....	2,188 4 + 358 x 516 .....	1,320 43	£ s. d. 1 7 6
Bluestone concrete .....	637 x 516 .....	328 69	£ s. d. 2 3 0
Sandstone .....	1,244 x 516 .....	642	£ s. d. 2 0 0
Brickwork .....	3,588 x 516 .....	185 14	£ s. d. 2 15 0
Rendering .....	13,963 x 516 .....	720 49	£ s. d. 0 5 0
Filling .....	8 x 516 .....	412 8	£ s. d. 0 0 0
New gas-check .....			£ s. d. 85 0 0
			£3,452 18 0

COMPARATIVE Estimate—Construction of Sewers, Western and Canterbury Branches, from Chamber, Premier-street, to Shaft, Illawarra Road—6 ft. 10 in. x 5 ft. 10 in., and 5 ft. 2 in. x 4 ft. 2 in. Sewers.

Description of Work.	Quantity.	Rate.	Amount.
Excavation.....	2,987 x 516 .....	1,541 3	£ s. d. 1 7 6
Bluestone concrete .....	69 x 516 .....	356 0	£ s. d. 2 3 0
Sandstone .....	31 x 516 .....	160 0	£ s. d. 2 0 0
Brickwork (two rings of brickwork) .....	481 x 516 .....	248 2	£ s. d. 2 15 0
Rendering .....	2,22 x 516 .....	1,145 5	£ s. d. 0 5 0
			£4,173 12 6

COMPARATIVE Estimate—6 ft. 10 in. x 5 ft. 10 in., and 5 ft. 2 in. x 4 ft. 2 in.

Description of Work.	Quantity.	Rate.	Amount.
Excavation.....	2,987 x 516 .....	1,541 3	£ s. d. 1 7 6
Bluestone concrete .....	69 x 516 .....	356	£ s. d. 2 3 0
Sandstone .....	531 x 516 .....	299 84	£ s. d. 2 0 0
Brickwork .....	21 x 516 (one ring of brickwork) .....	108 36	£ s. d. 2 15 0
Rendering .....	2,22 x 516 .....	1,145 5	£ s. d. 0 5 0
			£4,068 14 5 1/2

Resident Engineer's Office, Arncliffe, 29 September, 1894.

WESTERN Branch Sewer.—*Re* altering sewer between Premier-street and Illawarra Road.

I HAVE seen contractors *re* expense incurred in centres, &c, which they claim to be—

Centres for 5 ft. 10 in. x 6 ft. 10 in. sewer	...	...	£ s. d. 16 0 0
Altering centres for 5 ft. 2 in. x 4 ft. 2 in. sewer	...	...	£ s. d. 2 10 0
Section mould	...	...	£ s. d. 1 0 0
Concrete in pats	...	...	£ s. d. 15 0 0
Altering road	...	...	£ s. d. 3 0 0

£37 10 0

Mr. Davis.

W. J. MILLNER.

No. 26.

Supervising-Engineer Davis to Messrs. Carter, Gummow, & Co.

Gentlemen, Department of Public Works, Sewerage Branch, 11 October, 1894.

Referring to the conversation which I recently had with you, and to the interview which Mr. Millner had with you two weeks ago respecting the substituting of a single sewer for the double one, shown on contract drawings, between Premier-street shaft and the shaft at the Illawarra Road, I have the honor to inform you that the Engineer-in-Chief has decided to substitute a 7 ft. 8 in. x 6 ft. 8 in. sewer for the double one, and that you will be allowed for the expense you have been put to in connection with the double sewer, as arranged with Mr. Millner, viz., £37 10s.

The cross section of sewer will be as shown on attached tracing. Drawings will be forwarded in a few days of the shaft at the Illawarra Road, and of any slight alteration it may be necessary to make in the inverts of the Premier-street shaft chamber.

In the meantime you will please proceed with the construction of the single sewer, as shown on the tracing attached.

I have, &c,

J. DAVIS,  
Supervising Engineer for Sewerage.

No. 27.

Messrs. Carter, Gummow, & Co., to The Engineer-in-Chief for Sewerage.

Sir,

Marrickville, 11 November, 1894.

In reply to your letter of 11th October, with regard to alteration of design between Premier-street shaft and Illawarra Road, we beg leave to state that we will accept the terms therein, provided a special item be arranged for the filling at the rate of 5s. per cubic yard.

Yours, &c.,

CARTER, GUMMOW, & CO.,

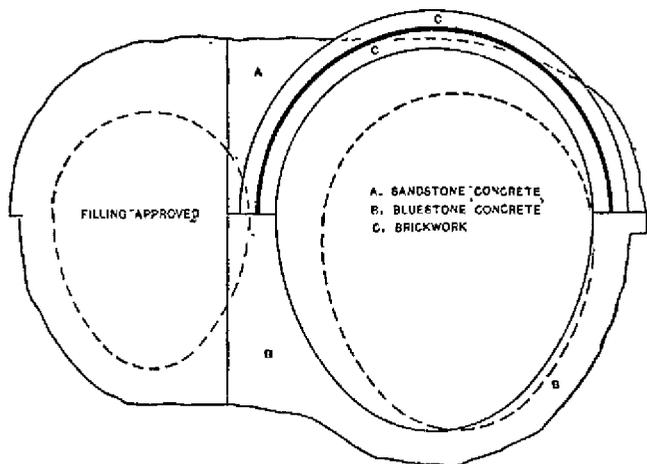
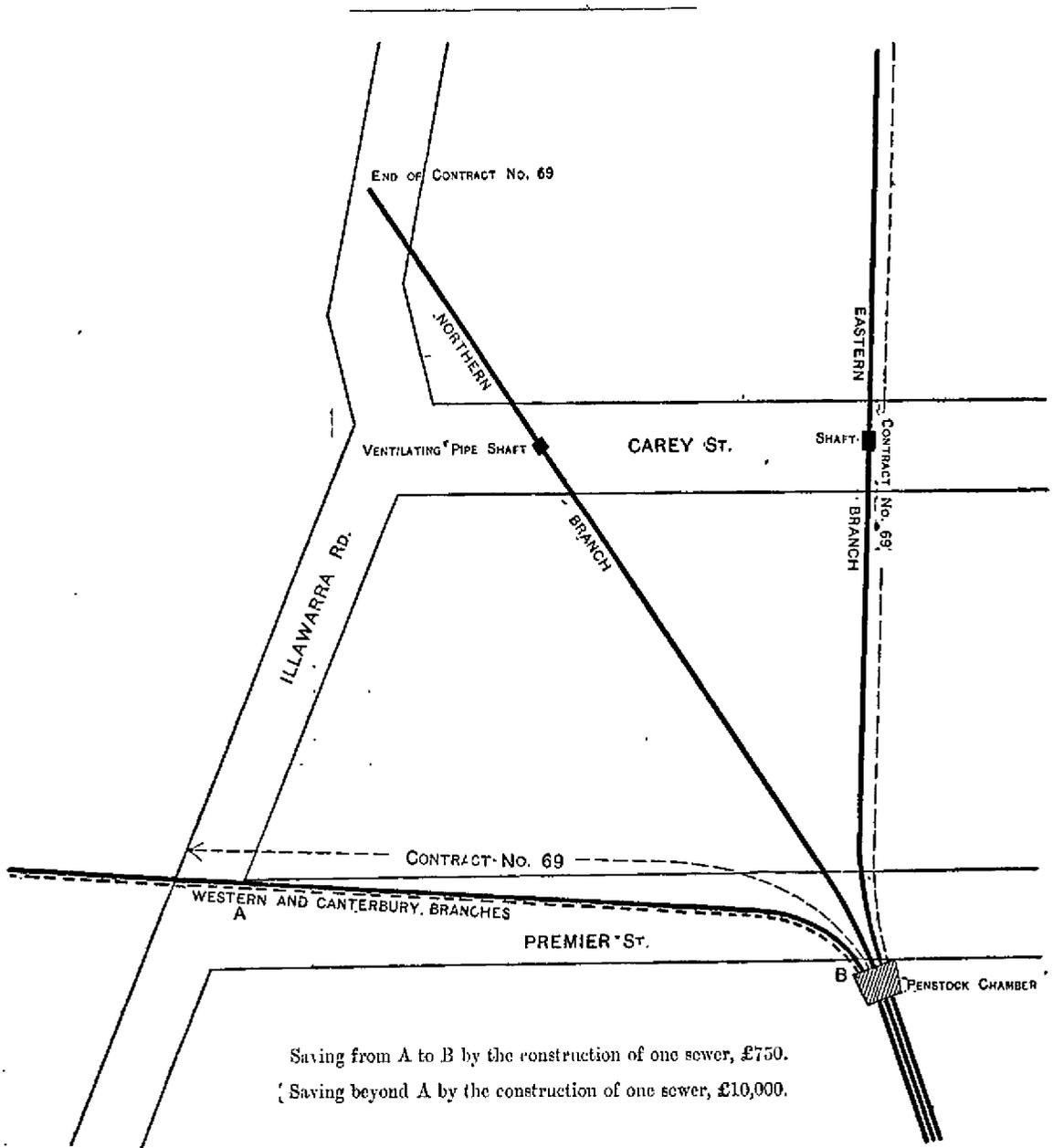
Contract No. 69.

Mr. Davis.—R.H., 11/11/94. Commissioner for Roads.—D.C.M'L., (pro U.S.) B.C., 15/11/94. Will Mr. Weedon please let me have quantity of filling.—J.D., 17/11/94. Quantity of filling, due to alteration in design, 410 cubic yards.—S.H.W., 20/11/94. The

The schedule rate for filling is 6d. per cubic yard, but it is manifest that the contractors, in giving this low price, did not contemplate doing the kind of filling required in connection with the western branch sewer, between Premier-street and Illawarra Road. The 5s. asked is, I consider, a little high, but I suppose, as they will lose something by the reduction of concrete and brickwork, occasioned by the alteration, it will be just to take this into account, and allow them what they ask. There will be about 400 cubic yards of this filling, which, at 5s. per cubic yard, would amount to £100. I recommend that the price named be approved.—J.D., 21/11/94. Commissioner and Engineer-in-Chief for Roads, Bridges, and Sewerage.

This addition is caused by an alteration in the original design, which has the effect of reducing the cost of the work in this contract by about £750, and a further reduction on the whole work of £10,000. Recommended for approval.—R.H., 21/11/94.

For approval.—J.B., 28/11/94. Approved.—J.H.Y., 29/11/94. Roads.—D.C.M'L., (*pro* U.S.), B.C., 29/11/94. Seen.—R.H., 30/11/94. Mr. Weedon to note.—J.D., 4/12/94. Noted.—S.H.W., 6/12/94. File.—J.D., 7/12/94.



Dotted lines indicate original duplicate sewers; full lines indicate sewer as carried out.

133

No. 28.

## Supervising-Engineer Davis to Messrs. Carter, Gummow, &amp; Co.

Gentlemen, Public Works Department, Sewerage Branch, 3 December, 1894.

In reply to yours of the 11th ultimo, accepting the terms stated in mine of the 11th October, relative to the alteration of design between Premier-street shaft and Illawarra Road, conditionally upon a special item being arranged for the filling at the rate of 5s. per cubic yard, I have the honour to inform you that the Minister has approved of your being paid for the filling in of this length at the price you name.

I have, &amp;c.,

J. DAVIS,

Supervising Engineer for Sewerage.

No. 29.

## Supervising-Engineer Davis to Messrs. Carter, Gummow, &amp; Co.

Gentlemen, Public Works Department, Sewerage Branch, 8 December, 1894.

Referring to my letter of the 11th October last, informing you that the Engineer-in-Chief had decided to substitute one sewer for the two shown on the contract drawing between Premier-street and Illawarra Road, and instructed you to proceed with the construction of the single sewer, I now beg to forward herewith the drawing showing the alteration which this change necessitated in the chamber of the Premier-street shaft.

I have, &amp;c.,

J. DAVIS,

Supervising Engineer for Sewerage.

(Through Mr. Millner.)

No. 30.

## Supervising-Engineer Davis to Messrs. Carter, Gummow, &amp; Co.

Department of Public Works, Roads and Bridges and Sewerage Branch,  
Sydney, 23 March, 1895.*Minute Paper.**Subject:—Shaft at Premier-street.*

THE present size of the shaft at Premier-street, excavated under contract No. 62, is 12 ft. x 5 ft. In Messrs. Carter & Co.'s contract, No. 69, provision has been made for enlarging the shaft to 14 ft. x 7 ft., and to line it with brickwork. The top of the shaft is left open, and surrounded by an iron railing, which would not prevent children and others getting into this shaft.

I do not think that there is any necessity to make the shaft larger than it is at the present time, and the iron railing would certainly be dangerous.

I recommend that the shaft be not increased in size, that it be lined with bluestone concrete, and that it be arched over, and a manhole cover be put on in the usual way. The saving that will thereby be effected will amount to £50.

J.D.

Approved.—R.P.H., 25/3/95. Messrs. Carter, Gummow, & Co., 25/3/95. Mr. Millner to note.—J.D., 25/3/95. Noted.—W.J.M., 29/3/95. Mr. Davis. File.—J.D., 30/3/95.

No. 31.

## Supervising-Engineer Davis to Messrs. Carter, Gummow, &amp; Co.

Gentlemen, Public Works Department, Sewerage Branch, 25 March, 1895.

I have the honor to request that instead of enlarging the Premier-street shaft to the size (14 ft. x 7 ft.) shown on the contract drawings and lining it with brickwork, that you will please line the shaft with bluestone concrete in the usual way, not increasing its size; and instead of putting the iron fencing round the top as shown on contract drawings, that you put a concrete arch with manhole cover as is the habit in such cases.

I have, &amp;c.,

J. DAVIS,

Supervising Engineer for Sewerage.

Messrs. Carter, Gummow, & Co.,  
Contractors for Contract No. 69.

No. 32.

## Voucher for £1,520.

CONTRACT No. 69.—Sixteenth Progress Return showing quantity and value of work executed or fixed, and material advanced on, on the 4th day of July, 1895.

Schedule Rate No.	Description.	Unit.	Quantity.	Rate.			Amount.			Total.		
				£	s.	d.	£	s.	d.	£	s.	d.
1	Excavation in open trench.....	cubic yard	18,888	0	0	9	708	6	0			
8	" tunnel (more or less hard).....	"	7,606	1	7	6	10,458	5	0			
11	" (solid rock).....	"	5,688	1	7	6	7,821	0	0			
12	" shafts (soft).....	"	91	0	4	0	18	4	0			
14	" (hard).....	"	404	0	4	0	80	16	0			
16	" more or less hard (soft).....	"	539	2	0	0	1,078	0	0			
19	" (hard).....	"	84	0	5	0	21	0	0			
20	Filling.....	"	12,666	0	0	6	316	13	0			
22	Removing culvert.....	"	38	0	2	6	4	15	0			
28	Hand packed stone filling.....	"	275	0	1	0	13	15	0			
29	Blue metal.....	"	110	0	10	0	55	0	0			
30	Blinding.....	"	55	0	2	6	6	17	6			
31	Sandstone concrete.....	"	587	2	0	0	1,774	0	0			
32	Bluestone.....	"	4,187	2	3	0	9,002	1	0			
33	Brickwork.....	"	1,858	2	15	0	5,109	10	0			

Schedule Rate N	Description.	Unit.	Quantity.	Rate.		Amount.		Total.
				£	s. d.	£	s. d.	
34	Cement facing .....	square yard	8,691	0	5 0	2,172	15 0	
36	Squared bluestone pitchers .....	"	22	50	0 0	1,100	0 0	
40	12-foot stoneware pipes .....	lineal yard	21	0	3 0	3	3 0	
43	Surplus material .....	cubic yard	20,000	0	0 3	250	0 0	
45	Fixing ironwork .....	ton	15	2	0 0	30	0 0	
46	C.I. penstock, 6 ft. diameter .....	each	3	230	0 0	690	0 0	
47	" " 3 ft. 9 in. diameter .....	"	2	140	0 0	280	0 0	
48	" " 2 ft. diameter .....	"	1	45	0 0	45	0 0	
49	C.I. gas check, 6 ft. 10 in. x 5 ft. 10 in. ....	"	1	75	0 0	75	0 0	
50	" " 6 ft. 8 in. x 5 ft. 8 in. ....	"	1	70	0 0	70	0 0	
51	" " 5 ft. 6 in. x 4 ft. 6 in. ....	"	1	45	0 0	45	0 0	
52	" " 5 ft. 2 in. x 4 ft. 2 in. ....	"	1	40	0 0	40	0 0	
53	" " 5 ft. 1 in. x 4 ft. 1 in. ....	"	1	40	0 0	40	0 0	
54	C.I.F. and F. pipe, 3 ft. 9 in. diameter .....	ton	2 2 3 4	16	0 0	34	4 7	
55	" " pipe, 3 ft. 9 in. diameter .....	"	2 0 0 18	16	0 0	32	2 7	
56	" " and S. pipe, 3 ft. 9 in. diameter .....	"	1 16 3 13	16	0 0	29	9 10	
57	C.I.S. pipe, 3 ft. 9 in. diameter .....	"	2 5 3 23	16	0 0	36	15 3	
58	C.I. thimble, 3 ft. 9 in. ....	"	0 11 3 20	16	0 0	9	10 10	
59	C.I.F. pipe, 3 ft. 6 in. diameter .....	"	4 12 2 2	16	0 0	74	0 3	
60	" " and F. pipe, 3 ft. 6 in. diameter .....	"	5 16 0 6	16	0 0	92	16 10	
61	" " and S. " " .....	"	4 9 2 2	16	0 0	71	12 3	
62	C.I.S. pipe, 3 ft. 6 in. diameter .....	"	2 2 3 25	16	0 0	34	7 6	
63	" " " " " " .....	"	1 7 3 20	16	0 0	22	6 10	
64	C.I.F. and S. pipe, 3 ft. 6 in. diameter .....	"	1 5 2 24	16	0 0	20	11 5	
65	C.I. thimble " " " " .....	"	1 0 2 14	16	0 0	16	10 0	
66	C.I.F. and F. " " 2 ft. drain .....	"	0 19 0 4	16	0 0	15	4 7	
67	" " and S. " " " " .....	"	1 13 3 18	16	0 0	27	2 9	
68	C.I. thimble, 2 ft. diameter .....	"	0 4 1 5	16	0 0	3	8 8	
69	C.I.F. bend, 12 in. " " .....	"	0 14 1 0	16	0 0	11	8 0	
70	" " and S. bend, 16 in. diameter .....	"	0 8 1 10	20	0 0	8	6 10	
71	Wrought-iron girders .....	"	0 7 0 0	22	0 0	7	14 0	
72	Platform for penstocks .....	"	1 4 2 15	30	0 0	36	19 0	
73	C.I. standards and W.I. railings .....	cwt.	0 4 1 11	2	10 0	10	17 5	
74	W.I. ladder .....	"	0 16 2 15	1	10 0	24	19 0	
75	Landing plates .....	"	0 15 2 27	1	0 0	15	14 10	
76	W.I. gratings .....	"	0 4 1 20	1	10 0	6	12 10	
77	" " " " " " .....	"	0 9 1 11	1	10 0	14	0 5	
78	C.I. pipes, 3 ft. 9 in. diameter .....	ton	289 4 0 0	8	15 0	2,530	10 0	
79	" " 3 ft. 6 in. " " .....	"	435 5 0 14	8	15 0	3,808	9 10	
80	" " 2 ft. diameter " " .....	"	63 16 3 20	8	15 0	558	13 1	
81	Screw-bolts .....	"	0 2 0 23	50	0 0	5	10 3	
82	" " " " " " .....	"	0 0 1 20	50	0 0	1	1 5	
83	Laying and jointing, 3 ft. 9 in. pipes .....	lineal yard	376	0	3 6	65	16 0	
84	" " 3 ft. 6 in. " " .....	"	640	0	3 6	112	0 0	
85	" " 2 ft. pipes .....	"	214	0	2 6	30	10 0	
96	Portland cement .....	cask	2	0	12 0	1	4 0	
97	Artizan .....	day	2	0	16 0	1	12 0	
99	Ordinary labour .....	"	109	0	11 0	59	19 0	
100	Cart horse and driver .....	"	23	1	0 0	23	0 0	
	<i>Work not in Schedule.</i>							49,164 2 7
	Filling western branch .....	cubic yard	400	0	5 0	100	0 0	
	C.I. pipes for flushing .....	ton	3 4 0 4	24	0 0	76	16 10	
	" " " " " " .....	"	1 6 0 22	22	0 0	28	16 4	
	<b>Total</b> .....							<b>49,369 15 9</b>

Recapitulation.	Amount.	Total.		
	£	s. d.	£	s. d.
Value of work executed to date .....	49,369	15 9	49,369	15 9
<i>Deductions to be made:—</i>				
Retention money .....	1,269	15 9		
Amount of progress payments already made, see annexed sheet, marked .....	46,580	0 0	47,849	15 9
Amount of 16th progress payment now recommended .....			1,520	0 0

£ s. d.  
 Minister's approval for ..... 6,200 0 0  
 Estimated amount of contract..... 45,207 3 11  
 Payments to date ..... 48,100 0 0

I hereby certify that the above return is a fair and correct statement of the contract to which it refers, and that the above measurements were made by the Resident Engineer with Mr. Snodgrass

J. O'CUNE-GIBBS,

Resident Engineer.

J. GRIFFITHS,

Supervising Engineer.

I certify that the amount charged in this voucher as to computations, castings, and rates is correct, that the service has been faithfully performed, and that the expenditure is duly authorized in terms of the Audit Act.

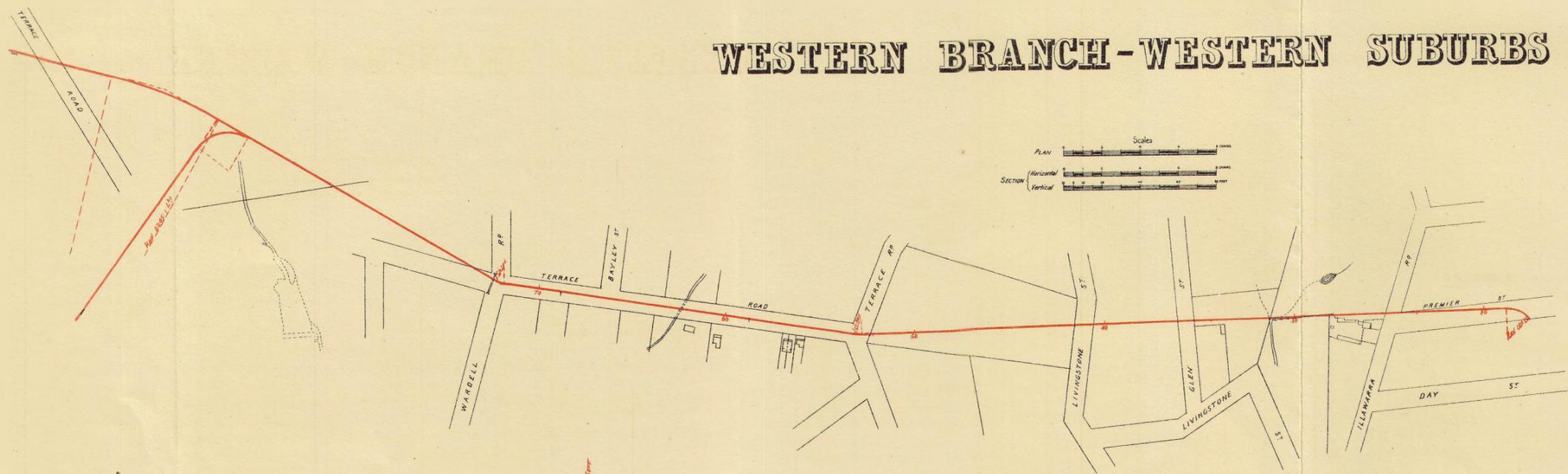
C. DARLEY,

Head of the Department.

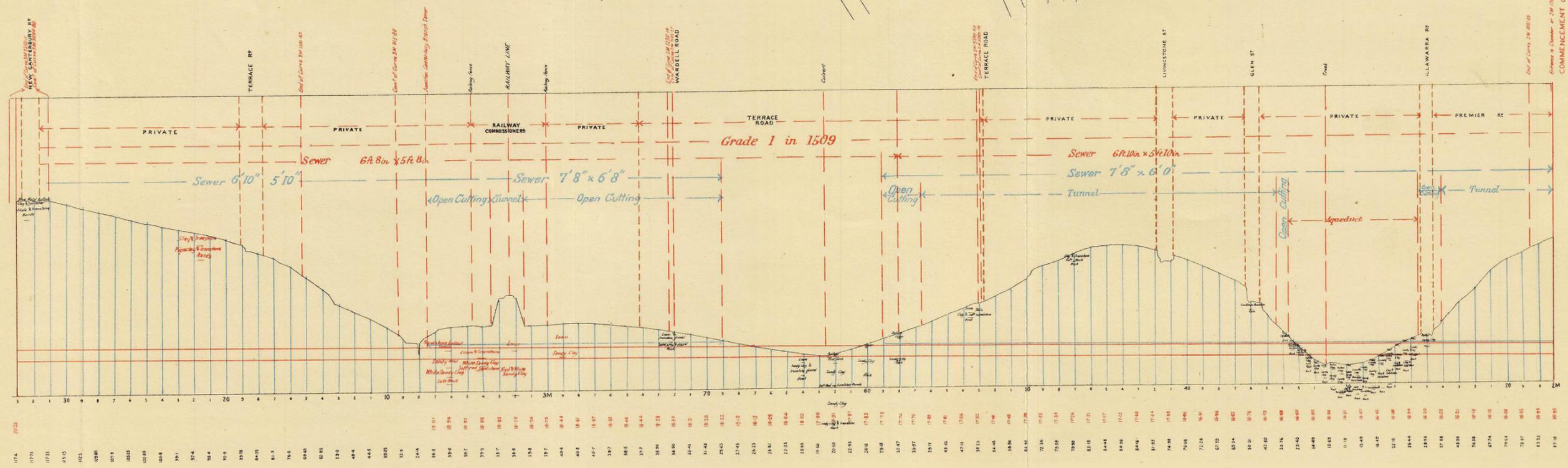
# WESTERN BRANCH - WESTERN SUBURBS

CONTRACT No 69

Tracing accompanying my Memorandum  
of September 10<sup>th</sup> 1894  
ap  
11/9/94



NOTE  
 Area drained by Western Branch - High Level 2533 } by M<sup>r</sup> Harbison  
 Low Level 1317 }  
 Extra area added for portion of Five Dock  
 to be taken in --- 442  
 Total for Western Branch --- 4292  
 Area drained by Canterbury Branch --- 2042 } Area used by M<sup>r</sup> Harbison  
 Total for both Sewers --- 6334 } in calculating discharges



(Sup. 158-)

Note: Bearings in red taken on old line of Sewer

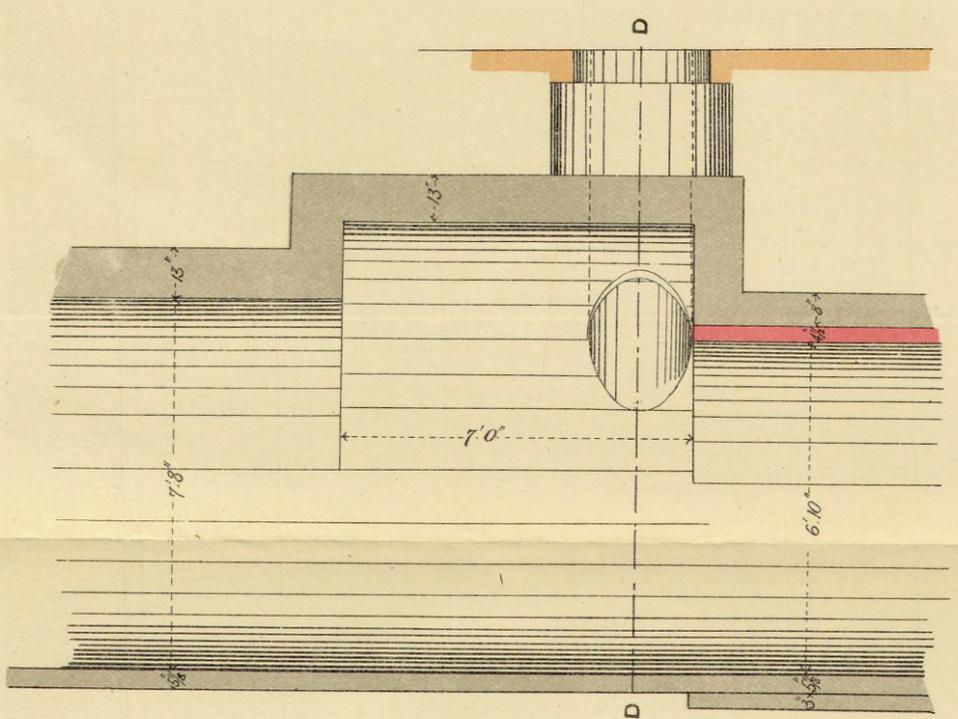
1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200
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COMMENCEMENT OF CONTRACT

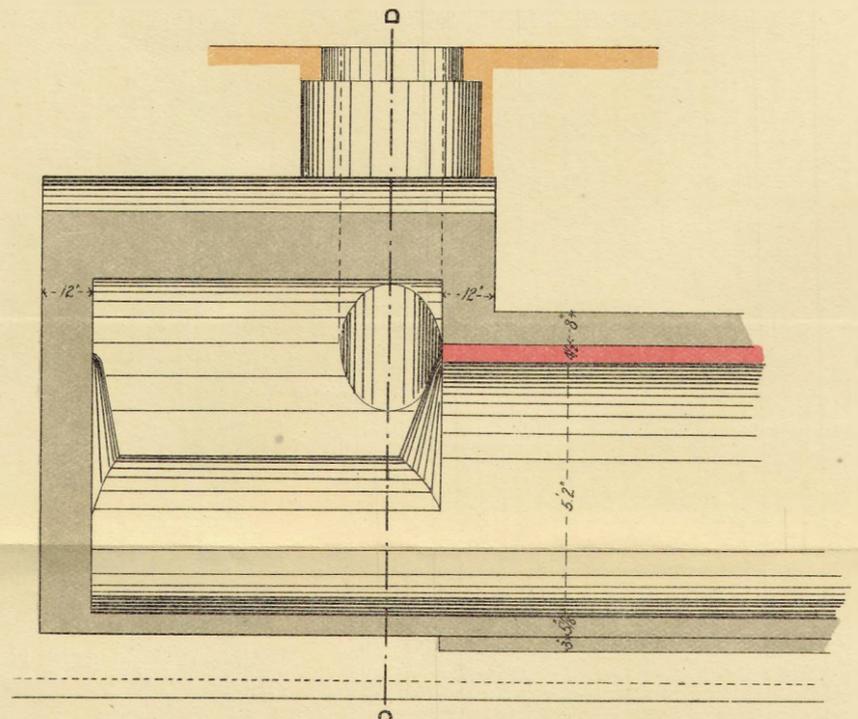
# WESTERN SUBURBS SEWERAGE

## WESTERN BRANCH

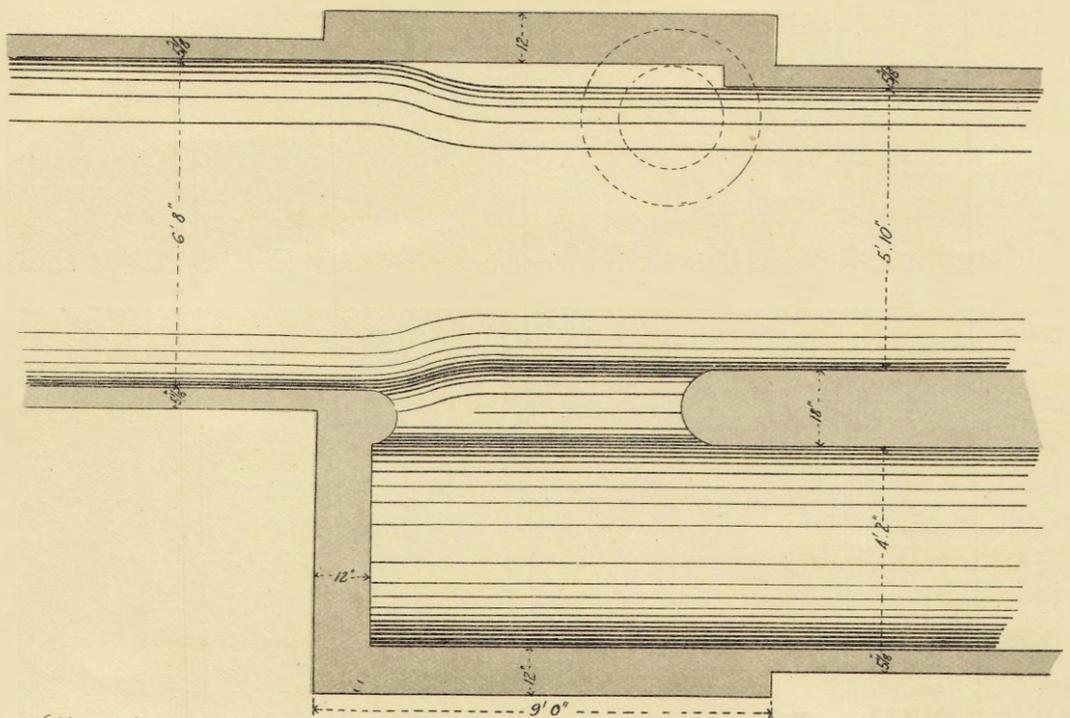
### SHAFT AT 2 MILES 25 CHAINS ON ILLAWARRA ROAD



SECTION ON LINE-A-A

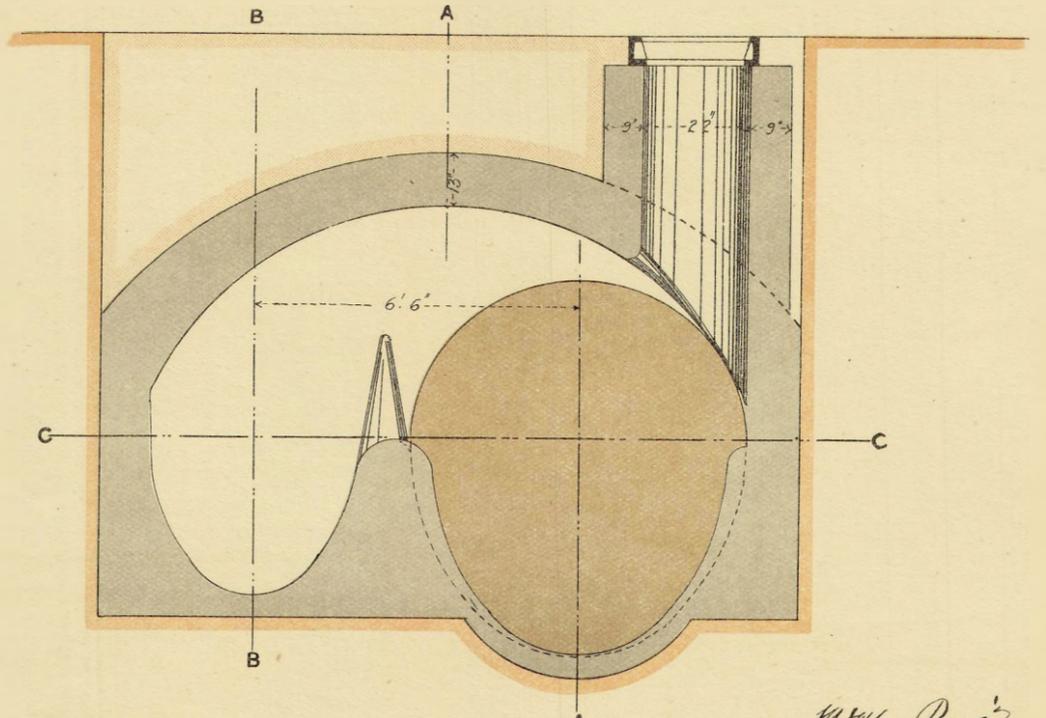


SECTION ON LINE-B-B



(Sig. 258.)

SECTION ON LINE-C-C



SECTION ON LINE-D-D

*W. H. Rose*  
21. 9. 94

## Contract No. 72, Sydney Sewerage.

### No. 1.

#### Schedule of Tenders received by Tender Board.

				Wednesday, 18 February, 1891.					
				Twelve.					
				£20,650.					
				Carter & Co.					
				Amount.		Deposit.		Nature.	
				£	s.	d.	£		
1.	Carter & Co.	...	...	20,650	0	0	207	Cheque.	
2.	Phippard Bros.	...	...	21,386	18	11	214	"	
3.	Jas. Atherton	...	...	21,886	1	6	219	"	
4.	Parry and Farley	...	...	23,445	0	0	230	"	
5.	A. M'Sweeny	...	...	23,977	0	6	240	Cash.	
6.	C. B. Bond	...	...	24,989	9	0	240	Cheque.	
7.	James Flood	...	...	25,569	0	0	260	"	
8.	C. Richards	...	...	25,600	0	0	250	"	
9.	Gummow & Gillau	...	...	25,995	0	0	260	"	
10.	John Shunn	...	...	28,205	7	0	282	"	
11.	H. A. Brigg & Co.	...	...	28,220	0	6	280	"	
12.	Murray and Stuart (received late)	...	...	28,693	10	11	300	"	

I recommend acceptance of Carter & Co.'s tender at schedule rates.

R. R. P. HICKSON

23rd February, 1891.

Vice-President of Tender Board.

### No. 2.

#### The Under Secretary for Public Works to Messrs. Carter and Co.

Sir,

Department of Public Works, Sydney, 28 February, 1891.

I have the honor, by direction of the Secretary for Public Works, to inform you that your tender, dated the 18th instant, is accepted for Contract No. 72, Sydney Sewerage, Construction of a Stormwater Sewer, Munni-street to Shea's Creek, at your schedule of prices.

The work is to be carried out in strict accordance with the several contract exhibits relating to this contract, and to be completed within eight months from this date.

I have to refer you to the Commissioner for Roads for further information, and to request that you will call upon the Officer in Charge of Bonds and Contracts at this office, for the purpose of executing the necessary documents for the due observance of your Contract.

I am, &c.,

J. BARLING,

Under Secretary.

### No. 3.

#### Agreement.

Department of Public Works, Bonds and Contract Branch,  
Sydney, 28 May, 1892.

*Minute Paper.*

*Subject:—Re Extension of Time, Munni-street Sewer, Contract No. 72.*

THE Memo. of Agreement herein duly prepared, has been executed by The Honorable the Minister and the Contractors, Messrs. Carter & Co., and stamped, and may now be forwarded to the Commissioner and Engineer-in-Chief for Sewerage.

The Tender, and all other papers herein, are sent herewith.

H. F. NORRIE,

Officer in Charge (*pro V.C.L.*)

#### MEMORANDUM OF AGREEMENT

MADE this 19th day of April, in the year of our Lord 1892, between the Honorable William John Lyne, the Minister for Public Works, in and for the Colony of New South Wales (hereinafter referred to as "the said Minister,") of the one part, and John Carter, David Graham Snodgrass, and George Forest, of North Sydney, in the said Colony, contractors, carrying on business together under the name, style, or firm of "Carter & Co.," and hereinafter referred to as "the said contractors." Whereas by a certain agreement in writing, bearing date the 16th day of March, 1891, the said contractors covenanted with Her Majesty the Queen, her heirs or successors, to find and provide all the materials, tools, plant, labour, and every other thing requisite and necessary for and performance of the various works required in and about the

the full and proper construction, erection, and completion of Munni-street, Macdonald-street, Mitchell Road to Shea's Creek storm-water channel, known as contract No. 72, Sydney and Suburbs Storm-water Drainage, in accordance in all things with the printed notice tender specification, general conditions, and special conditions, thereunto annexed, and the plans or drawings relating thereto, and therein referred to, and to complete and finish the whole of the said works on or before the 28th day of October, 1891. And whereas the said works are still unfinished and not completed, and the said contractors have applied to and requested the said Minister to extend the time for the completion of the said works until the 18th day of August, 1892, which the said Minister hath consented to do. Now these presents witnesseth, that in consideration of the premises the said Minister, acting on behalf of the Government of the said Colony, doth hereby extend the time for completion of the works in the said agreement, tender, specification, general conditions, and special conditions, mentioned or referred to, until the 18th day of August, 1892, and that the said contractors do hereby jointly and severally covenant, promise, and agree with the said Minister that they, the said contractors, shall, and will, well and truly complete the whole of the works mentioned in the specification, general conditions, and special conditions, and the plans or drawings therein referred to, mentioned or shown, in accordance in all things with the said tender, specification, general conditions, special conditions, and plans and drawings, on or before the 18th day of August, 1892; and further, that at all times hereafter the said agreement shall be read and considered, as if the said 18th day of August, 1892, had been named in and by the said agreement, tender, specification, general conditions, and special conditions, as the day on or before which the said works were to be completed and finished by the said contractors; and that the said agreement shall not be considered as altered, or the stipulations, provisoes, and agreements therein or in the said specification, general conditions, and special conditions, in any way barred, waived, or departed from in any respect, other than as to the time within which the said works are to be completed, but that Her Majesty the Queen, her heirs and successors, the said Minister and his successors in office, and the Government of the said Colony, shall have all and every the rights, powers, and authorities, cause and causes of action, and suits, claims, and demands, given to or vested in her, or them, in and by the said agreement, tender, specification, general conditions, and special conditions in all respects against the said contractors, and each and every of them, as if the said 18th day of August, 1892, had been the day or time originally named in and appointed for the completion of the said works; and that all, and singular, the penalties, forfeitures, sum or sums of money, rights, and privileges which would accrue to, or vest in Her said Majesty the Queen, her heirs or successors, the said Minister and his successors in office, or the Government of the said Colony, for or by reason, or on account of the said works not being completed and finished within the time named, and according to the said tender, specification, general conditions, special conditions, and the said agreement shall accrue to, or vest in Her said Majesty, her heirs or successors, the said Minister and his successors in office, or the Government of the said Colony, if the said works shall not be completed and finished in all things on or before the 18th day of August, 1892; and that the said agreement shall at all times be read and considered as if the said 18th day of August, 1892, was, and is the time therein named for the completion of the said works, instead of the said 28th day of October, 1891; and, lastly, that in consideration of such extension of time, as aforesaid, the said contractors shall not have any claim or demand against the Crown, or the Colonial Government, or the said Minister, for any alleged failure or delay on the part of the said Government in not setting out the said works, or furnishing plans or detailed drawings, or in not supplying machinery or materials, or otherwise arising out of any supposed failure, neglect, or default on the part of the said Government; and all such claims and demands are hereby expressly waived and surrendered. In witness whereof the said parties to these presents have hereunto set their hands and seals the day and year first before written.

Signed, sealed, and delivered by the said William John Lyne, }  
 the Minister for Public Works in and for the Colony of }  
 New South Wales, but not so as to incur or come under }  
 any personal liability in respect of the premises, in the }  
 presence of,— } J. BARLING. } WILLIAM JOHN LYNE.

Signed, sealed, and delivered by the said John Carter, in the }  
 presence of,— } J. L. CARTER.  
 HAROLD F. NORRIE, J.P.

Signed, sealed, and delivered by the said David Graham }  
 Snodgrass, in the presence of,— } D. G. SNODGRASS.  
 V. C. LUMSDAINE.

Signed, sealed, and delivered by the said George Forest, in }  
 the presence of,— } GEO. FOREST.  
 HAROLD F. NORRIE, J.P.

AGREEMENT made this 16th day of March, in the year of our Lord 1891, between John Carter, David Graham Snodgrass, and George Forest, all of Sydney, in the Colony of New South Wales, contractors, carrying on business together under the name, style, or firm of "Carter & Co.," hereinafter styled or referred to as "The Contractors" of the one part, and Her Most Gracious Majesty Queen Victoria of the other part.

Whereas the Minister for Public Works of the said Colony recently called for tenders for the providing of all materials, labour, and every other thing requisite and necessary for, and the performance of all the works required in and about the construction, erection, completion, and maintenance of a storm-water sewer from Munni-street, Macdonald-street, Mitchell Road to Shea's Creek, in the said Colony, as shown in the drawings relating thereto, and according to the specification, and under and subject to the general conditions and special conditions which are hereunto annexed. And whereas the contractors made the tender hereunto annexed, marked "C," for the providing of all plant and materials, labour, tools, and every other thing requisite and necessary for, and the performance of all the works required in and about the full and proper construction, erection, and completion and maintenance of the said works in accordance in all things with the specification, and under and subject to the general conditions and special conditions relating to the said works, and in accordance with the several plans or drawings relating

relating thereto in the office of the Engineer-in-Chief for Sewerage, and marked No. "1" to No. "5" inclusive, and at or for the rates or prices mentioned and set out in the schedule of quantities and prices to the said tender, and to complete the said works within eight months from the date of acceptance of the said tender; that is to say, on or before the 28th day of October, 1891, as mentioned in the first clause of the said special conditions. And whereas the Minister for Public Works of the said Colony, acting on behalf of the Government of the said Colony, hath accepted the said tender of the contractors, and the contractors have, in compliance with the requirement in clause 6 of the said special conditions, deposited the sum of £900 in the Bank of New Zealand, at Sydney aforesaid, in the name of the Minister for Public Works aforesaid, at interest, upon fixed deposit, number 286,855, dated the 10th day of March, 1891, for twelve months, and have handed the receipt for same to the Minister for Public Works, to be held by him as such Minister, or the Minister for Public Works for the time being of the said Colony, on behalf of Her Majesty, as security for the due performance of this contract, and all other matters and things herein contained, and which on the part of the contractors are to be done and performed. Now this agreement witnesseth that in consideration of the premises the contractors do hereby for themselves, their heirs, executors, and administrators, covenant with and to Her said Majesty the Queen, Her heirs and successors.

That they, the contractors, shall and will find and provide all the materials, labour, plant, tackle, tools, implements, carriage, machinery, scaffolding, and every other thing requisite and necessary for, and shall and will perform the various works required in and about the full and proper construction, erection, completion, and maintenance of a storm-water channel commencing at the junction of Union and Munni Streets, Macdonaldtown, in the said Colony, and extending more or less along the line of creek to Macdonald-street, and along that street; thence south along the course of the creek to its intersection with Mitchell Road; thence again in a southerly direction along the course of the creek to the northern angle of a Chinese garden; and thence in an easterly direction across a slight ridge to Shea's Creek, being a total distance of 77 chains and  $\frac{3}{4}$  of a chain, together with all manholes, junctions, &c., connected therewith, with such extensions or omissions as may be ordered in writing, being a portion of the works for Sydney Sewerage; this present contract being called or referred to as contract No. 72, in accordance in all things with the specification hereunto annexed marked A, and the general conditions and special conditions hereunto annexed marked B and D, and with the several plans or drawings relating thereto in the office of the Engineer-in-Chief for Sewerage, and numbered "1" to "5" inclusive, and which are signed by the contractors, and at or for the rates or prices set out in the said schedule of quantities and prices to the said tender; it being also hereby declared that any additions to or deductions from the said works, mentioned or set out in the said specification, or shown in the said plans, are to be paid or allowed for as the case may be, at and according to the rates or prices in the said schedule of quantities and prices. And shall and will complete the whole of the said works within eight months from the date of acceptance of the said tender; that is to say, on or before the 28th day of October, 1891, as mentioned and provided in clause 1 of the said special conditions in accordance in all things with the said specification, general conditions, special conditions, and plans. And it is hereby agreed and declared between and by the said parties hereto that the said specification, general conditions, and special conditions marked respectively as aforesaid, and the said tender marked as aforesaid, all being hereunto annexed as aforesaid, shall be read as incorporated in and forming part and parcel of these presents in like manner as if the same had been herein written and set forth at length, and that the said specification, general conditions, and special conditions, and tender, and these presents, shall together be taken to be the contract between the said parties in respect of the said works, and that all and whatsoever by the said specification, general conditions, and special conditions, or any or either of them, is to be done by the contractors, or shown on the said plans, shall be done in accordance therewith in all things by the contractors, their executors or administrators; and that all and whatsoever materials, goods, matters, and things which by the said specification, general conditions, and special conditions are to be supplied by the contractors in and about the construction and completion of the said works, shall be found, provided, and supplied by the contractors, their executors or administrators, in accordance in all things with the said specification, general conditions, special conditions, and plans. And it is hereby agreed that if the contractors, their executors or administrators, shall make default in proceeding with the said works or supplying the materials which, under the said specification, general conditions and special conditions, are to be supplied by the contractors, or in completing and finishing the said works in accordance in all things with the said specification, general conditions, and special conditions, and all things therein contained, and within the time for the completion of the said works as mentioned or provided in the said first clause of the said special conditions, the said sum of £900, so deposited as security for the due performance of this contract, shall be and become forfeited to Her Majesty the Queen, and may be used, paid, and applied so far as the same may be required in and about carrying out and completing the works in the said specification mentioned; and if any balance shall remain after the said works are completed the same shall remain to the credit of the Consolidated Revenue of the said Colony; and that the right of Her Majesty to deal with the said sum of £900 in manner aforesaid shall be in addition to all, any, or other rights or remedies which Her Majesty the Queen, or the Government of New South Wales, shall or may have or be entitled to against the contractors under these presents, or under the said specification, general conditions, and special conditions, or any or either of them, or otherwise for any breach or breaches of this contract.

In witness whereof the said parties to these presents have hereunto set their hands and seals, the day and year first before written.

Signed, sealed, and delivered by the said John } Carter, in the presence of,—	}	JOHN CARTER.
HAROLD F. NORRIE, J.P.		
Signed, sealed, and delivered by the said } David Graham Snodgrass, in the pre- sence of,—	}	D. G. SNODGRASS.
HAROLD F. NORRIE.		
Signed, sealed, and delivered by the said } George Forrest, in the presence of,—	}	GEO. FORREST.
HAROLD F. NORRIE.		

Department of Public Works, Sydney, 13 February, 1891.

TENDERS FOR PUBLIC WORKS.

TENDERS will be received at this office, for the public works specified in the Schedule hereunder, up to 11 o'clock a.m. of the various dates set forth in the second column.

All envelopes containing tenders must be addressed to the President of the Tender Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Tenderers may be in attendance when the tenders are opened, and the name of the lowest tenderer will be announced, if possible, before the duties of the Board have terminated.

The following conditions will have to be strictly complied with, otherwise the tenders will not be taken into consideration:—

- 1st.—Each tender must state the time within which it is proposed to complete the work, and in every instance the full name or names of persons tendering, also the names in full, occupations, and addresses of proposed bondsmen.
- 2nd.—At the foot of every tender there must be a memorandum, signed by the party tendering and two responsible persons as sureties, agreeing to be answerable for the due performance of the contract, in the event of the tender being accepted; and undertaking, in that event, that they will severally execute and deliver a bond to Her Majesty, in the penal sum mentioned in the specification, or otherwise arranged, for securing such performance.
- 3rd.—No tender will be considered which shall have been received after 11 o'clock a.m. on the day upon which tenders are to be received, unless there are circumstances which, in the opinion of the Board, render it desirable that it should be received.
- 4th.—Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz.:—

For amounts up to £500 inclusive ... ..	£5 0 0
For amounts exceeding £500 and not exceeding £1,000 ... ..	10 0 0

For all sums over £1,000, 1 per cent. of the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a Bank draft.

- 5th.—Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal and rejected accordingly.
- 6th.—In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all monies deposited by him on account of such contract shall be absolutely forfeited to the Crown, and shall be paid to the credit of the Consolidated Revenue of the Colony.
- 7th.—Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted, but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.
- 8th.—In the event of any contract being tendered for at a schedule of rates, the approximate quantities as given of each item must be worked out and a total sum shown.

All deposits, with the exception of that of the lowest tenderer, when practicable, will be returned to the persons entitled thereto, immediately after the Board shall have adjourned; and the deposit made by the successful tenderer shall be returned to him on executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200, the deposit with tender will not be returnable until the service is satisfactorily completed.

It is to be understood that the Government does not bind itself to accept the lowest or any tender and no tender will be accepted until the head of the branch under whose directions the work is to be carried out has reported upon the whole of the tenders received.

BRUCE SMITH.

Roads.

Description of Work or Supplies to be Tendered for.	Dates up to which Tenders will be received.	Where Plan, Specification, and Form of Tender may be seen.	Remarks.
* * * *	*	* * * *	* *
Construction of a Storm-water Sewer, Munnistreet to Shen's Creek, Contract No. 72 Sydney Sewerage Works.	18 Feb., 1891	Sewerage Office, Lincoln's Inn Chambers, Elizabeth-street.	See also special notice.
* * * *	*	* * * *	* *

This is the copy notice referred to in our annexed agreement with Her Majesty the Queen, dated the 16th day of March, A.D. 1891.

Witness,—HAROLD F. NORRIE, J.P.

JOHN CARTER.  
D. G. SNODGRASS.  
GEO. FORREST.



No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate per unit.	Amount
<b>IRONWORK.</b>					£ s. d.
18	Providing, delivering, and fixing in position girders, including bedding same on special mortar, as specified in clauses 91 and 102 to 107 .....	cwt.	74 cwt. 22 lb.	25/-	92 14 11
19	Providing, delivering, and fixing cast-iron gratings, as specified and shown on drawing No. 5, weighing 4 cwt. each, as specified in clauses 90 and 108 to 111 .....	each	32	90/-	144 0 0
20	Cast-iron ventilating grates, with square frames, 22 inches diameter internal opening, tarred sawn hardwood bricks in centre, fitted into panels, circular dirt-box 8 inches deep, complete, as shown on drawing No. 5, and as specified in clauses 90 and 108 to 111, placed in position, weighing each about 9 cwt. ....	"	6	200 -	6 0 0
<b>GENERAL.</b>					
21	Special bluestone concrete (clause 26), where ordered in any situation, in the construction of these works.....	cubic yard	5	60/-	15 0
22	Permanent puddle, where ordered in any situation, in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for) .....	"	5	2/6	0 12 6
23	Bluestone metal (clause 19), 1½-inch gauge, stacked.....	"	5	15/-	3 15 0
24	Bluestone metal (clause 31), 2¼-inch gauge, stacked .....	"	5	14/-	3 10 0
25	Sharp, clean-washed sand, stacked .....	"	5	4/-	1 0 0
26	Oregon timber, in scantlings or planks .....	cubic foot	100	2/-	10 0 0
27	Wrought-iron in bolts, screws, nails, spikes, and galvanised step-irons	lb.	1,000	-/6	25 0 0
28	Portland cement .....	cask	5	20/-	5 0 0
29	Artisan or mechanic, supplied by contractor .....	day	10	15/-	7 10 0
30	Quarryman or other skilled labourer, supplied by contractor.....	"	10	10/-	5 0 0
31	Ordinary labourer, supplied by contractor .....	"	10	10/-	5 0 0
32	Cart, with one horse and driver, supplied by contractor .....	"	5	20/-	5 0 0
33	One additional horse, supplied by contractor.....	"	5	10/-	2 10 0
<b>MAINTENANCE.</b>					
34	Three months' maintenance after formal delivery of works.....	lump sum	.....	...	20 7 7
<b>TOTAL</b> .....					20,650 0 0

*Notes.*

1. All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

2. The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

3. Prices for items Nos. 29, 30, 31, 32, and 33 are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

4. The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer-dams, fluming, temporary bridges, roads, pumping, gasket-filling, diverting watercourses and surface water, diverting and maintaining the traffic along roads, crossing over pipe-sewers, disposal and removal of surplus soil, reinstating all roads and other surfaces, &c, and any other thing necessary in executing and completing each respective item, in accordance with plans and specifications.

5. Tenderers are to state prices for all items, whether quantities are given or not.

This is the schedule of quantities and prices referred to in our annexed agreement with Her Majesty the Queen, dated the 16th day of March, A.D. 1891.

Witness,—HAROLD F. NORRIS, J.P.

JOHN CARTER.  
D. G. SNODGRASS.  
GEO. FORREST.

"A."

SPECIFICATION of the several works required in the construction of a storm-water channel commencing at junction of Union and Munni Streets, and extending, more or less, along the line of creek to Macdonald-street and along this street; thence south along the course of the creek to its intersection with Mitchell Road; thence again in a southerly direction along the course of the creek to the northern angle of a Chinese garden; and thence in an easterly direction across a slight ridge to Shea's Creek, being a total distance of 77·38 chains, together with all manholes, junctions, &c, connected therewith, in accordance with the accompanying drawings, with such extensions or omissions as may be ordered in writing, viz. :—

1. *Description of Drawings.*

1. Drawing No. 1.—General plan and longitudinal section.
- " No. 2.—Cross-sections.
- " No. 3.—Details of inlets, cross-sections of channel, manholes, outlet-end, piling, plank-floor, &c.
- " No. 4.—Details of large junction, intersection with 18-inch pipe-sewer, inlets, &c.
- " No. 5.—Details of wrought-iron girder, cast-iron ventilating and other gratings.

2. *Extent of Contract.*

2. The works comprised in this contract consists in the necessary excavation, shoring, timbering, piling, unwatering, concrete, brickwork, stonework, rendering, re-filling, pipe-laying, carpenter's work, ironwork, pitching, paving, ballasting, metalling, leading surplus materials to spoil, &c., required in the construction of the following, viz. :—

From Shea's Creek to	20 chains	open channel	11 ft. 6 in. x 7 ft. 6 in.
"	20 chains to 28 "	oval sewer	10 ft. 6 in. x 6 ft. 6 in.
"	28 " to 39.12 "	"	10 ft. 6 in. x 6 ft.
"	39.12 " to 39.77 "	junction of two creeks, with flat concrete decking between wrought-iron rolled girders.	
"	39.70 " to 48.17 "	oval sewer	7 ft. 2 in. x 6 ft.
"	48.17 " to 58 "	circular sewer of	6 ft. internal diameter.
"	58 " to 62.50 "	"	of 5 ft. 10 in. internal diameter.
"	62.50 " to 66 "	"	of 5 ft. 2 in. internal diameter.
"	66 " to 72 "	"	of 3 ft. internal diameter.
"	72 " to 76.58 "	"	of 2 ft. 6 in. internal diameter.

in open cutting in mud, sand, loam, clay, shale, and ironstone, as shown on longitudinal section, and as shall be directed, with all branches, junctions, curves, manholes, flushing chambers, sub-ducts, road-making, and all other works in connection with those herein enumerated, and the maintenance of the whole of the works for a period of three months after they have been formally taken over by the Engineer.

3. It is to be understood that the lower 13 or 27 chains of the channel shall not be constructed until the Engineer gives a written order to that effect; and the Engineer shall have the power to suspend the execution of these portions of the work, or any other part of the contract, or to reduce the length of the contract by the extent of the said 13 or 27 chains, or any other part of the sewer shown on the drawings, that he may consider necessary, and the contract shall not thereby be invalidated, nor shall the contractor be entitled to any compensation on account of such temporary suspension of any part or parts of the contract or permanent reduction of same.

4. Supply of Materials, &c.—Contractor to supply, at his own expense, all labour, plant, and materials of any sort whatever for the due performance of the contract.

3. *Site.*

5. Access to the site of the works to be had along centre lines where such are shown to be along lines of streets, and along all public roads which cross the centre lines of the Munni-street to Shea's Creek storm-water channel.

6. For the purpose of excavating open cuttings, where ordered, for sewers, &c., and for constructing and completing the various works therein, contractor to have temporary possession of a strip of land the exact widths which in the opinion of the Engineer is required for these works.

7. All areas of strips of land hereinbefore referred to to be set out by the Engineer, to whom written application for their temporary possession must be made by the contractor two weeks prior to the time the said land is required by him.

Such possession, however, not to be exclusive, but subject to the right of entry of the Engineer, his officers, and other persons, carts and horses, &c., required for any purposes of the Government at any time.

8. Any other lands required by the contractor for temporarily depositing materials, or for any other purposes in connection with the contract, he will have to procure at his own cost, in strict accordance with clause 6 of the conditions of contract.

9. The contractor shall provide and erect all necessary fences, temporary bridges over the open trenches, where directed, for the use of residents through whose ground the sewer has to be built, and underneath tramways, footpaths, and streets, boarding-barriers, &c., wherever directed to do so, and all fences, walls, railings, walks, or streets, metalled, grassed, paved, pitched, or asphalted surfaces, to be left by the contractor at the completion of the works in the same order as they were before the commencement of the works, at his sole cost, in strict accordance with the various stipulations and terms contained in this specification, and in clause 2 of the conditions of contract, to the entire satisfaction of the city or municipal authorities, and of the Engineer-in-Chief.

4. *Lines, Levels, and Setting-out Work.*

10. The centre lines of main sewer and branch sewers are shown on general plan, drawing No. 1, by full red lines, which will be marked on the surface of the ground, the same as on plan, as the works proceed.

After setting out, the centre lines of the works are to be preserved solely by reference to the iron nails, pegs, and other marks and signals which may be placed, fixed, and erected for the purpose of these works along their centre lines.

The gradients and levels of the works are to be preserved by reference to any bench-marks which the Engineer may deem necessary to establish along the lines of works during the progress of the contract, subject to check and adjustment, as shall be directed, from other bench-marks established beyond the site of the works.

5. *Materials.*

11. All materials, as brick, stone, cement, timber, iron, sand, stoneware pipes, clay, lead, &c., which are to be supplied by the contractor, are to be of the best quality and description of their respective kinds. Samples of each kind to be submitted for the approval of the Engineer, and retained in office; and on approval having been obtained, they are to be delivered on the works ready for use, as per sample.

12. The contractor shall inform the Engineer of the sources whence the various materials are supplied, or of the places of their manufacture, and afford him every facility to inspect their supply or manufacture at any stage of the same.

13. The contractor to make and provide proper and approved gauges or scales for measuring or weighing all materials supplied, whether specified to be broken or delivered to special sizes, and mixed together in stated proportions or not.

14. Bricks to be of well-mixed material of approved quality and uniform fineness; to be new sound, hard, well-burnt kiln bricks, free from cracks and all other defects, truly rectangular, with sharp arrises, of approved dimensions and form; to be specially moulded where required for arching inner and outer rings of sewers and circular or segmental shafts, and equal to sample bricks to be seen at the Engineer's office, and which must be sealed by the contractor and acknowledged as a sample of the bricks to be used throughout the works. Bricks used in these works will be subjected to the following tests, viz. :—

- (a) *Tensile strength*.—The tensile strength to be tested, in the departmental testing machine, by laying the brick horizontally on its base of 3 inches between supports 7 inches apart, and the strain applied across the centre of the brick and distributed over a width of  $1\frac{1}{2}$  inch. An average breaking strain of twelve bricks to be taken, which must not be less than 8,000 lb.
- (b) *Porosity*.—Bricks immersed in water for twenty-four hours must not increase in weight more than 3 per cent.

Should the twelve bricks fracture under the foregoing average strain, or prove more impervious to water than 3 per cent., then the Engineer may reject the whole stack of bricks from which the twelve bricks were taken. The whole of the expense incurred in testing the bricks shall be borne solely by the contractor.

15. In the event of the contractor delivering quantities of bricks on the site of the works for the contract of a mixed description and quality, the officer in charge shall have the power to require of the contractor to have those bricks which, in his opinion, are suitable for the works picked out and stacked where directed, and those defective or unsuitable removed from the site of the contract; and in the event of the contractor refusing or failing to comply with such request within twelve hours from the time it has been made, then in all such cases the Superintending Officer shall have the power of rejecting the whole of the bricks so delivered by the contractor.

16. Stoneware pipes to be of well ground and mixed material, of tough, tenacious, impervious quality, well burnt, sound, hard, uniform in thickness, true in section, straight longitudinally, uniformly glazed both inside and outside, free from fire or other cracks, flaws, and ash-holes, the collar perfectly joined to the barrel, and in every way equal to sample pipe to be seen at the Engineer's Office. Paving tiles to be of the same materials as the stoneware pipes, to be uniformly glazed on all sides and of approved size and form.

Pipes to be of the following thicknesses and depth of collar, namely :—

Pipes, inside diameter, 9 inches;	thickness, $1\frac{1}{8}$ inch;	depth of collar, 2 inches.
Do do 12 inches;	do 1 inch;	do 2 inches.
Do do 15 inches;	do $1\frac{1}{2}$ inch;	do $2\frac{1}{4}$ inches.
Do do 16 inches;	do $1\frac{3}{8}$ inch;	do $2\frac{1}{4}$ inches.
Do do 18 inches;	do $1\frac{1}{2}$ inch;	do $2\frac{3}{8}$ inches.
Do do 21 inches;	do $1\frac{5}{8}$ inch;	do $2\frac{5}{8}$ inches.
Do do 24 inches;	do $1\frac{3}{4}$ inch;	do $2\frac{3}{4}$ inches.

All parcels of pipes used in these works will be tested in the departmental testing machine, and submitted to the following crushing strains, applied in the centre of the pipe :—

24-inch diameter pipe at 110 lb. per square inch of bearing surface.
18-inch do 100 lb. do do.
16-inch do 100 lb. do do.
12-inch do 100 lb. do do.
9-inch do 100 lb. do do.

If the Engineer deems it necessary, the pipes will also be tested for porosity. Should the pipes fracture under the foregoing strains, or not prove impervious to water, then the Engineer may reject the whole of parcel from which the pipes were taken. The whole of the expense incurred in testing the pipes shall be borne solely by the contractor, and all pipes injured or broken by the testing shall be immediately replaced by sound pipes, subject to the foregoing tests, at contractor's cost.

17. Stone.—All stone used in the construction of these works for pitchers or masonry, unless where otherwise specified, to be sound, solid, hard sandstone, of the best description, free from all defects, and as per sample approved.

18. Broken stone for ballast to be sound, solid stone, as specified in clause 17; to be broken to a size to pass freely with its largest dimensions through a ring of 4 inches in diameter. Broken stone for packing round sewer-lining, above drains, &c., to be sound and solid, and broken to the same size as ballast.

19. Broken stone for bluestone concrete to be of basalt or other similar hard stone of approved quality; to be broken by hand or crushing machine, of a size to pass freely with its largest dimensions through a ring of  $1\frac{1}{2}$  inch in diameter; the whole of the metal to be free from dirt, quarry refuse, &c.; to be screened through a sieve of meshes  $\frac{1}{2}$  inch apart, and then to be washed with fresh water until approved, before it shall be deemed fit and suitable for these works.

20. Sand to be sharp quartz sand of approved quality, free from all earthy, loamy, clayey matter, &c., and washed perfectly clean whenever the Engineer deems it necessary.

21. Cement.—The cement to be used throughout these works to be the best Portland cement, of approved brands and manufacture, free from hard or set lumps, and no barrel or portion of same to be used until it has been examined and approved by the Engineer. Samples from each parcel brought on the works to be submitted for testing :—The weight per struck bushel not to be less than 100 lb., and not to exceed 116 lb. The specific gravity not to be less than 3.08. The cement, when passed through a wire sieve of 2,500 meshes per square inch, to leave a residue of not more than 10 per cent., through a sieve of 5,800 meshes not more than 25 per cent., and through a sieve of 14,400 meshes not more than 40 per cent. The cement, when mixed neat with  $16\frac{1}{2}$  per cent. by weight of water, to give a tensile strength of not less than 250 lb. per square inch after three days' setting in water, 445 lb. after seven days, and 550 lb. after twenty-eight days. The cement is to be "slow setting" unless a quick-setting cement is specially ordered. The cement, when mixed in the proportion of 1 of cement to 3 of standard sand, and 10.6 per cent. of the total weight of water, to give a tensile strength of not less than 100 lb. per square inch at seven days, and from 200 to 230 lb. at twenty-eight days. The tensile strength will be ascertained

in the departmental testing machine, with the load increasing at the rate of 200 lb. per minute, and the average breaking weight of six briquettes will be taken for each test. Should the sample fail in any or all of these tests, or not show a proper progressive increase in strength with age of briquette, then the Engineer may reject the whole parcel from which the sample was taken, and the contractor shall at once remove the said parcel of cement from the site of the works at his own expense, failing which, the Engineer may have it removed at the contractor's cost without further notice. Empty casks to be destroyed, as provided in clause 14 of the General Conditions. To facilitate the gauging of cement throughout the contract, cement casks will be taken as equal to holding 4 cubic feet, otherwise the Contractor to provide and make approved gauge boxes, holding exactly 4 cubic feet, for measuring cement. Cement of a lighter weight than herein stipulated, but otherwise equal to the specified test, may be permitted to be used in the works, subject to the decision of the Engineer-in-Chief, and provided that the deficiency in weight is made up in quantity.

22. Mortar.—The mortar to be used in these works to be composed of 1 part of Portland cement and of 2 parts of clean washed sharp sand, as described in clauses 20 and 21, the proportion of each to be correctly ascertained by measurement; the whole to be mixed with fresh water, as may be directed, to be well incorporated, and to be used fresh. Any mortar which has become hard or set to be at once rejected. All mortar to be mixed upon approved sawn timber platforms, close to where it is required.

23. Special mortar, composed of 1 part of cement and 1 part of sand, and prepared as before described, to be provided and used in all portions of the work where especially specified and directed.

24. Grout.—The grout to be made of mortar as described in clause 23, to be mixed fluid in tubs close to where it is required, and to be used fresh.

25. Bluestone concrete.—The concrete to be used in these works to be composed of 1 part of Portland cement, 2 parts of sand, and 4 parts of bluestone metal.

26. Special concrete, if required, to be composed of 2 parts of Portland cement, 3 parts of sand, and 7 parts of bluestone metal.

27. Sandstone concrete, where ordered to be used in these works, to be composed of 1 part of Portland cement, 2 parts of sand, and 5 parts of sandstone (as specified under clause 17) metal, free from dirt, quarry refuse, sieved (as specified in clause 19), washed, and of a size to pass with its largest dimensions through a ring of 2 inches in diameter. All materials to be mixed in the same manner as hereinafter specified for concrete.

28. Puddle to consist of the best clay to be obtained in the district within a radius of 5 miles; to be carefully turned over and mixed with fresh clean water, as shall be directed, until the clay, in the opinion of the Engineer, has become of one even and uniform colour and plasticity.

29. Hardwood timber to be ironbark, blue or red gum, box, or other approved colonial hardwood, of the best description, sound, straight, free from sap, wanes, shakes, gum-veins, cores, or other defects; to have clean sharp arrises, and to be of the fullest dimensions shown or specified; in round timber, the diameter given is to be measured at the smallest end, exclusive of bark.

30. Wrought-iron.—All wrought-ironwork to be of the best description, quality, and workmanship, with square arrises, and of the exact dimensions and forms shown on drawings. All wrought-iron to be double H. or B.B. Crown brand, and all ironwork, when finished, to be heated and then dipped in or coated with gas-tar.

31. Bluestone road-metal.—The stone used for metalling to be basalt or other similar hard stone of approved quality; to be broken to angular fragments of a size to pass freely with their largest dimensions through a ring  $2\frac{1}{2}$  inches in diameter, and to be free from dirt, quarry refuse, &c.

32. Bluestone.—All bluestone used in the construction of these works for pitchers or masonry to be of the best description of basaltic bluestone obtainable, free from honeycomb and all defects, and as per sample approved.

#### 6. General.

33. Earth-borings have been taken along or close to the line of sewer, the results of which are described on Drawing No. 1; but no guarantee is given that the ground to be excavated will be free from subsoil water, or that the proportion of materials will correspond with that shown on longitudinal section, or that there will be more or less subsoil water than indicated.

34. Diverting surface water and unwatering.—The prices set forth in schedule accompanying tender for the works comprised in this contract to cover and include the cost of all materials and labour, and everything that is necessary for executing the works of every description required for the proper and effectual deviation of all creek, surface, and subsoil drainage from the sites of the works; in constructing temporary coffer or other dams across the low-lying ground above and below the site of the works; in diverting said creek, subsoil, and surface water, from time to time, as the progress of the contract may require; in providing and constructing adequate and secure fluming, pumping apparatus, &c., for conducting undisturbedly all freshets, and the usual quantity of water flowing in the existing creek, across the site of the works on or near lines of lowest ground; in keeping all trenches and excavations constantly unwatered, and in preventing any injury to the same by floods or any other cause.

35. Diversion of sewage of existing sewers during the construction of the Works.—During the construction of the works in general, and of all points of intersection of existing and new sewers, and until completion of all works connected therewith, the contractor to provide all materials and labour and everything that may be necessary, and execute all the works of every description required to prevent (and be solely responsible for) all damage and injury which may occur to private property or to the existing or new works by floods, flooding with sewage, choking and bursting of sewers in consequence of insufficient and inadequate pumping apparatus, tanks, dams, fluming, &c., or any other cause, and erect and construct suitable tanks, pumps, watertight temporary dams across existing sewers above and below points of intersection, and watertight adequate and secure fluming for the purpose of conveying constantly the whole of the sewage which may flow in sewers at any time across said points of intersection, at his sole cost, to the entire satisfaction of the Engineer-in-Chief.

36. The contractor to adopt every precaution and provide all materials, piling, planking, shoring, labour, &c., and carefully execute, erect, and construct, at his own cost, any timbering and shoring wherever required and directed; and also watertight temporary coffer or other dams at junctions of creeks across outlet end of sewer, &c., or to prevent effectually the water from other creeks and from Shea's Creek at low or high water level from entering the site of the works, or such portions of same that may be operated.

operated upon at the time, during the term of the contract or as shall be directed, as the contractor shall be held solely responsible for all damage and injury which may occur to private property, to existing or new works, by floods, in consequence of insufficient and inadequate piling, timbering, pumping apparatus, dams, sluices, fluming, or any other cause.

7.—*Excavation.*

37. The excavations for sewers, manholes, junctions, curves, &c., to be executed to the depths, widths, and gradients shown on longitudinal and cross sections, and according to the nature and solidity of the ground.

38. All trenches excavated in rock to be taken out to the exact cross sections of the concrete work, as shown on drawings, while in compact, loamy, clayey, or other material of sufficient solidity, all trenches to be excavated at bottom level transversely, and 6 inches wider at each side than the exact width required for the concrete, and the sides from bottom of trench to surface of ground to be excavated with a batter of 1 in 8, unless otherwise directed.

39. In less compact or soft ground the trenches for foundations of sewers, manholes, &c.; to be excavated to such depths and widths as shall be directed and determined during the progress of the works. The excavation for foundations of sewers, manholes, &c., may therefore vary in depths and widths from those shown on drawings, but the exact cross sections of all excavations will be determined by the Engineer as the works proceed. All excavations to be taken out to the widths and depths herein specified, clear of any shoring and timbering wherever such may be required.

If the 13 or 27 chains of the outlet end of proposed storm-water sewer (as provided in clause 3) should not be excised from present contract, then, pending the completion of proposed ship-canal to its junction with proposed storm-water sewer, an open channel, when ordered, to be excavated to such gradients, depths, and cross sections, from the junction of the two channels to the present head of said ship-canal, a distance of about 32 chains, as shown on drawing No. 1, and as shall be determined at the time.

40. The excavation in "solid rock" for pipe trenches shall have vertical sides, and shall be of the following sizes, viz. :—

For 24-inch diameter stoneware pipe-sewers	...	...	...	3 ft. 9 in. wide.
21-inch do do do	...	...	...	3 ft. 4 in. do
18-inch do do do	...	...	...	3 ft. 0 in. do
15-inch do do do	...	...	...	2 ft. 6 in. do
12-inch do do do	...	...	...	2 ft. 0 in. do
9-inch do do do	...	...	...	2 ft. 0 in. do

41. When timbering is not required in excavation in all other ground for pipe-trenches, the trenches shall be of the same widths as those in "solid rock." Where timbering is required, the excavation for pipe trenches 8 feet deep and under, shall have vertical sides, and shall be of the following sizes to the outside of the polling-boards, viz. :—

24-inch diameter stoneware pipe-sewers	...	...	...	4 ft. 0 in. wide.
21-inch do do do	...	...	...	3 ft. 7 in. do
18-inch do do do	...	...	...	3 ft. 3 in. do
15-inch do do do	...	...	...	2 ft. 9 in. do
12-inch do do do	...	...	...	2 ft. 3 in. do
9-inch do do do	...	...	...	2 ft. 3 in. do

42. Where timbering is required, the excavation for pipe-trenches about 8 feet deep shall have vertical sides, and shall be the widths given in clause 41 for the lower 8 feet, and for any depth over and above 8 feet the trenches shall be of the following sizes to the outside of the 1½-inch polling-boards, unless otherwise ordered in writing, viz. :—

24-inch diameter stoneware pipe-sewers	...	...	...	4 ft. 9 in. wide.
21-inch do do do	...	...	...	4 ft. 4 in. do
18-inch do do do	...	...	...	4 ft. 0 in. do
15-inch do do do	...	...	...	3 ft. 6 in. do
12-inch do do do	...	...	...	3 ft. 0 in. do
9-inch do do do	...	...	...	3 ft. 0 in. do

43. *Shoring, Timbering, and Temporary Bridges.*—During the excavation for sewers, branch sewers, and pipe-sewers, in open cuttings, for junctions, points of intersection, flushing chambers, pipe-trenches, curves, manholes, crossing over or underneath existing road bridges, existing gas, water and sewer pipes, and oval or circular brick sewers, &c.; the contractor to adopt every precaution, as specified in clause 36, and provide all materials, as planking, strutting, shoring, timbering, &c., and labour, and carefully execute and construct, at his own cost, wherever considered necessary by the Engineer, and to his entire satisfaction, temporary bridges underneath Mitchell Road and other lines of streets or foot-paths, so as to ensure during the period of the contract, the undisturbed traffic along said streets, &c.; and execute approved strong and secure shoring and strutting and underpinning where the sewer passes under existing pipes and brick sewers, and in sandy or loose soil close timbering, or any other work that may be required to prevent any buildings over and adjacent to the line of sewer, and all other super-structures, road-surfaces, earth, rock, or other materials at top and sides of excavations from settling, cracking, being shaken, slipping, or falling in.

As the works proceed, all shoring, timbering, temporary bridges, &c., shall be withdrawn, except in cases where, in the opinion of the Engineer, the withdrawing of the same is impracticable, or would endanger the safety of the works and buildings, existing pipes, sewers, &c., streets, and other surfaces, over and adjacent to same, when the contractor must obtain an order, signed by the Engineer-in-Chief, to the effect that shoring, timbering, &c., may be covered up, with a statement of the quantities, which shall be measured before being covered up, and paid for at schedule rates.

44. *Pipe-sewers.*—Transverse and other checks to be excavated to receive pipe sockets and junctions, and for the purpose of making joints. No portion of pipe trench to be opened up anywhere until a sufficient number of pipes are on the ground ready for laying, and no greater length of the trench to be opened up at any time, at any place, than into which pipes can be laid and jointed during two working days.

45. If the contractor has exceeded the sectional area of excavation as shown he shall remove such extra material and make good and fill in same at sides of trench with good material, and at bottom with sand filling or concrete, as may be directed, at his sole cost.

46. The contractor will be paid only for the actual excavation done, not exceeding that due to the widths, batter, and dimensions, described in clauses 33 to 42. Any increase in width or batter which the contractor may think fit to take out for his own convenience, or which he may be compelled to take out by force of circumstances, will not be measured, but shall be covered by schedule prices. If, however, under the written authority of the Engineer, any portion of the excavation has been deepened or widened out on account of bad foundation or for other purposes, the extra excavation so ordered will be paid for at schedule rates.

47. Disposal of Soil.—Any sludge, filth, or other objectionable matter that may be met with in the excavations, shall not be used for refilling, but shall be kept separate from the approved soil, loaded into covered carts during the same day on which it is excavated, and disposed of as directed,—to be paid for as specified under refilling, clauses 60 and 61.

48. No concrete-work or pipe-laying shall be commenced until the portion of excavation to be operated upon has been cleaned and levelled, and until the Engineer or Superintending Officer has examined and approved of same; and no work shall be covered up until it has been examined and approved, and its covering up has been authorised by the Engineer or Superintending Officer.

49. Sumps.—Any sumps which the contractor may think fit to sink on line of sewer for his own convenience during the construction of these works, are to be filled in with concrete, as specified, and the cost of sinking, timbering, unwatering, and filling in concrete and removing the materials, &c., to be entirely borne by the contractor.

50. Removal of road metal, pitching, rubble masonry, timber-decking, &c.—Prior to commencing any excavation for a manhole, junctions, concrete or pipe sewers, road or street intersection, &c., in open cutting (in accordance with the various stipulations and conditions contained in this specification and in clauses 6 and 11 of the Conditions of Contract), the sites for each work to be prepared by the removal of all road-metal, ballast, pitching, asphalt, existing stone abutments of bridges, timber-decking, &c., where such occurs, as shall be directed. The materials so removed in the first instance to be laid and stacked aside, as the Engineer may direct, in different spoil-banks; and as the works proceed, the said materials, if approved of, to be used in reinstating the metalled, pitched, and paved road-surfaces, as the case may be, and those not approved of to be carted away to such places as shall be ordered, the cost of such work to be included in the price for one cubic yard of excavation.

51. All sods, road-metal, pitching, ballast, &c., removed and damaged, injured, or otherwise not approved of as fit for re-laying, placing, setting, and fixing in the re-formation and reinstatement of the various road and other surfaces, to be replaced by contractor with new, sound, and approved materials of their respective kinds, and therewith to reinstate and maintain during continuance of contract, the various road and other surfaces, at his sole cost, as provided in clause 9, in a sound and satisfactory manner, in accordance with clause 11 of the General Conditions of Contract, and to the entire satisfaction of the Municipal authorities and of the Engineer-in-Chief.

52. It is to be distinctly understood that when excavating for the foundations of the works and open channels where ordered, the materials excavated and raised to the surface of the street, or other ground, are to be at once removed from off the same; and when building materials, &c., are to be conveyed to the works, that the same, on arrival at open cutting, must be at once conveyed to the works in the same, as no allowance can be given to contractor to disturb or impede the usual traffic in the streets, or the usual occupation of the ground by the owner or the public beyond being in possession for the time of a strip of land of the exact width required for the works, as described in clause 6, except in all cases where the contractor has obtained the necessary permission to occupy larger areas, in strict accordance with the provisions contained in clauses 6 and 11 of the Conditions of Contract.

53. The different materials as sludge, filth, sods, road-metal, ballast, mud, sand, loam, clay, shale, and ironstone, masonry, timber-decking, &c., met with in all excavations for the construction of these works, shall in the first instance be put aside beyond actual site of the works in separate spoil-banks; they are to be measured and paid for under one item as "general excavation," and then to be used in filling in round concrete and over same, and filling into abandoned portions of existing open channels, as hereinafter specified in clauses 55 to 62, and as shall be directed.

54. The price of one cubic yard of excavation for all sewers, manholes, junctions, curves, open channels, &c., shall include the cost of all labour, tools, implements, plant of every description, timbering, shoring temporary bridges underneath streets, lanes, roads, &c., diverting surface water, unwatering, putting all excavations in the first instance to temporary spoil-banks, reinstating all fences, walls, walks, streets, roads, metalling, grassed, paved, or asphalted surfaces, as they were before the commencement of the works, and completing these works in strict accordance with plans and specifications.

#### VIII.—Refilling, Road-restoring, &c.

55. Refilling.—Unless otherwise directed, sand, clay, loam, pipe clay, and soft rock of approved quality only shall be used in refilling the spaces between sides of pipes, sewers, &c., and sides of excavation, and over pipes, sewers, &c. The refilling to be done in level layers, spread 6 inches thick, each layer to be carefully and separately rammed as hereinbefore specified. The lower layers up to level of top of pipes to be carefully packed and rammed solidly under and at sides of pipes and socket-joints with spades or other narrow tools. The filling to be done, as above described, to such a distance below the level of the street, road, path, &c., as the case may be, to admit of the ballasting, metal, or other covering being replaced. Only iron-shod rammers of not less than 10 lb. weight, of approved pattern, to be used, and one man to be employed in ramming to each man to be employed in filling. Filling into embankments and into abandoned portions of existing open channels, to be done as above described, except that the layers shall be 9 inches thick, and all slopes of embankments to be dressed to such inclines as shall be directed.

56. Road-restoring.—After the filling-in of sewer-trenches has been consolidated and approved, as specified, the surfaces of roads, streets, paths, &c., to be at once formed or restored, as the case may be, in the manner hereinafter described, viz., in the case of roads or streets which are ballasted and metalled, 9 inches of ballast shall be laid thereon, and after this has been blinded with selected and approved

approved material, the metal put aside, as specified in clause 54, shall be evenly spread and rammed until approved; in the case of roads or streets which are ballasted only, 9 inches of ballast shall be laid thereon and blinded with selected and approved material; and in the case of other coverings the surfaces to be restored to the same condition as they were before the commencement of the work. Any additional ballast which may be required over and above that found on the site of the excavation, and referred to in clause 50, to be supplied by the contractor, and the cost of same to be included in schedule items for filling.

57. *Cleaning Streets.*—Immediately the pipes are laid, or concrete, and other work in connection with manholes, lampholes, &c., are executed, and the ground filled in over any length of sewer, it is to be distinctly understood that all surplus material is to be carted away, the road cleaned until approved, and the road and other surfaces to be made good, flush with surrounding surfaces of roads, paths, &c., to the satisfaction of the Municipal authorities and the Engineer, in accordance with the specification; and if the contractor fails to do this the Engineer shall be at liberty, without further notice, to get the roads cleaned, and the road and other surfaces made good at contractor's cost.

58. *Maintenance of Streets.*—The contractor shall maintain the surface of the roads, streets, &c., after the trenches have been filled in, where the streets, roads, &c., have been broken up or injured during the progress of the work, during the period of the contract time, and afterwards during the period of maintenance, and shall from time to time make good any sinkings in the surface, and shall provide any additional metal, ballast, or other material that may be necessary during these periods, in accordance with clause 9.

59. If required by the Engineer, the contractor shall, at the termination of the period of maintenance, procure certificates from the Municipal authorities concerned, that the roads, &c., in their respective districts are in a satisfactory condition.

60. The price of one cubic yard of filling round all concrete and brickwork of sewers, curves, junctions, manholes, into old creek channels, embankments, &c., from all excavations, and any other sources outside the limit of the contract, shall include the cost of all labour, tools, implements, and plant of every description, carriage from temporary spoil-banks, or getting additional materials from other places outside the contract, excavating, filling-in, ramming, watering, and completing all filling-in in strict accordance with plans and specifications. It shall also include the removal and disposal of all rubbish, sludge, and other objectionable matter, as well as any excess of material beyond that required for refilling; these materials to be immediately removed from site of works and deposited in such places as shall be approved.

61. All refilling to be measured the net dimensions of excavation, less the actual net displacement of the permanent works.

62. Where it is found necessary to carry the excavation deeper than the underside of concrete foundations, in order to obtain a compact solid bottom, the portion so excavated to be filled in to the underside of concrete foundation with good quarry filling (which shall be provided by the contractor), in level layers 6 inches thick, rammed and watered until approved. The price per cubic yard of such filling-in to be one cubic yard of "filling-in" as described in clauses 60 and 61.

#### *Turfing.*

63. On completion of all refilling and filling at sides of concrete work, and pitching, into abandoned open channels, and where ordered, all top surfaces and slopes to be protected by sodding. Prior to sods being laid all surfaces to be levelled off, trimmed, and dressed to such level or inclined planes and slopes as shall be directed. The sods to be the best obtainable within a radius of 5 miles, of approved quality, not less than 3 inches in thickness and 10 inches square at top and bottom, full cut, with square arrises, to be laid in approved bond on their own flat beds, close jointed, over all top surfaces of filling, to be beaten down as the work proceeds with proper tools, as shall be directed, and when finished to present throughout perfectly smooth and plain surfaces. If the season requires it, the turfing to be properly and regularly watered to ensure the grass taking fresh root. The levelling and trimming of the ground and the turfing to be carried out simultaneously, and no greater area to be levelled and trimmed at any time than can be covered with turfing during two working days.

#### *IX.—Timber, Stone, Cement, Sand, Appliances, Plant, &c., to be on the ground ready when required.*

64. No excavations to be commenced on any portion of the contract until, in the opinion of the Engineer, sufficient quantities of piles, sheet-piles, shoring, staging, scaffolding, stone, bricks, cement, sand, or other materials are on the ground, together with the necessary appliances and plant, to insure the uninterrupted progress and continuance of the works, after they once have been commenced, at any locality, without any delay or stoppage. Delays and stoppages in the progress of the works arising from disputes as to quality of materials, and from insufficient supply of any materials, plant, &c., and any damage or injury caused to the works in consequence of such stoppage and delay, shall be entirely and solely at the risk and cost of the contractor.

#### *X.—Sub-ducts.*

65. Where ordered, sub-ducts to be constructed in hard-wood boxes, along lines of open trenches, 24 inches below invert of sewer, or as shall be directed at the time. The said boxes to be laid straight and true to levels decided upon, and 6-inch pipes to be laid therein, upon and surrounded by sandstone chippings and quarry refuse. Dry stone packing to be put over pipes, as specified in clause 18.

#### *XI.—Storm-water Channel, &c.*

66. Manholes and flushing-chambers to be built with sandstone concrete, to the forms and dimensions shown on Drawing No. 2, as may be ordered at the time.

67. Junctions and points of intersection, where ordered, to be formed in sides of manhole-chambers and sewers, &c., and worked into sewer channel with such curves, shapes, forms, centre piers, arches, &c., as shown on drawings. Step-irons of  $\frac{3}{4}$ -inch round iron to be built into the concrete 15 inches apart, vertically, for giving excess to manholes. Grooves to be formed for flushing-boards and flushing-valves, to be built in where directed.

68. A cast-iron ventilating grating to be placed over each manhole flush with the surface of the street, and surrounded to a width of 9 inches with sandstone pitchers, bedded on paving sand, set with full joints, and well rammed, cast-iron gratings to be placed over all manholes on line of sewer in open ground, flush with the formed surface of same, to be surrounded with pitchers as before. 69.

69. After the cross-section and depth of trench for each respective length of sewer, according to the more or less solid nature of the ground, has been determined, excavated, cleaned and approved, the sewers, together with the manholes, flushing-chambers, junctions, curves, &c., to be built therein with sandstone concrete in the manner described in clauses 78 to 95.

70. Where the ground is found to be very bad, the contractor shall, upon being ordered in writing to do so, construct timber platforms. The whole of the timber used in this work to be coated with two coats of the best kerosene tar. Transverse ground sleepers 12 in. x 12 in. spaced 6 feet from centre to centre, to be laid to exact depths and levels, and longitudinal sleepers 10 in. x 10 in. to be laid on top of same with butt joints, with 10 in. x 4 in. fish-plates 3 feet long underneath each joint, and bolted to the sleepers with two  $\frac{5}{8}$ -inch drift bolts. The planking to consist of planks 9 in. x 3 in. sawn hardwood the width of the sewer, or longer if required, and spiked to sleepers with 7-inch spikes, one to each bearing; the spikes to be drifted down and cleaned off. All timber split, from whatever cause, to be replaced with sound timber. Before the plank-floor is laid down the spaces between ground and longitudinal sleepers to be filled in with sand, well rammed and watered as shall be directed.

71. Guide piles, walings, and sheet piling at outlet end of channel, and where ordered.—Hardwood piles, 12-inch diameter at small end, to be provided, and to be driven perfectly plumb to a depth as shown on drawings, and as shall be directed. Any pile out of line, or split during driving, to be drawn and another sound one driven in its place. Piles to be fitted with wrought-iron, steel-pointed shoes, weighing 28 lb. each, of approved pattern, secured to piles with  $\frac{1}{2}$ -inch round iron spikes. The piles to be driven with a ram weighing 20 cwt., with fall when in position of not less than 5 feet, the fall to be increased as the pile is driven as the case may require, and as may be directed. The side surfaces of piles to be adzed to a flat face for sheet piling to butt against, and the top shouldered to receive walings. Double walings, each 10 in. x 6 in., and central walings 10 in. x 10 in. to be provided and secured to piles by 1-inch galvanised bolts. Sheet piling, 3 in. by 9 in. to be provided, and to be placed between walings and driven down to the depths shown on drawings, and as shall be directed; to be driven close and wedged up. All piling badly driven to be drawn and fresh piling substituted. The guide piles to be rung with 3 in. x  $\frac{3}{4}$  in. rings, and sheet piling with  $1\frac{1}{2}$  in. x  $\frac{1}{2}$  in. hoops. The plank floor of 9 in. x 3 in. planks over heads of piles to be provided and constructed as specified in clause 70.

72. As the contractor must provide all coffer-damming at his own cost, the above described work may form part and be in conjunction with any timber work for same, but only such piling and timbering described in clauses 47, 70, and 71, as ordered, will be paid for under schedule rate.

#### *Pipe-sewers.*

73. Foundation.—In clay or similar soil the pipes to rest direct and solid upon the soil. In rock, they are to be laid on a 1-inch bed of poor mortar; cost of same to be included in items for pipe-laying. In loose sand and other soil liable to be scoured out or easily shifted, they shall, if directed by the Engineer, be laid on and surrounded by sandstone concrete, as ordered.

74. Laying.—In every case they shall be laid in such a manner that their barrels shall bear firmly and evenly on their bedding material, the sockets being entirely free from pressure in the joint-hole, and the spigots concentric with the sockets, and to be jointed, viz.:

75. The 6-inch pipes with tarred gasket,  $\frac{1}{8}$  inch deep after setting, and special cement mortar  $1\frac{1}{2}$  inch deep within socket of pipe; the 9-inch pipes with tarred gasket,  $\frac{1}{8}$  inch deep after setting, and special cement mortar  $1\frac{1}{2}$  inch deep within socket of pipe; the 10-inch pipes with tarred gasket,  $\frac{1}{8}$  inch deep after setting, and special cement mortar  $1\frac{1}{2}$  inch deep within socket of pipe; the 12-inch pipes with tarred gasket,  $\frac{1}{8}$  inch deep after setting, and special cement mortar  $1\frac{1}{2}$  inch deep within socket of pipe; the 15-inch pipes with tarred gasket,  $\frac{3}{8}$  inch deep after setting, and special cement mortar  $1\frac{1}{2}$  inch deep within socket of pipe; the 16-inch pipes with tarred gasket,  $\frac{3}{8}$  inch deep after setting, and special cement mortar  $1\frac{1}{2}$  inch deep within socket of pipe; the 18-inch pipes with tarred gasket,  $\frac{3}{8}$  inch deep after setting, and special cement mortar  $1\frac{1}{2}$  inch deep within socket of pipe; the 24-inch pipes with tarred gasket,  $\frac{3}{8}$  inch deep after setting, and special cement mortar  $1\frac{1}{2}$  inch deep within the socket of the pipe.

76. After the tarred gasket has been placed in position and set tight round the pipe, and after the joint above has been cleaned and wetted, stiff special cement mortar to be packed in solidly, splayed off outside and finished with a carefully struck and cut joint, after which the inner joint between two pipes to be likewise carefully filled with special cement mortar all round, neatly wiped off as a finish. Each pipe length when thus finished to be carefully cleaned out before another pipe length is added.

77. Junction pipes of any desired size are to be laid into the line of pipe-sewers wherever required by the Engineer. The socket ends of all junction pipes, junction blocks, junction holes, and dead ends are to be protected against the ingress of foreign substances, and made easily accessible for effecting future connections, by being closed with earthenware discs having a temporary watertight joint all round.

#### *Concrete Work.*

78. The concrete to be used in these works to be sandstone concrete of the quality specified in clause 27.

79. The contractor to find, provide, and make, at his own cost, all concrete boxes, centres, staging, shoring, planking, &c., of the exact forms, shapes, curves, &c., required in a proper, secure, and substantial manner, due allowance being made for  $\frac{3}{8}$  inch thick cement facing over all internal exposed surfaces of concrete work, and great care being taken that all centering and concrete boxes can easily be withdrawn, except where otherwise directed. The designs for centering, concrete boxes, &c., are to be approved by and to the entire satisfaction of the Engineer. After completion of any portion of the concrete or brickwork, the concrete boxes and the centering, as the case may be, shall not be removed until the Engineer or his superintending officer, has given written permission to that effect.

80. The concrete to be prepared on a clean timber platform of the necessary size. The stone to be well washed when put on the platform and levelled on top; the sand to be placed on top of stone, and cement on top of sand; the whole is then to be carefully turned over three times while dry, and then mixed with clean fresh water applied from a rose, as shall be directed; to be thoroughly incorporated before being used, and to be used fresh.

81. If the concrete is made by machinery, all materials to be prepared as previously described; then to be mixed dry, and afterwards with fresh clean water, as may be directed, and as shall be approved of; to be used fresh.

82. The concrete, after it has been approved of, to be conveyed to the work as may be directed, and as shall be approved of, and tipped into same and upon the surface of each layer from a height not exceeding 18 inches. Commencing at each part of the work at lowest level of excavation, the concrete to be brought up in horizontal and even layers, and on lines of sewer, branch and pipe-sewers, manholes, junctions, ventilating-chambers, &c., unless where otherwise directed, in even layers, parallel with specified longitudinal gradients of works. Each layer when spread to be 9 inches thick throughout before ramming, and, after spreading, to be quickly and evenly rammed all over until approved of, and then allowed time to set before the succeeding layer is put on.

83. After the concrete has been carried up to the level of springing, all concrete arches to be commenced at both walls or abutments simultaneously, and carried on towards centre line in radiating parallel strips, spread 9 inches thick, of the whole width of arch, or in lengths as specified in clause 95 and as shall be directed at the time, and rammed as before described, and, where the arch is thicker than 9 inches, the lower layer to be completed throughout, and then allowed time to set and harden before the succeeding layer is put on.

84. After completion of the brick closing arch, all concrete work above springing of same, at sides of arch, in manhole chambers, shafts, &c., to be carried up in the same manner as specified in clause 82, and of exact dimensions, curves, and thicknesses, &c., as shown on drawings.

85. No portion of the concrete work described in the previous clauses (unless otherwise directed in writing) to be covered up with earth or brickwork until it has been examined and approved of by the Engineer. Any leakage that may appear in each layer to be carefully attended to, and be made good and repaired at the time, as shall be approved, before each succeeding layer is put on.

86. All end faces of layers of concrete to be stepped back at each respective length of sewer or other work, as shall be directed; to be carefully washed clean with fresh water, and then to be grouted prior to each layer of the adjoining length being commenced and joined on to the same.

87. After the lower layer has set to the satisfaction of the Engineer its top surface to be carefully washed until approved, and then to be grouted all over prior to each succeeding layer of concrete being put on.

88. In the event of any stoppage occurring to the work, from whatever cause, or in anticipation of rainfall, the contractor, before temporarily stopping work, shall finish it off at whatever level the work may be raised at the time, by thoroughly grouting the whole of the surface with cement-grout. The contractor also to provide and have always on hand approved tarpaulins for the purpose of covering there-with, where and whenever directed by the Engineer to do so, all fresh concrete work and brickwork, when ordered, so as to protect the same, during all stoppages in the daytime and at night, from sun and rain, and during hot or dry weather, to keep said tarpaulins watered to prevent the concrete work from cracking and setting too quickly on the outside.

89. In all cases where a layer at mid-day or at evening is left incomplete, the said layer shall not be continued after any stoppage until the surface of the lower and the end of the upper layer have been washed clean and then grouted with cement grout.

90. At the sites of all flushing-valve or stop-board frames, cast-iron covers over manholes, ventilating chambers, &c., after the concrete has been built to the exact height and gradient (leaving sufficient space for jointing), the whole of the cast-iron work, after having been washed clean with fresh water, is to be truly laid and jointed or set perfectly plumb or otherwise, as the case may be, and as shall be directed, in the exact positions, lines, and gradients, on fillets of mortar; and as the concrete rises against and around the castings, leaving a space of not less than  $\frac{1}{2}$  inch all round between the concrete and iron, this space round the invert, or underneath bottom of plates, as the case may be, to be filled in with special grout, or mortar, as shall be directed at the time, whilst above the springing line the outer surface of the castings to be grouted with special grout, and then to be covered with a coat of special mortar  $\frac{1}{2}$  inch thick before the concrete is built on to and around said pipes, castings, and frames.

91. The junction of the two creeks between 39.12 chains and 39.77 chains to be constructed with such curves, shapes, forms, flat arches between wrought-iron rolled girders, &c., as shown on drawings. On completion of junction to exact level of underside of transverse iron girders, the latter to be laid transversely over side walls of junction, bedded in and upon special cement mortar,  $\frac{1}{2}$  inch thick, truly parallel to each other, and spaced 4 feet from centre to centre, after which the cement filling alongside walls between and over ends of girders to be completed. The arches of 4 feet span, with a rise of 5 inches in centre, between the girders, to be commenced from north end, and to advance to the south end of junction (all girders being carefully stiffened and held in position by props as shall be directed) with not less than 11 centres of the exact width of junction between side walls. The arches to be built as specified in clause 83, and on completion to form a level concrete decking 3 inches above level of top of girders.

The intersecting point of proposed 18-inch diameter sewer, passing transversely through new storm-water channel near Mitchell Road, to be constructed and formed by said storm-water channel being gradually widened from its proper width of 10 ft. 6 in. above point of intersection to 15 ft. 6 in., and again drawn in to its proper width of 10 ft. 6 in. below said point of intersection (on a total length of 24 feet) with a pier 18 inches thick in centre, as shown on drawing, care being taken that the same cross-section area is maintained throughout the length of the intersecting chamber; 2 ft. x 2 ft. openings to be left at present in side-walls and centre pier of sewer for insertion of said 18-inch diameter pipe sewer, said openings to be temporarily closed with brickwork in cement 9 inches thick.

92. All anchor-bolts in connection with cast-iron frames to be placed in the exact positions required, to be washed clean, wetted, bedded upon, and surrounded with special mortar in each case before the concrete is built round same.

93. All stoneware pipes, where they are shown to be or ordered to be surrounded with concrete, to be clean washed with fresh water, to be truly laid and jointed in the exact lines and gradients on fillets of mortar, and to be grouted all round with special grout as the concrete is being built all round same.

94. On completion of concrete work, and after the boxes and centering have been removed, the outer faces shall present compact, solid, even, plain surfaces. All faulty portions, cavities, holes, or other defects shall be at once repaired by the contractor, at his own cost, with concrete or mortar, as the case may require, to the satisfaction of the Engineer.

95. The concrete of sewers in open trench to be commenced in accordance with clauses 2 and 116 in the different lengths of open trenches, and to be carried up in each and from each end of same simultaneously, in not less than three continuous lengths of 40 ft. each (unless otherwise directed);—that is to

say, when the arching-in of the first 40 feet commences, the next length of 40 feet must be completed up to the springing of arch, and the third 40 feet length must be in progress, and the latter so timed that the work is raised up to springing of arch by the time the closing-in of the adjoining length commences.

*Brickwork.*

96. The brickwork required in sewers, &c., to consist of the materials and mortar described under clauses, 14, 15, 20, 21, and 22. All circular work to be built of radiating bricks, unless otherwise directed. All bricks to be thoroughly soaked in clean fresh water for not less than 5 minutes, immediately before being used. All work to be built with whole bricks, and all walls in English bond, with  $\frac{1}{4}$ -inch joints, in alternate courses of headers and stretchers, each brick to break joint with the one above and underneath, and to be set full and rubbed in cement mortar. Every course to be carefully and thoroughly grouted, and well wetted before the succeeding course is put on. All work, wherever directed, to be finished on all outside and inside faces with a neatly struck joint. The brickwork of sewers, &c., to be of the thickness, dimensions, curves, and gradient shown on longitudinal and cross-sections, and as shall be determined and directed from time to time by the Engineer as each portion of excavation becomes ready for concrete or brick lining. Wherever brick lining for sewer is ordered it shall be built in radiating courses in  $4\frac{1}{2}$ -in. rings, each brick to be set full, and rubbed in cement mortar, with joints not exceeding  $\frac{1}{4}$  inch in thickness, in approved bond, the bricks of each course to break joint over the centre of those of the adjoining course. On completion of each ring of brickwork its whole surface to be carefully and thoroughly grouted, and then covered with a coat of cement mortar, collar-joint  $\frac{1}{2}$  inch thick. Before commencing each succeeding ring the surface underneath to be well wetted and grouted to ensure the thorough bonding of the joints. At completing any length of brick lining, the courses at end of same to be stepped back as shall be directed, and the end face of each ring or course to be well wetted and then grouted prior to each ring of the succeeding length being commenced.

97. The brickwork of sewer to be carried on in conformity with clause 95, and in such a manner that when the arching-in of one length of 40 feet commences the lining of invert of the next 40 feet in length must commence at the same time, and as the arching-in of the one length is completed the adjoining length must be completed up to the springing of arch.

98. Wherever concrete is to be built on to and against brickwork, or brickwork on to and against concrete, the latter in each case to be well wetted and grouted, and then to be covered with a coat of cement mortar, collar joint  $\frac{1}{2}$  inch thick, before the concrete or brickwork is built against it.

99. Prior to commencing any concrete or brickwork which has to be built on to and against rock faces, all shaken and loose rock to be removed, all rock surfaces to be well cleaned, washed, and wetted, and all beds, open joints, and spaces between concrete or brickwork and rock faces to be carefully filled in with cement mortar, and flushed and grouted every course as the brickwork proceeds; and the cost of thus preparing rock faces, washing, grouting, flushing, &c., to be included in, and covered by, the Schedule price per cube yard for the concrete and brickwork herein referred to.

*Pymont Sandstone.*

100. Pymont sandstone ashlar of the quality specified in clause 17 to be provided where ordered in any situation in the construction of these works, to be worked, pierced, dressed, picked to the exact sizes, dimensions, forms, and shapes as shown on drawings or as may be directed, to be set full upon and in cement mortar, and to be finished, when directed, with a neatly cut and struck joint.

*Bluestone Ashlar.*

101. Bluestone ashlar, of the quality specified in clause 32, to be provided in blocks or otherwise when ordered, in any situation in the construction of these works, to be worked, pierced, grooved, picked, axed, and dressed to the exact sizes, dimensions, forms, and shapes, as shall be shown on detail drawings, or as may be directed; to be washed clean and well wetted before setting, and to be set in the exact positions required, truly level, on fillets of mortar under the four corners of each stone, or under and between outer edges of joints as may be directed at the time, after which all joints between stones and between stones and concrete to be filled in with grout. All joints to be  $\frac{1}{4}$  inch wide, to be carefully raked out  $\frac{3}{4}$  inch deep, and filled in solid with special mortar, neatly pointed, finished flush with exposed faces of stones.

*Ironwork.*

102. Rolled girders, sheared, or cut, as shown on drawing No. 5, to be supplied, delivered, and fixed, as specified in clause 91, and to be paid for at per cwt. under schedule item No. 18. The contractor to provide means of weighing same in the presence of the inspecting officer. Should the girders be below the specified weights, payment will be made on actual weights; but any weight above that specified will not be paid for.

The following will be required:—

Depth of Girder.	Width of Flange.	Thickness of Web.	Length of Girder.	Weight in lb. per foot run.	Number required.
14 inches.	6 inches.	$\frac{3}{4}$ inch.	Varying from 12 feet to 18 feet.	60	10

103. All girders that are bent or twisted shall be heated and straightened.

104. The wrought-iron in girders must be free from scales, blisters, laminations, and all other defects, of approved manufacture, and equal in quality to the best Staffordshire plate. The ten lengths of the girders are respectively as, viz.:—12 feet, 12 feet, 12 feet, 12 feet 3 inches, 12 feet 9 inches, 13 feet 6 inches, 14 feet 3 inches, 15 feet 3 inches, 16 feet 6 inches, and 18 feet.

105. The test for wrought-iron shall be as follows:—A piece of 1-inch sectional area, of such shape and cut from such a bar as may be determined, with a length of at least 7 inches, under tension shall bear a strain of—

18 tons without elongation exceeding  $\frac{1}{8}$  inch;  
21 " " " " "  $\frac{1}{4}$  "  
23 " " " " "  $\frac{3}{8}$  "

and to elongate  $\frac{3}{8}$  inch with a strain of 24 tons before fracture.

106.

106. The whole of the wrought-iron work to be properly cleaned and then heated, and while hot to be dipped or coated with two coats of hot gas tar, to be applied with brush.

107. The girders to be solidly bedded in the concrete on a  $\frac{1}{2}$ -inch joint of special mortar, and finished off inside and outside with a neat cut and struck joint.

108. The castings to be provided of the grates and frames, &c., shown on drawing No. 5, to be cast of No. 2 pig-iron or of a proper mixture of No. 1 and No. 3 pig-iron, according to the quality of the iron and the nature of the pattern; said iron to be of the best quality, tough, close-grained, and capable of being chipped and drilled without difficulty, perfectly sound, free from all cold shuts, honeycomb, holes, or other defects; to be cast in dry sand moulds, unless where otherwise directed; and the whole of the castings of the pipes, plates, ventilating and other grates and frames, as soon as they have been cast, to be properly cleaned and then heated, and whilst hot to be dipped or coated in gas tar.

109. All castings to be true in sectional form, straight longitudinally where shown to be so, or of such shapes, projections, curves, angles, and forms as shown on drawings; and each portion of such castings to be of equal strength and of the specified thickness throughout its respective length. The ventilating grates to be complete with tarred sawn ironbark wood-bricks fitted into panels of covers, as shown.

110. The external and internal surfaces of all castings to be perfectly clean and smooth and in strict accordance with sections.

111. The cast-iron work hereinbefore specified to be completed in the most workmanlike manner in strict accordance with the drawings and dimensions figured thereon, and such directions and other details which the Engineer may provide during the progress of the works; and all grates, &c., with all wrought-iron work, to be left in perfect working order.

#### *Cement Coating.*

112. The whole of the internal and external surfaces of sewers, man-holes, chambers, &c., where such is shown on plans, and where directed, to be protected by a cement coating, to be put on in two thicknesses, consisting of mortar of one part of cement to two parts of clean sharp sand. The coating throughout, when finished, to be  $\frac{1}{2}$  inch in thickness.

113. All surfaces to be well watered before mortar is applied.

#### *Sandstone Pitching.*

114. Contractor to provide and find, where ordered, squared sandstone pitchers 9 inches deep throughout, no stone to be less than 9 in. x 9 in. x 9 in., but to be larger and longer, if ordered, curved and radiating, as shall be directed; to be worked, fitted, and set in sand, one ring round all man-hole covers, with  $\frac{1}{2}$ -inch joints between pitchers and cast-iron frames, as ordered.

#### *Existing Gas, Water, or Sewer Pipes, and Sewers.*

115. During the excavation and construction of these works the contractor is to take every precaution to prevent damage or injury to existing gas, water, or sewer pipes, and sewers. Such pipes and sewers on being met with at sides, over, or crossing the excavations of these works, to be carefully and securely protected and supported, as the case may require, by chains, timbering, strutting, and under-pinning, &c., to prevent said pipes or sewers from being shaken, bent or broken, and the contractor to provide all materials, plant, and labour required for said timbering, strutting, and under-pinning, &c., and maintain the same at his sole cost until, in the opinion of the Engineer, the refilling of excavation and the general progress of the works render further precaution unnecessary.

#### *XII.—General Progress, and order of Works.*

116. The contractor, immediately after he gets possession of the ground, shall commence the sewer throughout the length of the contract, unless otherwise directed, and proceed with the earth-work, concrete, and other works connected therewith in the manner described in clause 95. The progress made every working week with excavation, filling in, concrete, pitching, roadwork, &c., required in the construction of the sewer and all other works, shall not be less than 160 feet of sewer complete.

#### *XIII.—Notice for Inspection.*

117. The contractor shall give notice to the Engineer of the commencement or completion of the under-mentioned work, and formally submit it for inspection before proceeding to place, execute, or cover it up, viz.:—

- Excavation of trenches.
- Excavation for foundations.
- Withdrawing of timber in open excavation, &c.
- Laying of foundation.
- Laying of pipes or sub-ducts.
- Placing centering in position.
- Keying of arches.
- Striking of centres.
- Shifting of concrete boxes.
- Filling in round concrete and pipe-sewers and man-holes into open trenches, sumps, &c.

#### *XIV.—Power to use any part of the Work.*

118. The Engineer-in-Chief shall have the power, at his discretion, without vacating this contract to enter upon, by himself or his agents, and make use of any part or parts of the work comprised under this contract, and his doing so shall in nowise be held as a waiver of the responsibility of the contractor in respect to his contract, except in so far as any injury may accrue to such work so entered upon by reason of any proved carelessness of any employé of the Government, in which event the contractor shall be free from liability on account thereof, but not otherwise.

#### *XV.—Maintenance.*

119. The contractor will be bound to maintain the works for a period of three months after their final completion and use by the Government; and if any part should within that period show signs of weakness

weakness or of giving way, or should any defective workmanship or materials be detected, the contractor, when called upon to do so, shall make good same at his own cost, to the satisfaction of the Engineer-in-Chief, before the reserve balance will be paid. It is to be distinctly understood that the Government shall have the full, free, and unrestricted use of the said works, without any interference whatever on the part of the contractor, during the currency of this period of maintenance; and such use of the said works on the part of the Government shall not be held as relieving the contractor of any liabilities or obligations whatever in respect of his contract.

*Conditions of Contract.*

120. The special and general conditions attached to this specification shall be held binding on all matters relating to this contract as far as the Engineer-in-Chief may deem the same applicable.

This is the specification marked "A." referred to in our annexed agreement with Her Majesty the Queen, dated the 16th day of March, A.D. 1891.

Witness,—HARROLD F. NORRIE, J.P.

JOHN CARTER.  
D. G. SNODGRASS.  
GEO. FORREST.

"B."

1. *Interpretation of Terms.*

Whenever the terms, hereafter explained in the present clause, occur in the conditions of contract and in the specification, they shall be held to mean, and shall mean as follows:—

- "Minister" shall mean the Secretary of Works of the Colony of New South Wales for the time being or any person legally acting for him.
- "Engineer" shall mean the Engineer-in-Chief duly appointed by the Minister to have principal charge of the works.
- "Assistant Engineer" shall mean the person duly appointed by the Engineer-in-Chief to act in his behalf.
- "Superintending Officer" shall mean any person, who may from time to time be notified to the contractor by the Engineer-in-Chief as being entrusted with the local superintendence of the works.
- "Overseer" shall mean any person, who may from time to time be appointed by the Engineer-in-Chief, to supervise the works or any part thereof under the immediate direction of the Superintending Officer.
- "Contractor" shall mean "Contractors," when two or more persons have tendered or contracted jointly for the work.
- "Special Conditions" shall mean the "Special Conditions," hereto attached and forming part of the contract; such Special Conditions shall be deemed to be, and shall be, incorporated with the General Conditions.
- "Schedule Price" shall mean the rate, at which the contractor has offered and agreed to execute the kind of work under consideration.
- "Contract Sum" shall mean the sum total, resulting from the finally certified quantities, ascertained in the manner provided in clause 16, and calculated at the schedule rates or arranged prices.
- "Drawings" shall mean and include any plan, section, general or detail drawing, sketch, or illustration referring to the works and explanatory of, or supplementary to, the specification.
- "Extra Work" shall mean any kind or description of work, not comprised in the "Schedule of Prices," and other than those, the distinct mention of which may have been inadvertently omitted in the specifications or drawings and for which provision is made in clause 3 of these conditions.
- "Labour."—All cartage and haulage and work done or to be performed by machinery shall be included in the term "Labour."
- "Plant" shall mean and include all tools, utensils, stores, sheds, timber, scaffold, centres, moulds, templates, coffer dams, cordage, chains, tackle, boats, punts, rafts, sleepers, rails, waggons, trucks, trollies, engines, water and air pumps, boring and ventilating apparatus, signals, lights, diving bells and dresses, and every other thing necessary for the security, proper execution, completion, and specified maintenance of the several works.

2. *Extent of Contract.*

The contractor shall, except in so far as the specification may expressly state to the contrary, provide at his own cost and expense all labour, material, and plant, and everything else necessary for the proper and complete performance of the contract. Supply of labour, materials, and plant.

All works described in, or implied, by the specification, or shown in any of the drawings, or set forth in any lists or tables thereof or attached thereto as well as those expressly herein provided for under clauses 3 and 4, are to be made and executed in every detail conformably to the several drawings, already prepared, or that may be prepared hereafter for the purpose of this contract, in strict accordance with the provisions of the specification and conditions, both general and special, and to the entire satisfaction of the Engineer. Execution of works.

Should any work be not so executed, it shall be at the sole risk of the contractor, and shall be immediately altered and amended at the contractor's cost and expense.

The contractor shall, at his own expense, set out accurately and to the satisfaction of the Superintending Officer, all the works comprised in this contract, in strict accordance with the drawings and specifications, and shall be solely responsible for their being so set out and executed, and that notwithstanding the Superintending Officer or Overseer may have assisted the contractor in setting out the same. Setting out.

Contractor

Contractor shall also at his own cost and expense at any time—by day or by night, either on working days or on Sundays or holidays—render all such assistance, and supply all such labour, plant, and lighting, as the Engineer or Superintending Officer may require to check such setting out, or to inspect any portion of the works, which must for that purpose be left clear and free from any obstruction or impediment. During and for the performance of those operations contractor shall be obliged to suspend any or all of his work, if required to do so by the Superintending Officer, and without having any claim for loss or damage on account of such temporary suspension.

All bench marks, pegs and signals on the surface, and all alignments and level marks underground, put in by the Engineer or Superintending Officer for the purpose of checking the contractor's work, will be pointed out to the contractor and confided to his care. He shall, at his own expense, take all proper and reasonable precaution and care to preserve and maintain them in their true positions; in the event, however, of their being disturbed or obliterated by accident or from any other cause whatever, they shall be replaced by the Engineer or Superintending Officer at the contractor's expense, and the cost thereof deducted from any moneys, then or thereafter due to the contractor.

If two different contractors execute simultaneously two adjoining sections of the works, they shall be held jointly and severally responsible for effecting a proper junction of the sections.

During the whole time of construction and during the "period of maintenance," referred to in clauses 10 and 18 hereof and more particularly described in clause 3 of the special conditions, contractor shall keep and maintain in good and sufficient repair all the works, executed or in course of execution, and make good all injury or loss, which may happen or occur to them, or to any materials, or plant, or anything else in connection with the works under this contract.

### 3. *Specification and Drawings.*

The specification and the drawings (if any), referred to in the specification, shall be taken to explain each other; and anything contained in the specification or in any of the drawings shall be equally binding on contractor, as if it were contained in all.

Any dimensions, written or figured on the drawings, shall usually be taken in preference to measurements by scale; but in cases of doubt in this respect, or in case of any discrepancy between the drawings, specifications, and conditions, or any ambiguity or defective description in them, such doubt, discrepancy, ambiguity or defective description shall not invalidate the contract, but shall be rectified by the Engineer if he deem it requisite, and the contractor shall have no claim for compensation for damages on account of such discrepancy, ambiguity, or defective description.

If neither specification nor drawings contain any mention of minor parts of works, which are reasonably and obviously necessary for the satisfactory completion of the works, such parts are to be provided, made, and executed by the contractor, without any extra charge, as if they were specially mentioned, and shall be deemed to be, and hereby are, included in the several schedule prices.

It is hereby expressly understood, that the contractor is bound to completely and thoroughly inform himself of every circumstance connected with, or relating to, the work, and of the correctness or otherwise of any information contained in, or supplied by, the drawings or specification, as he shall have no claim on account of any errors, omissions, or inaccuracies, that may be found in those documents after the contract shall have been signed, and since he has to provide in his tender for every contingency that may arise.

A copy of the conditions, specifications, and drawings will be furnished to contractor free of charge, but he must himself compare the same with the original, as no claim will be allowed for any errors therein.

All copies of drawings, &c., supplied to contractor are to be returned to the Engineer on completion of contract.

### 4. *Increase or Decrease of Works.*

The contractor is to execute in like manner and with the same quality of materials, as provided for the works, expressly mentioned in specification and drawings, any extensions, additions, deviations, alterations, or extra works, which the Engineer may require by an order in writing.

The work, executed under this clause, will be measured up and paid for at schedule rates in the same manner, as provided for the other works under this contract; and if it comprise any work not specified in contract and in schedule of prices, a special agreement shall be made between the Engineer and the contractor, and signed at the time of giving the order for such work.

In case the above-named parties shall be unable to agree on the value of such extra work, the Engineer shall be at liberty and fully authorised to have it executed by whomsoever he may think fit.

No extra work, extensions, or any additions, deviations, or alterations whatever, which may be claimed by contractor, will be recognised or admitted under any circumstances, if done or executed without, or contrary to, an order in writing from the Engineer as aforesaid, and the production of such order shall be a condition precedent to contractor receiving payment for them.

The Minister, or the Engineer, acting on his behalf, may from time to time by writing under his hand require the omission of any particular portion or part of the works, described in the specification or shown on drawings; and the contractor shall have no claim for loss of profit, sustained damage, or other compensation on account of any such omission.

### 5. *Possession of Lands.*

The Minister shall, within one month from the date of the signing of the contract by the contractor, put the latter in possession of such parts of the land, required for the execution of the permanent works and spoil banks or access to either, as in the opinion of the Engineer may be necessary for their commencement. And the Minister shall also from time to time put contractor in possession of such other parts of the land, as may, in the opinion of the Engineer, be necessary for the vigorous prosecution and timely completion of all the works.

The contractor must, however, procure for himself all other land, which he may deem requisite for any temporary purposes or for his own convenience; but the Minister will, at the expense of the contractor and only to the extent of any legal powers, possessed by the Governor or Minister, assist the contractor in procuring such land or in procuring materials, suitable for the construction of the works, from any adjoining lands. Should

Protecting and maintaining signals and marks.

Junction of different Contracts. Maintenance.

Specification and Drawings to explain each other. Written dimensions to be preferred to scaling.

Omission of minor parts.

Errors of information at Contractor's risk.

Supply of Drawings and Specifications.

Quality.

Quantity. Prices of extra works.

If value cannot be agreed upon.

Omission of portion of the work.

Lands to be provided by the Minister.

Land to be provided by Contractor.

Should any delay take place in giving to the contractor possession of any land required for the construction of the works aforesaid, such delay shall not be deemed a breach of contract, or give contractor any claim for compensation, but the contractor shall be entitled to a commensurate extension of time for the completion of the whole works. Delay in getting possession.

Nothing herein contained shall at any time prevent the Minister or any person duly authorised by him from entering upon and making use of such lands or any portion thereof for any purpose whatever. Possession not exclusive.

#### 6. *Trespass.*

The contractor shall not enter upon any lands outside the limits of the lands, defined by, and held in possession by him under clause 5 hereof for the construction of the works or for any purpose whatever in connection with this contract, without the distinct consent in writing of the occupier and owner of such lands, and shall not, without the permission in writing of the Engineer or Superintending Officer, remove any trees or structures within the limits of the lands defined in said clause 5 hereof. Private lands.

Nor shall he open or throw down any part of a fence without making sufficient provision by temporary fences, gates, or other necessary accommodation, to be erected and maintained at contractor's cost, for preventing persons or animals from trespassing or straying from, or into, any enclosure, affected thereby. Cutting of trees.

Nor shall he interfere with any private or public road without making proper temporary provision for the convenience of owners or users thereof. Roads.

Any costs or damage incurred by the Government through any legal process on account of any trespass caused by the act or negligence of the contractor or his workmen, shall be considered as payment made to the contractor under this contract, and shall be deducted accordingly at the time of final payment to him. Damage caused.

Should the contractor refuse or neglect to erect and maintain, either or both, any such temporary fences or other necessary accommodation, it shall be lawful for, but not obligatory on, the Engineer, after having given to the contractor twenty-four hours' notice in writing of his intention to do so, summarily, and without further process, to cause any such temporary hoarding, fences, gates, bridges, or other accommodation to be erected and maintained, which he may deem necessary for the proper protection either of such lands or of the adjoining lands, or for the safety of the property of the owners and occupiers thereof or of the general public, and the cost of so doing shall be deducted as provided hereinbefore. If not fenced by contractor, Engineer to have power to do so.

#### 7. *Subletting, Assigning.*

The contractor shall not sublet any portion of the works, nor enter into any subcontract for the execution thereof or any portion thereof, nor shall he assign all or any of the moneys payable or to become payable under the contract, or all or any part of any other benefit whatsoever arising to him or which may arise under the contract, without the consent in writing of the Minister; and no assignment without such consent shall have any effect or be in any way recognised. No subletting or assigning.

#### 8. *Progress of Works.*

It shall be lawful for, but not obligatory on, the Engineer or Superintending Officer to direct in writing the contractor to carry out the works in such order and in such manner as he shall deem fit; and Work to be carried out under the direction of the Engineer.

If the contractor shall fail to make such progress with the works as the Engineer or the Superintending Officer shall deem sufficient to insure their completion within the specified time; or

If he refuse or fail in the opinion of the Engineer or Superintending Officer to use due diligence in carrying out any particular part of the work, which the Engineer or Superintending Officer shall have directed him in writing to carry out forthwith; or

If he shall use or employ bad or insufficient material, or shall execute any work in an imperfect manner or not to the satisfaction of the Engineer or Superintending Officer; or Non-compliance.

If he shall fail or neglect to take down or remove such work, or to rectify any such work for seven days after being required to do so in writing by the Engineer or Superintending Officer; or

If he shall fail to employ what in the opinion of the Engineer or Superintending Officer is a sufficient number of men on the works; or

If he shall suspend work without the Engineer's order or sanction in writing; or

If the contractor shall in the judgment of the Engineer commit a wilful breach of the contract;

Then, and in any of such cases, it shall be lawful for the Minister to do at his option any of the following things, that is to say:—

(a) The Minister or the Engineer may, on giving written notice to the contractor of his intention so to do, forthwith cause additional men to be employed and additional materials and plant to be purchased, and the cost of so doing may be deducted from any moneys, then due, or which may thereafter become due to the contractor. (a) employing additional men.

(b) Or the Minister may, by notification in writing under his hand, delivered to the contractor, absolutely determine this contract without further process; and from and after the delivery of such notice as aforesaid, the contract shall be absolutely determined, and on such determination the money, which shall have been previously paid to the contractor under the contract, shall be deemed to be the full value of the work executed, and shall be taken and accepted by the contractor in full payment and satisfaction of all claims and demands under the contract; and the balances retained, including amount deposited as security, together with all materials and plant, then being in or near or upon the works for the purpose of being used or employed in or about the same, shall remain the absolute property of Her Majesty, and may be disposed of as the Minister may think fit. (b) absolute determination of contract.

#### 9. *Bankruptcy.*

If the contractor shall become bankrupt or insolvent, or shall make an assignment of his estate for the benefit of his creditors, it shall be lawful for the Minister, on behalf of Her Majesty, by notice in writing under his hand, to determine the contract by such notice, and for Her Majesty either to carry on the works under the Engineer's direction or to recontract with another contractor to proceed with and complete

complete the same upon such terms, stipulations, and conditions, as shall be deemed expedient by the Minister; and all the then remaining materials and plant may be used in and applied for the purpose of the works; and on the final completion of the works the surplus of such materials and plant shall be delivered to the contractor's assignees or trustees, but without any payment or allowance for any loss or diminution, wear, tear, or injury, they may have sustained in the meantime; and any losses, damages, costs, or expenses, which shall, in the opinion of the Engineer have been sustained by Her Majesty by reason of the premises, shall be deducted from the deposit money and the balance retained after payment of the progress payment; and the residue of such deposit money and percentages (if any), or any securities, in which the same may be invested (but without any interest thereon), shall belong and be paid or delivered to the said assignees or trustees; and if there should be no residue, but a deficiency, the amount of such deficiency may be proved for as a debt against the estate of the contractor.

#### 10. *Suspension and Completion.*

**Completion.** The whole of the works under this contract shall be completed on or before the day set forth in clause 1 of the special conditions as the "date of completion of contract," and formally delivered up to the Engineer in perfect order and repair, and to his entire satisfaction.

**Extension of time.** In the event of any alterations, deviations, additions, or extra works being required to be executed by contractor, or in the event of any delay arising under this clause, or under clauses 5 and 15 hereof, the Engineer may allow such an extension of time (if any), as he shall think adequate for the proper carrying out of such alterations, deviations, additions, or extra works, or for the delay caused (if any).

**Liquidated damages.** The Minister, on behalf of the Queen shall be entitled to deduct or set off for each and every week's delay after the date mentioned as the date of completion of contract, or after the expiration of the "extension of time" (if any), allowed under this clause as and by way of liquidated damages, the sum mentioned in clause 2 of the special conditions.

**Suspension.** Such damages shall be deducted from the final balance and the cash security lodged by the contractor in accordance with clause 20 of these conditions and with clauses 5 and 6 of the special conditions, or at the option of the Minister, from any other moneys payable to the contractor under this contract.

On receiving a written notice to that effect from the Engineer, contractor shall suspend the whole or any portion of the works, as may be directed in such notice. He shall have no claim for loss or damage on this account, unless the suspension exceeds one month, and such suspension shall in no wise vitiate the contract, but a commensurate extension of time for completing the works will be granted to the contractor.

**Testing.** When, in the judgment of the Engineer, the whole of the works appear to be completed, they shall be tested or examined as may be provided in the specification; if the result of the test or examination be satisfactory, they will be formally taken over by the Engineer, who will issue a certificate to that effect, whereupon the period of maintenance shall begin.

**Maintenance.**

#### 11. *Safety of Works and Persons.*

**Reinstating defects.** Contractor shall be liable for the reinstating or making good of any thing whatsoever, which may be removed, displaced, damaged, or destroyed during the performance of the works, or by reason of the same; and he shall also be solely responsible for all defects to, and failures in, the works, during the whole time of construction and the period of maintenance, whether the said defects arise from insufficient foundations, defective construction, bad materials, or any other cause within the contractor's control, or from the inclemency of the weather, landsprings, or similar cause.

**Hoardings, roads, &c.** Contractor shall also provide and maintain all hoarding-barriers, night-lights, and properly ballasted temporary roads, required by any municipal or other authorities having charge or control of streets or roads, or which may be required for the convenience or safety of the public; and he shall also make all arrangements by temporary roads or bridges or otherwise, which may be required by any local authorities or by the Engineer, to prevent stoppage or delay of public traffic or any avoidable inconvenience to the public.

**Liability for accidents, &c.** During the whole time of construction of the works, and during the period of their maintenance contractor shall be liable for any accident, damage, or injury whatsoever to the public or to any individual, which may be caused by his operations or his neglect, and also for the safety of any adjacent roads, streets, cellars, vaults, pavements, walls, houses, and buildings, and shall be bound to remove any scaffolding, timbering, &c., as occasion may require or when ordered by the Engineer to do so; and in case of emergency or probable danger to life or property the Engineer, without notice to contractor, may there and then provide or employ, at contractor's cost, such labour, materials, and plant, as may be necessary to meet the exigency, of which the Engineer himself shall be the sole judge. All such cost to be deducted from any sum then or thereafter due to the contractor under this contract.

No opening is to be made in any street until a sufficient quantity of approved bricks or other material is on the ground to complete the length to be opened. Should any delay or dispute arise as to the supply of bricks or material, to prevent inconvenience to the public, the Engineer shall have power to direct any opening made to be filled up and the surface restored at contractor's cost, amount to be deducted from any money due to the contractor.

#### 12. *Agency, Notice, Right of Entry.*

**Agency.** When the contractor is not personally present on the works he must at all times during their progress have a responsible agent on the ground, who shall be deemed to be, and shall be, authorised to represent him for all purposes of this contract.

In case the contractor or his responsible agent shall not be immediately available at any point of the works, the instructions given by the Engineer, in writing, to any overseer, foreman, or workman, employed on the works by contractor, shall have the same effect as if they were given to the contractor or his authorised agent.

**Delivery of notice.** Any written instrument or notice to be given or delivered to the contractor under this contract shall be deemed to have been so given or delivered, when it is given or delivered to the contractor or his representative on the works, or left at the contractor's usual or last known place of abode or business.

**Entry on works.** The Engineer and any other person duly authorised by him shall have power at all times to enter upon all or any portion of the works; and to travel by any engine, lift, cage, carriage, truck, trolley, or other vehicle, which the contractor may be using on, or near, or in connection with the works; and to make examination

examination of any work, fixed or unfixed, or in any state of progress, and of any materials or plant in use or intended to be used for the purposes of this contract; and the contractor shall give or afford facility for the exercise by the Engineer and other duly authorised persons of the powers given under this clause, and shall for that purpose cause the motion of any vehicle, engine, or other machinery to be arrested, when requested so to do.

Due notice shall be given by contractor to the Superintending Officer or overseer before any piles are swung and commenced to be driven; on the completion of all excavations for foundations, or otherwise, and before any foundations are laid therein; when foundation rings for wells are to be laid, and before the well-sinking commences; before the filling in of the wells, of other structures, or of sewer or pipe trenches is proceeded with; before centres are struck; before and after tunnel soles are laid, and at such other stages of progress of the works, as may be specially directed in the specification. Progress notice.

### 13. Dismissal and Mode of Payment of Men.

The Engineer or Superintending Officer may, for incompetency or misconduct, or inattention to orders, or other sufficient cause, require the dismissal within twenty-four hours by the contractor of any agent, overseer, foreman, workman, or other person employed by him on the works; and in the event of the contractor refusing or neglecting to comply with such requisition all further payments on account of the contract may be stopped until such dismissal is carried out. Dismissal.

The workmen, tradesmen, and labourers of every class or kind, employed on the works under this contract shall be paid their wages or other earnings in full in money, current coin of the Colony, at least once in every fortnight, and no ticket or other system of payment by goods of any sort, provisions, or liquor will be allowed on any pretence whatever. Cash payment.

Nor shall the contractor or any person employed by him, or in any way connected with him, establish any shop for the supply of liquors, provisions, or goods, nor shall the contractor cause or oblige his workmen to take their necessaries or goods of any kind from any person in particular. Truck system.

The workmen or labourers of every kind or class shall be paid on the works (if it be possible) or in some building adjoining; and in no case shall they be paid at a public-house or other place where spirituous or fermented liquors or refreshments are sold.

Before the payment of any money to the contractor, the Minister may require from the contractor a statutory declaration that the tradesmen and labourers of every kind employed on the works to which these conditions refer, have been paid their wages and claims of every kind in full money, the current coin of the Colony, and to the latest date to which such wages or claims are due; and the Minister may withhold the payment of any money that may be due or become due to the contractor until such declaration shall have been made and delivered to him. Statutory declaration.

### 14. Material.

All approved materials, plant, and prepared work brought upon the ground for use in or on the works shall be considered, and shall be the property of Her Majesty the Queen until completion of contract; and contractor shall not take away, remove, or dispose of any such material or plant or prepared work without the written authority of the Superintending Officer. Ownership.

All materials supplied by contractor for, and used in, the works shall be the best of their respective kinds, and in conformity with any further particular directions that may be contained in the specification. Quality.

Due notice shall be given by contractor to the Superintending Officer and overseer when any material is brought on the ground, all of which must be neatly stacked in regular heaps, submitted for approval, and approved of in writing by the Superintending Officer, before it may be used in the works; none but that so approved shall be used. Arrival on ground.  
Approval.

The contractor, if so directed, shall remove entirely off the ground any inferior or improper material, or alter or remove any improper or unworkmanlike work at his own expense within twenty-four hours after a written notice in that behalf shall have been served upon him by the Engineer or Superintending Officer. Removal.

After the expiration of the time stated in such notice, it shall be lawful for, but not obligatory upon, the Engineer or Superintending Officer at any time to remove and, if necessary, to destroy any such material, or to pull down or alter any such work, and to replace or rebuild the same. The expense of so doing shall be deducted from any moneys then due, or that may thereafter become due, to the contractor under this contract.

Cement is to be brought on the ground in quantities of not less than fifty barrels, at least ten clear days before it is intended to be used in the works, and kept in weather-tight sheds under lock and key. After having been tested and approved of, the approved barrels will be marked on the outside, and their contents may be used. After they are empty, they shall, in the presence of the Superintending Officer or any person deputed by him, be broken up, and thereupon removed off the works. Storing.

The use by the contractor on the works of blasting powder or any other explosive material shall be confined strictly to the limits, which will be set by an order in writing of the Engineer as to locality, time, quantity, particular kind of material, and precautions to be taken during its use. Explosives.

In any case, no larger quantity of explosive material shall be taken underground than is likely to be used during any current shift. Quantities.

Storing of explosive material underground shall be, and hereby is, absolutely prohibited; and for its storage on the surface special directions will from time to time be issued by the Engineer in accordance with the provisions of the Act, regulating storage and conveyance of explosives. Storing underground prohibited.

Should contractor exceed the limits of such order, or not strictly observe the special directions in regard to use, the Engineer shall have power to appoint, at the contractor's expense, inspectors of powder, in whose presence alone the explosives may be made use of, and who shall have entire charge of all matters connected with their storage or supply to the works. Inspectors of powder.

If the contractor shall be found to have supplied materials or executed work not in accordance with the true intent and meaning of the specification and conditions of this contract, and if the Engineer shall elect to allow such materials to be used or such executed work to remain, he shall have power to fix the price to be paid for any such material or work, and contractor shall be bound by the Engineer's valuation. Reduced prices.

15. *Government Property.*

Delivery.	Should the Minister furnish to the contractor for the purposes of this contract, any materials, or plant, or other article of value, all of which are hereafter in this clause and in the specification included under the term "Government property," the contractor shall give a detailed receipt in writing to the Superintending Officer at the time of delivery and before taking possession thereof.
Protecting.	If required to do so by the Superintending Officer, contractor shall erect, at his own expense, sheds or other covering to protect such property from the weather or from theft.
Repairs.	He shall likewise make good any loss or injury which may happen to it from any cause whatever, and shall keep it in good and sufficient repair and renew all moving and working parts, which may have become worn out, to the satisfaction of the Engineer or Superintending Officer during the whole time it is under his care.
Returning.	On the completion of the contract, all such property shall be returned to the Engineer, unless otherwise directed in the specification; and for that purpose shall be removed, after having been put into a thorough state of repair, to the place or places mentioned in the specification, and there neatly stacked or arranged, as the Superintending Officer may require.
Discharge.	The latter shall thereupon give a detailed receipt in writing for everything so returned, and until such receipt shall have been given, the property shall be deemed to be, and shall be, under the care of the contractor.
Delay in delivery.	Should any delay occur in supplying contractor with any drawings, or specifications, or any Government property which may be specified to be supplied or delivered to contractor by the Minister, the contractor shall have no claim for compensation for any such delay other than that (if any) particularly set forth in the specification; but the contractor shall be entitled to such reasonable extension of time for the completion of the works as shall be fixed by the Engineer.

16. *Measurements, Quantities, and Accounts.*

Net measurements.	Except in cases for which the specification distinctly prescribes another method or rule of ascertaining measurements or weights, the <i>net</i> measurements, according to the actual dimensions or weights, will always be taken, notwithstanding any custom to the contrary. The surplus soil to be removed shall be calculated as equal to the volume of the soil actually displaced by the foundations, sewers, shafts, or other works.
Surplus soil.	
Quantity.	
Lead.	The distance of removal shall be measured from top of shaft or end of open cutting to centre of spoil-bank or other place of deposit. The schedule price for excavation shall cover all haulage in tunnels or cuttings, unless otherwise specified.
In contractor's presence.	The contractor shall be present at all measurements, and, if required, assist in making the same. If he fail to attend after twenty-four hours' notice in writing has been delivered to him of the Superintending Officer's intention to take measurements and clearly setting forth the locality of such intended operation, the measurements made by the Superintending Officer shall be binding on the contractor.
Time.	On the satisfactory completion of any part or portion of the works, and at all other suitable times, the dimensions of such piece of work shall be measured by the Superintending Officer, recorded on drawings, kept or to be made for the purpose, and the quantities ascertained therefrom and entered into a quantity book, to serve as basis for arriving at the contract sum on completion of the contract.
Check accounts.	Within forty-eight hours of such measurement having been effected, contractor shall furnish to the Engineer an account of the work thus intended to have been finally measured up, showing in detail the dimensions, quantities, prices, and value, specifying day of measuring, in whose presence measured, and signed by contractor.
Progress measurements.	For the purpose of making progress payments the dimensions of still unfinished, but otherwise satisfactorily performed, portions of the work will be measured in a summary way monthly, or as near as may be, but without prejudice to the ultimate acceptance or rejection of such portions of work.
Monthly accounts.	On the day following the conclusion of such summary measurement, contractor shall furnish to the Superintending Officer an account of all work done during the preceding month, giving detail, quantities, prices, and approximate value of all unfinished work, and, for every structure separately, total quantities, prices, and exact value of all completed work.
Final account.	Any final account to be presented by the contractor must be on similar form, and under the same heads as the printed tender form, with additional items at foot of same.

17. *Jobbing.*

Jobbing.	When desired by the Superintending Officer so to do, contractor shall furnish to said officer any skilled artizans, labourers, or carts with horses and drivers for the performance of such services, as the aforesaid officer may desire to be performed in connection with, for, on, or near the works under the contract.
Paid monthly in full.	Contractor shall supply those artizans, labourers, &c., with the necessary plant and lighting, and shall be paid for all services thus rendered the full amount provided therefor in the schedule of prices, under the head of "jobbing," at the end of every month, or as nearly as may be thereafter. The accounts for this "jobbing" shall, however, be rendered by contractor to the Superintending Officer or overseer in half-weekly intervals, that is to say, during the forenoon of every Monday and Thursday, failing which he shall lose all claim to payments for the jobbing performed by him during the preceding three days.
Half-weekly accounts.	

18. *Progress and Final Payments.*

Monthly progress payments.	No payments shall be legally due to contractor until after the entire completion of the contract; but progress payments on account, subject to all deductions herein provided for, will be made monthly, or as nearly so as may be, during the continuance of the contract, on the certificate in writing of the Engineer, at rates not exceeding those stated in clause 4 of the special conditions.
Balance.	The balance of the moneys due for works executed under this contract, less 5 per cent. and less the deductions properly to be made hereunder, will be paid within thirty days, or as nearly as may be, after the Engineer shall have certified under his hand that all the works under the contract, less those of maintenance, have been fully and satisfactorily completed, and that such balance, less the 5 per cent., is due to contractor. Provided

Provided that if the amount for maintenance, as entered by contractor in his tender, shall appear to the Engineer to be insufficient, the Minister may retain, on the declaration to that effect in writing by the Engineer, either the whole or any part of the sum otherwise deemed payable to contractor, till all the works under the contract, including those of maintenance, shall have been finally and satisfactorily executed. Insufficient balance.

The said five (5) per cent., together with the "cash security," provided for in clause 20 of these conditions, will be retained until after the expiration of the "period of maintenance" more particularly described in clause 3 of the special conditions, and shall be paid to contractor (less the costs of any repairs or defects, should the contractor fail to execute the same), on the production of a certificate from the Engineer that all the works under the contract, including those of maintenance, have been finally and satisfactorily executed. Final payment.

No progress payments will be made after the date specified for the completion of the contract, until the whole of the works shall have been properly completed to the satisfaction of the Engineer. No progress payment after expiration of contract time.

If, in the opinion of the Engineer, further inquiry is desirable or necessary, before payment is made on any certificate, the Engineer shall have power to suspend the payment of all or any part of the amount mentioned in any such certificate for a period not exceeding one month from the date at which, in the ordinary course, the money would have been paid, and no interest shall be due or accruing on any money the payment of which shall have been so suspended. Suspension of payment.

No certificate given to the contractor for any purpose whatever during the progress of the work, shall prevent the Engineer, at any time before the final payment, from rejecting any unsound material or improper workmanship, which may be discovered in the work, or from requiring the contractor to remove or amend at his own cost any work which may be found not to have been performed in accordance with the contract, or from deducting from any money which may be due or become due to the contractor, the whole amount, which may have been paid to the contractor for such material or work. Certificates without prejudice.

The obtaining of the Engineer's certificate that all the works under the contract, including those of maintenance, have been finally and satisfactorily executed, shall be a condition precedent to any claim or cause of action in respect of work done, as well as to the final payment to be made hereunder. No claim without certificate.

#### 19. Arbitration Clause.

1. All questions or disputes which shall arise respecting the true construction or meaning of the drawings or specification, or the quality of the workmanship, or quantity or quality of materials necessary for the whole or any part of the contract, and all questions and disputes respecting the matters next hereinafter mentioned, when the aggregate amount claimed in respect of such last mentioned matters shall not amount to the sum of one thousand pounds, shall be decided by the Engineer-in-Chief for Roads, Bridges, and Sewerage, whose decision shall be absolute and final.

2. But all questions as to the cancellation of the contract, as to the right of the contractor to extension of time, as to the infliction of penalties, as to the true value of any extra work that has not been previously agreed upon, or as to the value of work omitted from the works specified to be done under the contract, shall, if the aggregate amount of the claims in respect of such matters shall be one thousand pounds or upwards, upon the completion of the works under the said contract, and before payment of the retention money and the money deposited as security for the due carrying out of the contract, be fixed and determined by arbitration as hereinafter provided.

3. If the contractor or the Minister in charge of the Department under which the works in the contract have been or are being carried out, considers that he has claims in respect of the several matters mentioned in paragraph 2, as those in which arbitration may be claimed, he shall furnish to the other of them full particulars in writing of such claims, breaches, doubts, disputes, and differences in respect of which he desires arbitration, giving distinct and separate items, and the amount, if any, claimed under each item; and the other party may thereupon furnish particulars of all claims he has in respect of such matters, irrespective of the aggregate amount of such claims; and the party furnishing the same shall be bound by such particulars; and no claim not included in such statement shall be taken into consideration at such arbitration, or become subject of arbitration or action; and the claim or respective claims so made as aforesaid shall be determined by arbitrators, to be appointed as hereinafter provided, that is to say—

4. If the Engineer-in-Chief for Roads, Bridges, and Sewerage, and the contractor concur in the appointment of a single arbitrator, then the matter and question aforesaid shall be referred to and decided by such single arbitrator; but if the Engineer-in-Chief for Roads, Bridges, and Sewerage, and the contractor cannot concur in the appointment of a single arbitrator, each party, on the request in writing of the other party, shall, by writing under his hand, nominate and appoint an arbitrator, to whom the said questions and matters shall be referred. Every such appointment shall be delivered to the arbitrator, and be deemed a submission to arbitration on the part of the party by whom the same shall have been made, and neither party shall have power to revoke the same without the consent in writing of the other, nor shall the death of either party operate as a revocation.

5. And if, for twenty-one days after the notice in writing by the contractor or by the Engineer-in-Chief for Roads, Bridges, and Sewerage, that the contractor and the Engineer-in-Chief for Roads, Bridges, and Sewerage cannot agree shall have been served, and for seven days after a request in writing to appoint an arbitrator shall have been served by the one party on the other, such last-mentioned party fail to appoint such arbitrator, then, upon such failure, the party making the request, and having himself appointed an arbitrator, may appoint such arbitrator to act on behalf of both parties; and the arbitrator may proceed to hear and determine the matter or question between the contractor and the Engineer aforesaid, and in such case the award or determination of such single arbitrator shall be final. If, before the matter so referred shall be determined, either arbitrator shall die or become incapable, the party by whom such arbitrator was appointed may nominate and appoint some other person as arbitrator to act in his place; and if, for the space of seven days after notice in writing from the other party for that purpose, he fail to do so, the remaining or other arbitrator may proceed *ex parte*; and in case the matter in dispute shall stand referred to a sole arbitrator in default of the appointment by the other party, and such sole arbitrator shall die, the party by whom he was appointed shall appoint another sole arbitrator in his place; and every arbitrator so to be substituted in either of the cases aforesaid, shall have the same powers and authorities as were vested in the former arbitrator at the time of his death or disability.

6. If more than one arbitrator shall be appointed, such arbitrators shall, before they enter into the matter or question referred to them, nominate and appoint, by writing under their hands, an umpire to decide on the matter so referred; and if such umpire shall die or become incapable of acting, they shall forthwith, after such death or incapacity, appoint another umpire in his place, and the decision of every such umpire on the matters referred to him shall be final.

7. If, in either of the cases aforesaid, the said arbitrators shall refuse, or shall, for seven days after request of either party, neglect to appoint an umpire, a Judge of the Supreme Court, upon application made to him by either party, shall appoint an umpire, whose decision shall be final.

8. If a single arbitrator shall be appointed, and he shall die or become incapable to act before he shall have made his award, the matters referred to him shall be determined by arbitrators appointed hereunder, as if the arbitrator so dying had not been appointed.

9. If more than one arbitrator be appointed, and either of them shall refuse or for seven days neglect to act, the person by whom such defaulting arbitrator was appointed shall, within seven days after notice in writing, proceed to appoint another arbitrator to act for the arbitrator so refusing or neglecting, or the other arbitrator may proceed *ex parte*; and the decision of such other arbitrator shall be as effectual as if he had been the single arbitrator appointed by both parties.

10. If more than one arbitrator shall be appointed, and neither of them shall refuse or neglect to act, as aforesaid, then if such arbitrators shall fail to make their award within thirty days after the day on which the last of such arbitrators shall have been appointed, or within such further time as may be granted by a Judge of the Supreme Court on application by either party, the matters so referred to them shall be determined by the umpire appointed as aforesaid.

11. The arbitrators, or any two of them, shall have power to hear, receive, and examine evidence; and the witnesses on any reference herein may be examined on oath and affirmation. Neither of the parties hereto shall be at liberty to appear before the arbitrators by counsel or solicitor.

12. The award of the arbitrator or arbitrators or umpire shall be in writing, ready to be delivered to either party within the time appointed for making the said award. This submission may be made a rule of the Supreme Court. The amount of costs, umpire's and arbitrators' fees, shall be decided by the arbitrators, arbitrator, or umpire; the amount of costs, including arbitrators' and umpire's fees and witnesses' expenses, the items thereof being shown in the account annexed to said award.

13. If upon an arbitration in respect of claims made by the contractor the sum awarded to the contractor shall be less than one-half of the amount of his said claim, all the costs, charges, and expenses of and incident to the said arbitration and award shall be borne and paid by the contractor; but if the amount awarded shall exceed one-half of the amount of the said claim, then each party shall pay his own costs and one-half of the arbitrator's and umpire's fees.

14. It is to be distinctly understood that all claims by the contractor or by the Minister to have any of the matters which under paragraph No. 2 may be submitted to arbitration so dealt with, must be made upon the whole of the work being completed, and before payment to the contractor of the retention money or of the money deposited as security for the due performance of the contract, and that the acceptance by the contractor of payment of the retention money in cases where a bond to secure the completion of the works has been given, and in other cases of the retention money or of any balance thereof, and of the money deposited as security for the due performance of the contract, shall be conclusive proof that the contractor has no such claim or claims.

15. The Engineer shall not be required to defend or answer, or be made a party to, any bill, claim, action, or other proceedings at law or in equity at the instance of the contractor.

16. The exercise by the Minister, Engineer, or Superintending Officer, of any of their respective powers shall not relieve the contractor from any liability to which he may be subject for any breach of the contract.

17. None of the clauses or provisions of the specification, or of these conditions, or of any other part of this contract, shall be varied, waived, discharged, or released, either at law or equity, unless by the express consent in writing of the Minister.

#### 20. Tender, Cash Security, &c.

Tenders to be sent in on a private form, accompanied by the printed schedule of prices, with all the blanks properly filled in, and addressed, as directed in the advertisement, calling for tenders.

The approximate quantities only are given as a guidance to intending contractors, and the contract being at a schedule of prices, will be subject to such extensions, extras, additions, deductions, enlargements, deviations, alterations, and omissions as therein provided. The Minister will be only liable to pay for the actual measured quantity of each respective kind of work done and ordered at the rates set forth in the schedule, and if there be no rate in the schedule for any that may be ordered, then at such rate as shall be fixed by the Engineer-in-Chief, whether such measured quantities shall be less or more than the quantity stated in the schedule of quantities and prices.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz.:—For amounts of £300, and up to £500, £5; for amounts exceeding £500, and not exceeding £1,000, £10; for all sums over £1,000, 1 per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a Treasury deposit receipt, or a cheque in favour of the President of the Board, endorsed by the manager of the bank upon which it is drawn. Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

All deposits, with the exception of that of the lowest tenderer, when practicable, will be returned by the Secretary to the persons entitled thereto, immediately after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract.

Within seven days from the date of notification in writing to any tenderer of the acceptance of his tender by the Minister, the successful tenderer must lodge with the Colonial Treasurer in cash, the sum named in clause 6 of the special conditions, which sum will be retained as security for the due performance of the contract, until after the expiration of the "period of maintenance," and returned to the contractor (if at all) only on the day of final payment, and less any deductions, which hereunder may properly be made therefrom.

Within

Engineer no party to lawsuits.

Liability to remain.

Provisions not to be varied.

Form of tender.

Schedule rates of contract.

Deposit with tender.

Returning of preliminary deposit.

Cash security.

Within three days after lodging the aforesaid deposit, the successful tenderer shall attend at the office of the Crown Solicitor, and execute the contract. Signing of contract.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract within the time specified, all moneys deposited by him on account of such contract shall be absolutely forfeited to the Crown, and shall be paid to the credit of the Consolidated Revenue of the Colony, and the Minister shall be at liberty to accept next lowest or invite fresh tenders. Forfeiture of cash security.

The Board shall not be bound to accept the lowest or any tender. Lowest or any tender.

The contractor shall bear and pay all duty stamps, licences, building or surveyor's fees, or other charges or fees whatsoever, legally demanded by any municipal or other authorities, also the amount of all patent rights and royalties due to any patentee. Stamps, fees, &c.

No tenderer will be allowed to proceed with the work tendered for until he shall have signed the required contract. Commencement of work.

Department of Public Works, Sewerage Branch,  
Sydney, 22nd January, 1891.

ROBT. HICKSON,  
Engineer-in-Chief for Sewerage.

These are the General Conditions marked "B" referred to in our annexed Agreement with Her Majesty the Queen, dated the 16th day of March, A.D. 1891.

JOHN CARTER,  
D. G. SNODGRASS,  
GEO. FORREST.

Witness—HAROLD F. NORRIE, J.P.

"D."

SPECIAL CONDITIONS.

*Clause 10 of General Conditions.*

1. The "date of completion of contract" shall be eight months from the date of acceptance of tender—that is to say, the 28th day of October, 1891.

*Clause 10 of General Conditions.*

2. The sum to be deducted or set off as or for "liquidated damages," shall be £20 sterling a week.

*Clauses 2, 10, and 18 of General Conditions.*

3. The "period of maintenance" shall be three calendar months from the date of the certificate of the Engineer that all the works under the contract, less those of maintenance, have been fully and satisfactorily completed.

*Clause 18 of General Conditions.*

4. The "rates of progress payment" shall be 90 per cent. of the value of work actually done performed, and delivered, as the Engineer may approve of as fit and necessary for the work.

*Clause 20 of General Conditions.*

5. The "Treasury deposit receipt" to accompany the tender shall be as required by clause 20 of the general conditions.

6. The sum to be lodged with the Under Secretary for Public Works as security shall be a Bank deposit receipt, in the name of the Secretary for Public Works, for £900 sterling.

*Clause 2 of General Conditions.*

7. Even after the expiration of the period of maintenance, contractor will still be held liable for all defects in the works which were not visible, or which may have been kept secret, at the time of the works being taken over by the Engineer, since he is, and hereby distinctly agrees to be, *responsible for all faults or neglects of, or all deception practised by, his agents, overseers, or workmen, irrespective of the time at which such faults, neglects, or deceptions may be detected.*

*Clause 3 of General Conditions.*

8. Although the information in possession of the Government has been freely placed at the disposal of the tenderers, by being noted on the drawing or otherwise, the Government undertake no guarantee whatever regarding the kinds of soil that will be met with, or the firmness or stratification of the ground to be excavated, or the amount of unwatering to be done, or the strength of the timbering that may be required, or the nature and extent of other precautions which may have to be adopted.

*Clause 4 of General Conditions.*

9. Contractor shall not be entitled to claim or receive any compensation whatever over and above payment for the actual increase of quantities at schedule rates, and where there are no schedule rates, at such rates as shall be determined at the time by the Engineer-in-Chief, for any additions to, deviations from, or alterations of the various designs comprised in this contract. These conditions shall also apply to, viz., variations in manholes, flushing chambers, &c., and in consequence of meeting with any existing gas, water, or sewer pipes or sewers, as referred to and in accordance with clause 115 of the specification, the position of which it is impossible to ascertain until the ground for the construction of the works comprising this contract is opened up,—

Variations in inclination of slopes and gradients.

„ lengths of open trenches.

„ depth, shape, or size of excavation for sewer, &c.

„ depth, shape, or size of concrete of sewers, manholes, flushing chambers, &c.

„ internal diameter of pipe sewers.

„ alteration or extension of sewer lines.

Any decrease in quantities to be deducted as provided for.

*Clause*

*Clause 11 of General Conditions, paragraph 6.*

10. Cement is to be brought on the ground in quantities not less than fifty barrels, provided that this quantity is sufficient for fourteen days' supply, but in no case is less than fourteen days' supply (whatever that may prove to be) to be brought on the ground in one parcel; nor is the supply stored on works to be at any time less than fourteen days' supply.

*Clause 8 of General Conditions.*

11. Suspension of works and non-compliance with clauses 64, 95, and 116 of the specification on the part of the contractor shall constitute a wilful breach of contract.

*Clause 18 of General Conditions.*

12. The acceptance by contractor of the final payment shall be deemed equivalent to a distinct declaration on his part that he has no further demands on the Government in respect to this contract.

These are the Special Conditions marked "D," referred to in our annexed Agreement with Her Majesty the Queen, dated the 16th day of March, A. D. 1891.

Witness—HAROLD F. NORMIE, J.P.

JOHN CARTER,  
D. G. SNODGRASS,  
GEO. FORREST.

TENDER FOR CONTRACT NO. 72, SYDNEY AND SUBURBS STORM-WATER DRAINAGE.

To the Honorable the Minister for Public Works, Bridge-street, Sydney, N.S.W.

I [We], the undersigned, do hereby tender and offer to construct, completely finish, and maintain the various works for contract No. 72, Sydney and suburbs storm-water drainage, in accordance with the conditions of contract, specifications, and drawings, prepared for that purpose in your Department, for or at the rates particularly entered in the accompanying Schedule of Prices, and enclose herewith Treasury deposit as required by clause 20 of the General Conditions.

Should this tender be accepted I [we] undertake to lodge with the Under Secretary for Public Works, within seven days from the notification of the acceptance of this tender, a bank deposit receipt, in the name of the Secretary for Public Works, for the sum of £900 sterling, as security for the due performance of the contract.

In the event of my [our] failing to do so, or to sign the required contract within the time specified in clause 20 of the General Conditions, I [we] hereby distinctly agree to forfeit to the Queen the sum deposited with this tender.

(Date.)

Name } of Firm (if any.)  
Address }

Name } of Partners (if any.)  
Address }  
Name }  
Address }

CONTRACT No. 72.—Schedule of quantities and prices for constructing and completing concrete and stoneware pipe storm-water sewer, from Munn-street along Macdonald-street to Mitchell Road and Shea's Creek, with manholes, flushing chambers, junctions, &c., subject to omissions, additions, deviations, or alterations, as provided. The quantities in this schedule are not guaranteed as correct, but are merely given for the guidance of intending contractors, this being a Schedule of Prices Contract.

No. of Item.	Description of Works	Unit.	Probable Quantity.	Rate per unit.	Amount.
					£ s. d.
1	General excavation in open trenches for sewers, junctions, curves, manholes, pipe-drains, &c., including grubbing, clearing, timbering, unwatering, road restoring, coffer-dam, removing of old stone, abutments and timber-decking of existing road bridge, depositing the excavated materials beyond actual site of works in separate spoil-banks, complete, as specified in clauses 34 to 36, and 37 to 54 inclusive	cubic yard	25,200	...	.....
2	Filling in below, at sides, and over sewers, junctions, curves, manholes, into abandoned open channels, road embankment, &c., including the providing of quarry filling, lead from sites of excavations or temporary spoil-banks, or any other sources outside the limits of this contract, to the place of permanent deposit, breaking, road restoring, ramming, watering, leading surplus and rejected material to spoil, as specified in clauses 47, 50, 51, 53 to 62, inclusive	"	12,000	...	.....
3	Sodding at both sides of new channels, and where ordered, complete, as specified in clause 63	square yard	1,000	...	.....
4	Brickwork, any thickness, shape, arched, &c., where ordered, in any situation, as specified in clauses 96 to 99	cubic yard	110	...	.....
5	Sandstone concrete, any shape, form, thickness, arched &c., where ordered, in any situation, as specified in clauses 78 to 95, inclusive	"	8,100	...	.....
6	Cement facing 4 in. thick, where ordered, in any situation, as specified in clause 112	square yard	11,600	...	.....

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate per unit.	Amount.
	Providing, laying, and jointing glazed stoneware plain pipes, in trenches, and where ordered, including fixing discs, as specified in clauses 16, 40-42, 44, and 73 to 77:—				
7	24 in. internal diameter.....	lineal foot	250	...	.....
8	21 in. " " .....	"	20	...	.....
9	18 in. " " .....	"	550	...	.....
10	12 in. " " .....	"	20	...	.....
11	9 in. " " .....	"	20	...	.....
12	6 in. " " .....	"	20	...	.....
13	Less than 6 in. " .....	"	20	...	.....
14	Providing and fixing in position hardwood timber in piles, walings, sheet piling, including ironwork, as specified in clause 71 .....	cubic foot.	600	...	.....
15	Providing and fixing in position hardwood timber in platform, including ironwork, as specified in clause 70, where ordered .....	"	600	...	.....
16	Timber, ordered in writing, to be left in excavations, as specified in clause 43, including all iron used in fixing same.....	"	600	...	.....
17	Sandstone pitchers, laid where ordered, as specified in clause 114.....	square yard	40	...	.....
<b>IRONWORK.</b>					
18	Providing, delivering, and fixing in position, girders, including bedding same on special mortar, as specified in clauses 91 and 102 to 107 .....	cwt.	74c. 221b.	...	.....
19	Providing, delivering, and fixing cast-iron gratings, as specified and shown on Drawing No. 5, weighing 4 cwt. each, as specified in clauses 90 and 108 to 111 .....	each	32	...	.....
20	Cast-iron ventilating grates, with square frames, 22 in. diameter internal opening, tarred sawn hardwood bricks in centre, fitted into panels, circular dirt-box 8 in. deep, complete, as shown on Drawing No. 5, and as specified in clauses 90 and 108 to 111, placed in position, weighing each about 9 cwt. ....	"	6	...	.....
<b>GENERAL.</b>					
21	Special bluestone concrete (clause 26) where ordered in any situation, in the construction of these works .....	cubic yard	5	...	.....
22	Permanent puddle, where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for) .....	"	5	...	.....
23	Bluestone metal (clause 19) 1½ in. gauge, stacked .....	"	5	...	.....
24	Bluestone metal (clause 31) 2½ in. gauge, stacked .....	"	5	...	.....
25	Sharp, clean washed sand, stacked .....	"	5	...	.....
26	Oregon timber, in scantlings or planks .....	cubic foot	100	...	.....
27	Wrought-iron in bolts, screws, nails, spikes, and galvanised step-iron .....	lb.	1,000	...	.....
28	Portland cement .....	cask	5	...	.....
29	Artisan or mechanic, supplied by contractor.....	day	10	...	.....
30	Quarryman or other skilled labourer supplied by contractor.....	"	10	...	.....
31	Ordinary labourer, supplied by contractor .....	"	10	...	.....
32	Cart with one horse and driver, supplied by Contractor .....	"	5	...	.....
33	One additional horse, supplied by Contractor .....	"	5	...	.....
<b>MAINTENANCE.</b>					
34	Three months' maintenance after formal delivery of works .....	lump sum	.....	...	.....
Total .....		.....	.....	...	.....

*Notes.*

1. All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the Specification.
2. The above Schedule Prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.
3. Prices for items Nos. 29, 30, 31, 32, and 33 are to be for such as are able-bodied and efficient. The Schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.
4. The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centring, concrete boxes, unwatering, coffer-dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads, crossing over pipe-sewers, disposal and removal of surplus soil, reinstating all roads and other surfaces, &c., and any other thing necessary in executing and completing each respective item, in accordance with Plans and Specifications.
5. Tenderers are to state prices for all items, whether quantities are given or not.

## Final Certificate.

CONTRACT No. 72.—Final Return showing quantity and value of Work executed or fixed on the 23rd day of September, 1892.

Schedule Rate No	Description.	Unit.	Quantity.	Rate.	Amount.	Total.
					£ s. d.	£ s. d.
1	General excavation .....	cubic yard	53,410·24	2/6	6,676 5 7	
2	Filling .....	"	27,961·11	1/-	1,398 1 1	
3	Sodding .....	square yard	11	1/-	0 11 0	
4	Brickwork .....	cubic yard	32·30	80/-	129 4 0	
5	Sandstone concrete .....	"	8,372·31	34/-	14,232 18 6	
6	Cement facing .....	square yard	12,324·79	2/6	1,540 12 0	
7	Earthenware pipes, 24 in. diameter .....	lineal foot	58	15/-	43 10 0	
9	" 18 in. " .....	"	349	7/-	122 3 0	
10	" 12 in. " .....	"	4	5/-	1 0 0	
11	" 9 in. " .....	"	2	3/-	0 6 0	
12	" 6 in. " .....	"	357	2/-	35 14 0	
14	Hardwood timber .....	cubic foot	902·92	4/-	180 11 8	
16	Timber left in excavation .....	"	336·93	6d.	8 8 5	
17	Sandstone pitchers .....	square yard	13·58	15/-	10 3 8	
18	Cast-iron girders .....	cwt.	400·33	25/-	500 8 3	
19	" gratings .....	number	15	90/-	67 10 0	
20	Manhole covers .....	"	11	£10	110 0 0	
22	Permanent puddle .....	cubic yard	9	2/6	1 2 6	
26	Oregon timber .....	cubic foot	6·5	2/-	0 13 0	
27	Wrought ironwork .....	lb.	2,301·31	6d.	57 10 8	
28	Portland cement .....	cask	2	20/-	2 0 0	
29	Mechanic .....	day	2	15/-	1 10 0	
31	Ordinary labourer .....	"	92	10/-	46 0 0	
32	Cart, horse, and driver .....	"	2·50	20/-	2 10 0	
33	Additional horse .....	"	½	10/-	0 5 0	
34	Three months maintenance .....	lump sum			20 7 7	25,189 5 11
	<i>Not in Schedule.</i>					
	18 in. earthenware pipes (bends) .....	lineal foot	6	9/5½	2 16 9	
	Sandstone, Ashlar .....	cubic foot	480·47	1/6	36 0 8	
	Fixing girders .....	cwt.	10·70	5/-	2 13 6	
	Connecting Messrs. Green and Son's Mill .....				6 12 6	
	Cast-iron gratings .....	number	11	50/-	27 10 0	75 13 5
	Total .....					25,264 19 4

Recapitulation.	Amount.	Total.
	£ s. d.	£ s. d.
Value of work executed .....	25,264 19 4	25,264 19 4
<i>Deductions to be Made:—</i>		
Amount of progress payments already made .....		24,448 1 9
Amount of final payment now recommended .....		816 17 7

We hereby certify that the above return is a fair and correct statement of the contract to which it refers, and that the above measurements were made by the Resident Engineer with Mr. Snodgrass.

STEPHEN H. WEEDON,  
Resident Engineer, Contract No. 72.

J. DAVIS,  
Supervising Engineer.

Amount of contract ..... £29,650  
Actual amount of payments, including present advance ..... £25,264 19s. 4d.  
Contractor's name—CARTER & CO.

I hereby certify that I examined the work generally and found it in accordance with specifications, and have checked the quantities with the plans, and that they generally agree with same, and that rates are correct.

C. H. OHLFSEN-BAGGÉ,  
Chief Assistant Engineer.

I certify that the amount charged in this voucher as to computations, castings, and rates is correct, that the service has been faithfully performed, and that the expenditure is duly authorised in terms of the Audit Act.

ROBT. HICKSON,  
Head of the Department.

Received on the \_\_\_\_\_ day of \_\_\_\_\_ 189\_\_\_\_, the sum of eight hundred and sixteen pounds seventeen shillings and seven pence, sterling, in full payment for the whole of the works mentioned in the above account, the quantities stated having been finally agreed upon, and settled to be the whole of the work done and materials provided, for which payment is to be made in respect of the Contract for Munni-stroet to Shea's Creek, S.W. Sewer, Ct. 72, and all extra works in connection with the said Contract, and we declare that the sum hereby acknowledged to be received by us includes the percentages retained until the final completion of the work, and is in full payment and satisfaction of all our claims for or in respect of, or arising out of our Contract for the said work, and for everything in connection therewith, in respect whereof we have any claim whatsoever.

(Witness)

Contract

## Contract No. 77, Sydney Sewerage.

### No. 1.

The Engineer-in-Chief for Sewerage to The Under Secretary for Public Works.

Northern Main Sewer, Leichhardt and Annandale Sections.—Contract No. 77.

HEREWITH is submitted for the approval of the Commissioner and Engineer-in-Chief, plans and specifications, in triplicate, for the above sewerage works.

Amount available, £388,000. Estimated cost, £22,037 17s. 8d.

Plans and specifications to be exhibited at the Sewerage Office, Public Works Department, Bridge-street.

Tenders to close at 11 a.m., Wednesday, 13th March, 1895.

The Commissioner and Engineer-in-Chief.

C. H. OHLFSEN-BAGGÉ,

Chief Assistant Engineer for Sewerage.

HEREWITH is forwarded for the approval of the Secretary for Public Works, and for insertion in the *Government Gazette* and local papers, an advertisement inviting tenders for the above.

The Under Secretary.—B.C.

ROBT. HICKSON,

Commissioner and Engineer-in-Chief for Sewerage.

For approval to invite tenders.—J.B., 18/2/95.      Approved.—J.H.Y., 18/2/95.      Notice to *Gazette*, 18/2/95.      Tenders for, 13/3/95.

### No. 2.

#### Schedule of Tenders received by Tender Board.

Wednesday, 13 March, 1895.

LIST OF TENDERS received for construction of the Northern Main Sewer, Leichhardt and Annandale Sections. Contract No. 77, Sydney Sewerage.

Number of tenders received ... ..	Fifteen.
Estimated amount ... ..	£22,037 17s. 8d.
Amount of lowest tender ... ..	28½ per cent. below schedule rates.
Name of lowest tenderer ... ..	Carter, Gummow, & Co.
Vote ... ..	£830,000. 53 Vic. No. 33.

	Amount.	Deposit.	Nature.
*1. Carter, Gummow, & Co. ... ..	28½ per cent. B.S.	£160	Cheque.
2. J. M'Sweeney ... ..	25½    "	166	"
3. J. F. Carson ... ..	20 1/10    "	177	"
4. Gilliver and Curtis ... ..	18½    "	180	"
5. Holloway Bros. ... ..	18¼    "	180	"
6. J. Stewart & Co. ... ..	18½    "	220	"
7. Howie Bros. ... ..	17½    "	182	"
8. Hugh Owen ... ..	15    "	190	"
9. Phillips, Rhodes, and Broughton ... ..	13    "	190	"
10. R. and S. Butcher ... ..	11    "	200	"
11. E. Taylor ... ..	10½    "	192	"
12. Maddison and Ewing... ..	8½    "	220	"
13. T. Williams ... ..	6½    "	205	"
14. T. E. Spencer ... ..	5    "	200	"
*15. Carter, Gummow, & Co. ... ..	For lump sum of £15,500	160	"

ROBT. HICKSON,

Vice President of Tender Board.

## No. 1.—CARTER, GUMMOW, &amp; CO.'S TENDER.

## TENDER FORM.

IN pursuance of advertisement in the *Government Gazette* we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Northern Main Sewer, Leichhardt and Annandale section (Contract No. 77), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by us, at 28½ per cent. under the prices affixed to each item, in the schedule of quantities and prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates quoted above, or if not in schedule, at a price to be agreed upon at the time, and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works, a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and we enclose herewith our cheque for the sum of £160 as a preliminary deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said tender is opened withdraw the same, or if in the event of this tender being accepted we fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 13th day of March, 1895.

JOHN CARTER.  
F. M. GUMMOW.  
D. G. SNODGRASS.

Witness,—A. N. BURKITT.

Carter, Gummow, & Co., Box No. 10, North Sydney.

## TENDER BOARD REGULATIONS.

No tender shall be received after 11 a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive...	...	...	...	...	...	£5	0	0
For amounts exceeding £500 and not exceeding £1,000...	...	...	...	...	...	£10	0	0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

CONTRACT No. 77.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate per Unit.
	Excavation in open trenches in more or less hard materials, and in hard rock, for foundations of abutment-piers, and piers of arches of aqueducts, main sewers, retaining walls, gullies, seats of embankments for road deviations, road cuttings, storm-water overflow and storm-water discharge and other pipe-sewers, &c., including removing pitching, masonry, brick or concrete work, drains, &c., met with in excavations as specified in clauses 3, 4, 6, 10, and 21 :—			
1	Excavation in road surfaces, soil, sand, loam, clay, ironstone, soft rock only .....	cubic yard	4,243	2/-
2	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	140	7/-
3	Excavation in hard rock where charges of powder 4 in. in length x 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .	"	1,160	6/-
	Excavation in tunnels in solid rock for main and branch sewers, junctions, subducts, curves, &c., as specified in clauses 3, 4, 10, and 21 :—			
4	Excavation in hard rock where guttering and gadding only is permitted .....	"	90	65/-
5	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted.....	"	300	60/-
6	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted..	"	1,000	57/6
	Excavation in more or less hard materials and in solid rock, in shafts and shaft-chambers, as specified in clauses 3, 6, 10, and 21 :—			
7	Excavation in road surfaces, loam, ironstone, shale, and soft rock only.....	"	70	6/-
8	Excavation in hard rock where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	4	22/6
9	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted .	"	70	20/-
10	Excavation in hard rock where guttering and gadding only is permitted .....	"	2	30/-
11	Filling in at sides, round and over all concrete and brickwork of main sewer in open cutting round manhole shafts, chambers, retaining walls, gullies, round abutment piers, and piers of arches of aqueducts, round all pipe-sewers in tunnels and open trenches, into embankments for road deviations, including all sand-filling over main sewer between parapets of aqueducts and in tunnels, restoring all road and other surfaces, trimming, &c., as specified in clauses 5, 6, 10, and 21 .....	"	2,300	1/-
12	Tarred metal deck over sand-filling between parapet walls of aqueducts, and where ordered, complete, including all screenings, hot coal-tar coatings, &c., as specified in clause 9.....	"	95	48/-
13	Sandstone ballast provided, placed in position, and spread 8 in. thick on road formation, 3 feet thick ballast packing between heads of piles when directed and where ordered, as specified in clause 8 .....	"	740	4/-
14	Bluestone road metal provided, placed in position, and spread 4 in. thick on road formations, and where ordered, as specified in clause 8 .....	"	370	12/-
15	Bluestone screenings provided, placed in position, and spread over road formations, as specified in clause 8 .....	"	180	5/-
16	Subducts in more or less hard materials, when ordered, of glazed stoneware pipe of 6 in. internal diameter, provided and executed as specified in clause 4 .....	lineal yard	50	1/6
17	Timber ordered in writing to be left in excavations, as specified in clause 6, including all iron used in fixing same .....	cubic foot	300	1/8
18	Supplying and fixing hardwood round timber in piles, where ordered, including providing and fixing all iron shoes and other ironwork used in driving same.....	lineal foot	960	4/-
19	Sandstone concrete, in any situation, in any shape, form or thickness, as specified in clauses 10, 11, and 21 .....	cubic yard	2,350	28/-
20	Bluestone concrete, in any situation, in any shape, form, or thickness, as specified in clauses 10, 11, and 21 .....	"	590	50/-
21	Special bluestone concrete in inner lining of sewers (between brick facings) of aqueducts, including providing, placing in position, and walling in of iron bond rods, as specified in clauses 10, 11, and 21 .....	"	1,000	60/-
22	Brickwork in cement in facings, arches, circular panels, pilasters, corbels, piers, spandrels, parapets, of specially selected white and red bricks, in sewer linings, and in any situation, as specified in clauses 2, 10, 13, and 21 .....	"	2,020	50/-
23	Cement facing, 1 to 2, in any situation where ordered, as specified in clause 12.....	sq. yard...	2,960	2/3
24	Special cement facing, 1 to 1, to all internal surfaces of concrete lining of sewers over aqueducts, as specified in clause 12 .....	" ...	2,750	2/6

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate per Unit.
25	Plymouth bottom-block sandstone ashlar, set in cement, in skewbacks to arches over Nelson and White Streets, to string courses and copings of aqueducts, in stop-blocks at ends of aqueducts and in any situation where ordered, as specified in clauses 2, 10, 14, and 21.....	cubic foot.	13,250	3/6
26	Freestone ashlar set in cement in steps along lines of raised footpaths as specified in clauses 2, 10, 14, and 21.....	"	180	3/-
27	Supply and set in position freestone curbing as specified in clause 17 .....	lineal foot	650	2/6
28	Supply and set freestone gully-covers, where ordered, as specified in clause 17 ....	each ...	4	18/6
29	Supply, place in position, and set in cement, slate-covers over cistern heads of scupper-pipes on lines of aqueducts, as specified in clause 19 .....	" ...	40	2/-
30	Supply and set round manhole covers, and where ordered, squared bluestone pitchers, as specified in clause 15 .....	sq. yard...	8	12/6
31	Squared freestone pitchers to be supplied and set in any situation, 6 in. deep, as specified in clause 16 .....	" ...	320	8/-
32	Supply and fix two-rail ordnance fencing, complete with all ironwork, painting and tarring, as specified in clause 7 .....	rod ...	50	18/-
33	Supply and fix, where ordered, hardwood, split, two-rail and wire fence, as specified in clauses 212 to 220 of the schedule to specification .....	" ...	100	8/-
	Providing laying, and jointing glazed stoneware plain, junction and bend pipes in trenches, shafts, &c., including providing and fixing discs complete, as specified in clause 18, as viz. :—			
34	24-in. diameter storm-water overflow pipes .....	lineal yard	120	33/-
35	12-in. diameter vertical drop pipes from weir chambers .....	"	20	6/9
36	9-in. diameter pipes in shafts .....	"	15	5/-
37	4-in. diameter scupper-pipes .....	"	64	1/6
	Removal of surplus materials from all excavations as specified in clauses 98 to 100 of the schedule to specification, as viz. :—			
38	For the first half-mile of lead .....	cubic yard	4,580	-/9
39	For every further quarter of a mile of lead .....	"	4,580	-/4
40	Receiving, fixing, and jointing any metalwork as cast-iron frames with manhole coverings or gully gratings, gas-check frames, galvanised wrought-iron step-irons, &c., supplied by Government at the site of the works, as specified in clause 20 .....	ewt. ...	125	4/-
41	Flap-traps, providing, delivering, and building in, including providing and fixing discs .....	each ...	10	25/-
42	Permanent puddle, where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 22 of the schedule to specification, including spreading in 9-in. layers and ramming, complete.....	cubic yard	Rate only ...	10/-
43	Special bluestone concrete, in any situation, as specified in clause 11 .....	"	"	60/-
44	Bluestone metal (clause 11), 1½-in. gauge, stacked .....	"	"	13/-
45	Sandstone metal (clause 11), 2-in. gauge, stacked .....	"	"	4/-
46	Bluestone metal (clause 8), 2½-in. gauge, stacked .....	"	"	12/-
47	Sharp, clean, washed sand (clause 2), stacked .....	"	"	7/6
48	Sawn hardwood, in scantlings or planks (clause 2) .....	cubic foot	"	3/-
49	Oregon timber, in scantlings or planks .....	"	"	3/-
50	Wrought-iron, in bolts, screws, nails, spikes, straps, &c. (clause 2) .....	lb. ...	"	-/4
51	Portland cement (clause 2) .....	cask	"	13/-
52	Artizan or mechanic, supplied by Contractor .....	day ...	"	11/-
53	Quarryman or other skilled labourer, supplied by Contractor.....	" ...	"	10/-
54	Ordinary labourer, supplied by Contractor .....	" ...	"	8/-
55	Cart, with one horse and driver, supplied by Contractor .....	" ...	"	11/-
56	One additional horse, supplied by Contractor .....	" ..	"	5/6

The quantities are not guaranteed as correct, and are merely for the guidance of Tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 52, 53, 54, 55, and 56, are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads and other surfaces, &c., and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

## No. 2.—J. McSWEENEY'S TENDER.

## TENDER FORM.

IN pursuance of advertisement in the *Government Gazette*, I, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Northern Main Sewer, Leichhardt and Annandale section (Contract No. 77), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by me, at 25½ per cent. below the prices affixed to each item in the schedule of quantities and prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this tender; and I do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates quoted above, or, if not in schedule, at a price to be agreed upon at the time; and I hereby undertake that I will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and I enclose herewith my cheque for the sum of £166 as a preliminary deposit; and I agree that such sum shall be absolutely forfeited if I at any time within thirty days after the said tender is opened withdraw the same, or if in the event of this tender being accepted I fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board regulations, printed on the back hereof, and by which I agree to be bound.

Dated this 13th day of March, 1895.

JUSTIN McSWEENEY,  
Box 914, G.P.O.

## TENDER BOARD REGULATIONS.

No tender shall be received after 11 a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive...	...	...	...	...	...	£5	0	0
For amounts exceeding £500 and not exceeding £1,000...	...	...	...	...	...	£10	0	0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

CONTRACT

CONTRACT No. 77.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate per Unit.
	Excavation in open trenches in more or less hard materials, and in hard rock, for foundations of abutment-piers, and piers of arches of aqueducts, main sewers, retaining walls, gullies, seats of embankments for road deviations, road cuttings, storm-water overflow and storm-water discharge and other pipe-sewers, &c., including removing pitching, masonry, brick or concrete work, drains, &c., met with in excavations as specified in clauses 3, 4, 6, 10, and 21 :—			
1	Excavation in road surfaces, soil, sand, loam, clay, ironstone, soft rock only .....	cubic yard	4,243	2/-
2	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	140	7/-
3	Excavation in hard rock where charges of powder 4 in. in length x 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted...	"	1,160	0/-
	Excavation in tunnels in solid rock for main and branch sewers, junctions, subducts, curves, &c., as specified in clauses 3, 4, 10, and 21 :—			
4	Excavation in hard rock where guttering and gadding only is permitted .....	"	90	65½/-
5	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted.....	"	100	60½/-
6	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	1,000	57½/6
	Excavation in more or less hard materials and in solid rock, in shafts and shaft-chambers, as specified in clauses 3, 6, 10, and 21 :—			
7	Excavation in road surfaces, loam, ironstone, shale, and soft rock only.....	"	70	0/-
8	Excavation in hard rock where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	4	22½/6
9	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted..	"	70	20/-
10	Excavation in hard rock where guttering and gadding only is permitted .....	"	2	30/-
11	Filling in at sides, round and over all concrete and brickwork of main sewer in open cutting round manhole shafts, chambers, retaining walls, gullies, round abutment piers, and piers of arches of aqueducts, round all pipe-sewers in tunnels and open trenches, into embankments for road deviations, including all sand-filling over main sewer between parapets of aqueducts and in tunnels, restoring all road and other surfaces, trimming, &c., as specified in clauses 5, 6, 10, and 21 .....	"	2,300	1/-
12	Tarred metal deck over sand-filling between parapet walls of aqueducts, and where ordered, complete, including all screenings, hot coal-tar coatings, &c., as specified in clause 9.....	"	35	48½/-
13	Sandstone ballast provided, placed in position, and spread 8 in. thick on road formation, 3 feet thick ballast packing between heads of piles when directed and where ordered, as specified in clause 8 .....	"	740	4/-
14	Bluestone road metal provided, placed in position, and spread 4 in. thick on road formations, and where ordered, as specified in clause 8 .....	"	370	12½/-
15	Bluestone screenings provided, placed in position, and spread over road formations as specified in clause 8 .....	"	180	5½/-
16	Subducts in more or less hard materials, when ordered, of glazed stoneware pipe of 6 in. internal diameter, provided and executed as specified in clause 4 .....	lineal yard	50	1½/6
17	Timber ordered in writing to be left in excavations, as specified in clause 6, including all iron used in fixing same .....	cubic foot	300	1½/8
18	Supplying and fixing hardwood round timber in piles, where ordered, including providing and fixing all iron shoes and other ironwork used in driving same.....	lineal foot	900	4/-
19	Sandstone concrete, in any situation, in any shape, form or thickness, as specified in clauses 10, 11, and 21 .....	cubic yard	2,350	28½/-
20	Bluestone concrete, in any situation, in any shape, form, or thickness, as specified in clauses 10, 11, and 21 .....	"	590	50½/-
21	Special bluestone concrete in inner lining of sewers (between brick facings) of aqueducts, including providing, placing in position, and walling in of iron bond rods, as specified in clauses 10, 11, and 21 .....	"	1,000	60½/-
22	Brickwork in cement in facings, arches, circular panels, pilasters, corbels, piers, spandrels, parapets, of specially selected white and red bricks, in sewer linings, and in any situation, as specified in clauses 2, 10, 13, and 21 .....	"	2,020	50½/-
23	Cement facing, 1 to 2, in any situation where ordered, as specified in clause 12.....	sq. yard...	2,960	2½/3
24	Special cement facing, 1 to 1, to all internal surfaces of concrete lining of sewers over aqueducts, as specified in clause 12 .....	"	2,750	2½/6

No. of Item.	Description of Works.	Unit	Probable Quantity	Rate per Unit.
25	Plymouth bottom-block sandstone ashlar, set in cement, in skewbacks to arches over Nelson and White Streets, to string courses and copings of aqueducts, in stop-blocks at ends of aqueducts and in any situation where ordered, as specified in clauses 2, 10, 14, and 21.....	cubic foot.	13,250	3/6
26	Freestone ashlar set in cement in steps along lines of raised footpaths as specified in clauses 2, 10, 14, and 21.....	"	130	3/-
27	Supply and set in position freestone curbing as specified in clause 17 .....	lineal foot	650	2/6
28	Supply and set freestone gully-covers, where ordered, as specified in clause 17 .....	each	4	18/6
29	Supply, place in position, and set in cement, sluto-covers over cistern heads of scupper-pipes on lines of aqueducts, as specified in clause 19 .....	"	40	2/-
30	Supply and set round manhole covers, and where ordered, squared bluestone pitchers, as specified in clause 15 .....	sq. yard..	8	12/3
31	Squared freestone pitchers to be supplied and set in any situation, 6 in. deep, as specified in clause 16 .....	"	320	8/-
32	Supply and fix two-rail ordnance fencing, complete with all ironwork, painting and tarring, as specified in clause 7 .....	rod	50	18/-
33	Supply and fix, where ordered, hardwood, split, two-rail and wire fence, as specified in clauses 212 to 220 of the schedule to specification .....	"	100	8/-
	Providing laying, and jointing glazed stoneware plain, junction and bend pipes in trenches, shafts, &c., including providing and fixing discs complete, as specified in clause 18, as viz. :-			
34	24-in. diameter storm-water overflow pipes .....	lineal yard	120	33/-
35	12-in. diameter vertical drop pipes from weir chambers .....	"	20	6/3
36	9-in. diameter pipes in shafts .....	"	15	5/-
37	4-in. diameter scupper-pipes .....	"	64	1/6
	Removal of surplus materials from all excavations as specified in clauses 98 to 100 of the schedule to specification, as viz. :-			
38	For the first half-mile of lead .....	cubic yard	4,580	-/0
39	For every further quarter of a mile of lead .....	"	4,580	-/4
40	Receiving, fixing, and jointing any metalwork as cast-iron frames with manhole coverings or gully gratings, gas-check frames, galvanised wrought-iron step-irons, &c., supplied by Government at the site of the works, as specified in clause 20 .....	cwt.	125	4/-
41	Flap-traps, providing, delivering, and building in, including providing and fixing discs .....	each	10	25/-
42	Permanent puddle, where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 22 of the schedule to specification, including spreading in 9-in. layers and ramming, complete.....	cubic yard	Rate only	10/-
43	Special bluestone concrete, in any situation, as specified in clause 11 .....	"	"	60/-
44	Bluestone metal (clause 11), 1½-in. gauge, stacked .....	"	"	13/-
45	Sandstone metal (clause 11), 2-in. gauge, stacked .....	"	"	4/-
46	Bluestone metal (clause 8), 2½-in. gauge, stacked.....	"	"	12/-
47	Sharp, clean, washed sand (clause 2), stacked .....	"	"	7/6
48	Sawn hardwood, in scantlings or planks (clause 2) .....	cubic foot	"	3/-
49	Oregon timber, in scantlings or planks .....	"	"	3/-
50	Wrought-iron, in bolts, screws, nails, spikes, straps, &c. (clause 2) .....	lb.	"	-/4
51	Portland cement (clause 2) .....	cask	"	13/-
52	Artizan or mechanic, supplied by Contractor .....	day	"	11/-
53	Quarryman or other skilled labourer, supplied by Contractor.....	"	"	10/-
54	Ordinary labourer, supplied by Contractor .....	"	"	8/-
55	Cart, with one horse and driver, supplied by Contractor .....	"	"	11/-
56	One additional horse, supplied by Contractor .....	"	"	5/3

The quantities are not guaranteed as correct, and are merely for the guidance of Tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 52, 53, 54, 55, and 56, are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads and other surfaces, &c., and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

## No. 3.—J. F. CARSON'S TENDER.

## TENDER FORM.

IN pursuance of advertisement in the *Government Gazette*, I, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Northern Main Sewer, Leichhardt and Annandale section (Contract No. 77), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by me, at 20·01 per cent. below the prices affixed to each item in the schedule of quantities and prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this tender; and I do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates quoted above, or, if not in schedule, at a price to be agreed upon at the time; and I hereby undertake that I will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and I enclose herewith my cheque for the sum of £177 as a preliminary deposit; and I agree that such sum shall be absolutely forfeited if I at any time within thirty days after the said tender is opened withdraw the same, or if in the event of this tender being accepted I fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board regulations, printed on the back hereof, and by which I agree to be bound.

Dated this 12th day of March, 1895.

Witness,—JNO. J. ROONIE.

J. F. CARSON,  
Bay-street, Croydon.

## TENDER BOARD REGULATIONS.

No tender shall be received after 11 a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive...	...	...	...	...	...	£5 0 0
For amounts exceeding £500 and not exceeding £1,000...	...	...	...	...	...	£10 0 0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

CONTRACT

## CONTRACT No. 77.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Works.	Unit.	Probable Quantity	Rate per Unit.
	Excavation in open trenches in more or less hard materials, and in hard rock, for foundations of abutment-piers, and piers of arches of aqueducts, main sewers, retaining walls, gullies, seats of embankments for road deviations, road cuttings, storm-water overflow and storm-water discharge and other pipe-sewers, &c., including removing pitching, masonry, brick or concrete work, drains, &c., met with in excavations as specified in clauses 3, 4, 6, 10, and 21 :—			
1	Excavation in road surfaces, soil, sand, loam, clay, ironstone, soft rock only .....	cubic yard	4,243	2/-
2	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	140	7/-
3	Excavation in hard rock where charges of powder 4 in. in length x 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted...	"	1,160	6/-
	Excavation in tunnels in solid rock for main and branch sewers, junctions, subducts, curves, &c., as specified in clauses 3, 4, 10, and 21 :—			
4	Excavation in hard rock where guttering and gadding only is permitted .....	"	90	65/-
5	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted.....	"	100	60/-
6	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	1,000	57/6
	Excavation in more or less hard materials and in solid rock, in shafts and shaft-chambers, as specified in clauses 3, 6, 10, and 21 :—			
7	Excavation in road surfaces, loam, ironstone, shale, and soft rock only.....	"	70	6/-
8	Excavation in hard rock where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	4	22/6
9	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted..	"	70	20/-
10	Excavation in hard rock where guttering and gadding only is permitted .....	"	2	30/-
11	Filling in at sides, round and over all concrete and brickwork of main sewer in open cutting round manhole shafts, chambers, retaining walls, gullies, round abutment piers, and piers of arches of aqueducts, round all pipe-sewers in tunnels and open trenches, into embankments for road deviations, including all sand-filling over main sewer between parapets of aqueducts and in tunnels, restoring all road and other surfaces, trimming, &c., as specified in clauses 5, 6, 10, and 21 .....	"	2,300	1/-
12	Tarred metal deck over sand-filling between parapet walls of aqueducts, and where ordered, complete, including all screenings, hot coal-tar coatings, &c., as specified in clause 9.....	"	95	48/-
13	Sandstone ballast provided, placed in position, and spread 8 in. thick on road formation, 3 feet thick ballast-packing between heads of piles when directed and where ordered, as specified in clause 8 .....	"	740	4/-
14	Bluestone road metal provided, placed in position, and spread 4 in. thick on road formations, and where ordered, as specified in clause 8 .....	"	370	12/-
15	Bluestone screenings provided, placed in position, and spread over road formations, as specified in clause 8 .....	"	180	5/-
16	Subducts in more or less hard materials, when ordered, of glazed stoneware pipe of 6 in. internal diameter, provided and executed as specified in clause 4 .....	lineal yard	50	1/6
17	Timber ordered in writing to be left in excavations, as specified in clause 6, including all iron used in fixing same .....	cubic foot	300	1/8
18	Supplying and fixing hardwood round timber in piles, where ordered, including providing and fixing all iron shoes and other ironwork used in driving same.....	lineal foot	900	4/-
19	Sandstone concrete, in any situation, in any shape, form or thickness, as specified in clauses 10, 11, and 21 .....	cubic yard	2,350	28/-
20	Bluestone concrete, in any situation, in any shape, form, or thickness, as specified in clauses 10, 11, and 21 .....	"	500	50/-
21	Special bluestone concrete in inner lining of sewers (between brick facings) of aqueducts, including providing, placing in position, and walling in of iron bond rods, as specified in clauses 10, 11, and 21 .....	"	1,000	60/-
22	Brickwork in cement in facings, arches, circular panels, pilasters, corbels, piers, spandrels, parapets, of specially selected white and red bricks, in sewer linings, and in any situation, as specified in clauses 2, 10, 13, and 21 .....	"	2,020	50/-
23	Cement facing, 1 to 2, in any situation where ordered, as specified in clause 12.....	sq. yard...	2,960	2/3
24	Special cement facing, 1 to 1, to all internal surfaces of concrete lining of sewers over aqueducts, as specified in clause 12 .....	"	2,700	2/6

No. of Item.	Description of Works.	Unit.	Probable Quantity	Rate per Unit.
25	Pymont bottom-block sandstone ashlar, set in cement, in skewbacks to arches over Nelson and White Streets, to string courses and copings of aqueducts, in stop-blocks at ends of aqueducts and in any situation where ordered, as specified in clauses 2, 10, 14, and 21.....	cubic foot.	13,250	3/6
26	Freestone ashlar set in cement in steps along lines of raised footpaths as specified in clauses 2, 10, 14, and 21.....	"	130	3/-
27	Supply and set in position freestone curbing as specified in clause 17 .....	lineal foot	650	2/6
28	Supply and set freestone gully-covers, where ordered, as specified in clause 17 .....	each	4	18/6
29	Supply, place in position, and set in cement, slate-covers over cistern heads of scupper-pipes on lines of aqueducts, as specified in clause 19 .....	"	40	2/-
30	Supply and set round manhole covers, and where ordered, squared bluestone pitchers, as specified in clause 15 .....	sq. yard	8	12/6
31	Squared freestone pitchers to be supplied and set in any situation, 6 in. deep, as specified in clause 16 .....	"	320	8/-
32	Supply and fix two-rail ordnance fencing, complete with all ironwork, painting and tarring, as specified in clause 7 .....	rod	50	18/-
33	Supply and fix, where ordered, hardwood, split, two-rail and wire fence, as specified in clauses 212 to 220 of the schedule to specification .....	"	100	8/-
	Providing laying, and jointing glazed stoneware plain, junction and bend pipes in trenches, shafts, &c., including providing and fixing discs complete, as specified in clause 18, as viz. :-			
34	24-in. diameter storm-water overflow pipes .....	lineal yard	120	33/-
35	12-in. diameter vertical drop pipes from weir chambers .....	"	20	6/9
36	9-in. diameter pipes in shafts .....	"	15	5/-
37	4-in. diameter scupper-pipes .....	"	64	1/6
	Removal of surplus materials from all excavations as specified in clauses 98 to 100 of the schedule to specification, as viz. :-			
38	For the first half-mile of lead .....	cubic yard	4,580	-/0
39	For every further quarter of a mile of lead .....	"	4,580	-/4
40	Receiving, fixing, and jointing any metalwork as cast-iron frames with manhole coverings or gully gratings, gas-check frames, galvanised wrought-iron step-irons, &c., supplied by Government at the site of the works, as specified in clause 20 .....	cwt.	125	4/-
41	Flap-traps, providing, delivering, and building in, including providing and fixing discs .....	each	10	25/-
42	Permanent puddle, where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 22 of the schedule to specification, including spreading in 9-in. layers and ramming, complete.....	cubic yard	Rate only	10/-
43	Special bluestone concrete, in any situation, as specified in clause 11 .....	"	"	60/-
44	Bluestone metal (clause 11), 1½-in. gauge, stacked .....	"	"	13/-
45	Sandstone metal (clause 11), 2-in. gauge, stacked .....	"	"	4/-
46	Bluestone metal (clause 8), 2½-in. gauge, stacked.....	"	"	12/-
47	Sharp, clean, washed sand (clause 2), stacked .....	"	"	7/6
48	Sawn hardwood, in scantlings or planks (clause 2) .....	cubic foot.	"	3/-
49	Oregon timber, in scantlings or planks .....	"	"	3/-
50	Wrought-iron, in bolts, screws, nails, spikes, straps, &c. (clause 2) .....	lb.	"	-/4
51	Portland cement (clause 2) .....	cask	"	13/-
52	Artizan or mechanic, supplied by Contractor .....	day	"	11/-
53	Quarryman or other skilled labourer, supplied by Contractor.....	"	"	10/-
54	Ordinary labourer, supplied by Contractor .....	"	"	8/-
55	Cart, with one horse and driver, supplied by Contractor .....	"	"	11/-
56	One additional horse, supplied by Contractor .....	"	"	5/3

The quantities are not guaranteed as correct, and are merely for the guidance of Tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 52, 53, 54, 55, and 56, are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads and other surfaces, &c., and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

## No. 4.—GILLIVER AND CURTIS'S TENDER.

## TENDER FORM.

IN pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Northern Main Sewer, Leichhardt and Annandale section (Contract No. 17), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by us, at 18 $\frac{7}{8}$  per cent. below the prices affixed to each item in the schedule of quantities and prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates quoted above, or, if not in schedule, at a price to be agreed upon at the time; and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and we enclose herewith our cheque for the sum of £180 as a preliminary deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said tender is opened withdraw the same, or if in the event of this tender being accepted we fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 13th day of March, 1895.

WM. GILLIVER,  
CHARLES HENRY CURTIS,  
Rookwood.

Witness,—J. B. STACK, Rookwood.

## TENDER BOARD REGULATIONS.

No tender shall be received after 11 a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive ... ..	£5 0 0
For amounts exceeding £500 and not exceeding £1,000...	£10 0 0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

CONTRACT

## CONTRACT No. 77.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Works.	Unit.	Probable Quantity	Rate per Unit.
	Excavation in open trenches in more or less hard materials, and in hard rock, for foundations of abutment-piers, and piers of arches of aqueducts, main sewers, retaining walls, gullies, seats of embankments for road deviations, road cuttings, storm-water overflow and storm-water discharge and other pipe-sewers, &c., including removing pitching, masonry, brick or concrete work, drains, &c., met with in excavations as specified in clauses 3, 4, 6, 10, and 21 :—			
1	Excavation in road surfaces, soil, sand, loam, clay, ironstone, soft rock only .....	cubic yard	4,243	2/-
2	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted ..	"	140	7/-
3	Excavation in hard rock where charges of powder 4 in. in length x 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .	"	1,160	6/-
	Excavation in tunnels in solid rock for main and branch sewers, junctions, sub ducts, curves, &c., as specified in clauses 3, 4, 10, and 21 :—			
4	Excavation in hard rock where guttering and gadding only is permitted .....	"	90	65/-
5	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted.....	"	100	60/-
6	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	1,000	57/6
	Excavation in more or less hard materials and in solid rock, in shafts and shaft-chambers, as specified in clauses 3, 6, 10, and 21 :—			
7	Excavation in road surfaces, loam, ironstone, shale, and soft rock only.....	"	70	6/-
8	Excavation in hard rock where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	4	22/6
9	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore holes as shall be directed only are permitted .	"	70	20/-
10	Excavation in hard rock where guttering and gadding only is permitted .....	"	2	30/-
11	Filling in at sides, round and over all concrete and brickwork of main sewer in open cutting round manhole shafts, chambers, retaining walls, gullies, round abutment piers, and piers of arches of aqueducts, round all pipe-sewers in tunnels and open trenches, into embankments for road deviations, including all sand-filling over main sewer between parapets of aqueducts and in tunnels, restoring all road and other surfaces, trimming, &c., as specified in clauses 5, 6, 10, and 21 .....	"	2,300	1/-
12	Tarred metal deck over sand-filling between parapet walls of aqueducts, and where ordered, complete, including all screenings, hot coal-tar coatings, &c., as specified in clause 9.....	"	95	48/-
13	Sandstone ballast provided, placed in position, and spread 8 in. thick on road formation, 3 feet thick ballast-packing between heads of piles when directed and where ordered, as specified in clause 5 .....	"	740	4/-
14	Bluestone road metal provided, placed in position, and spread 4 in. thick on road formations, and where ordered, as specified in clause 8 .....	"	370	12/-
15	Bluestone screenings provided, placed in position, and spread over road formations, as specified in clause 8 .....	"	180	5/-
16	Subducts in more or less hard materials, when ordered, of glazed stoneware pipe of 6 in. internal diameter, provided and executed as specified in clause 4 .....	lineal yard	50	1/6
17	Timber ordered in writing to be left in excavations, as specified in clause 6, including all iron used in fixing same .....	cubic foot	300	1/8
18	Supplying and fixing hardwood round timber in piles, where ordered, including providing and fixing all iron shoes and other ironwork used in driving same.....	lineal foot	960	4/-
19	Sandstone concrete, in any situation, in any shape, form or thickness, as specified in clauses 10, 11, and 21 .....	cubic yard	2,350	28/-
20	Bluestone concrete, in any situation, in any shape, form, or thickness, as specified in clauses 10, 11, and 21 .....	"	590	50/-
21	Special bluestone concrete in inner lining of sewers (between brick facings) of aqueducts, including providing, placing in position, and walling in of iron bond rods, as specified in clauses 10, 11, and 21 .....	"	1,000	60/-
22	Brickwork in cement in facings, arches, circular panels, pilasters, corbels, piers spandrels, parapets, of specially selected white and red bricks, in sewer linings, and in any situation, as specified in clauses 2, 10, 13, and 21 .....	"	2,020	50/-
23	Cement facing, 1 to 2, in any situation where ordered, as specified in clause 12.....	sq. yard	2,960	2/3
24	Special cement facing, 1 to 1, to all internal surfaces of concrete lining of sewers over aqueducts, as specified in clause 12 .....	"	2,700	2/6

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate per Unit.
25	Plymouth bottom-block sandstone ashlar, set in cement, in skewbacks to arches over Nelson and White Streets, to string courses and copings of aqueducts, in stop-blocks at ends of aqueducts and in any situation where ordered, as specified in clauses 2, 10, 14, and 21.....	cubic foot.	13,250	3/6
26	Freestone ashlar set in cement in steps along lines of raised footpaths as specified in clauses 2, 10, 14, and 21.....	"	130	3/-
27	Supply and set in position freestone curbing as specified in clause 17 .....	lineal foot.	650	2/6
28	Supply and set freestone gully-covers, where ordered, as specified in clause 17 .....	each ...	4	18/6
29	Supply, place in position, and set in cement, slate-covers over cistern heads of scupper-pipes on lines of aqueducts, as specified in clause 19 .....	"	40	2/-
30	Supply and set round manhole covers, and where ordered, squared bluestone pitchers, as specified in clause 15 .....	sq. yard ...	8	12/6
31	Squared freestone pitchers to be supplied and set in any situation, 6 in. deep, as specified in clause 16 .....	"	320	8/-
32	Supply and fix two-rail ordnance fencing, complete with all ironwork, painting and tarring, as specified in clause 7 .....	rod ...	50	18/-
33	Supply and fix, where ordered, hardwood, split, two-rail and wire fence, as specified in clauses 212 to 220 of the schedule to specification .....	"	100	8/-
	Providing laying, and jointing glazed stoneware plain, junction and bend pipes in trenches, shafts, &c., including providing and fixing discs complete, as specified in clause 18, as viz. :-			
34	24-in. diameter storm-water overflow pipes .....	lineal yard	120	33/-
35	12-in. diameter vertical drop pipes from weir chambers .....	"	20	6/3
36	9-in. diameter pipes in shafts .....	"	15	5/-
37	4-in. diameter scupper-pipes .....	"	64	1/6
	Removal of surplus materials from all excavations as specified in clauses 98 to 100 of the schedule to specification, as viz. :-			
38	For the first half-mile of lead .....	cubic yard	4,580	-/0
39	For every further quarter of a mile of lead .....	"	4,580	-/4
40	Receiving, fixing, and jointing any metalwork as cast-iron frames with manhole coverings or gully gratings, gas-check frames, galvanised wrought-iron steps, &c., supplied by Government at the site of the works, as specified in clause 20 .....	cwt. ...	125	4/-
41	Flap-traps, providing, delivering, and building in, including providing and fixing discs .....	each ...	10	25/-
42	Permanent puddle, where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 22 of the schedule to specification, including spreading in 9-in. layers and ramming, complete.....	cubic yard	Rate only ...	10/-
43	Special bluestone concrete, in any situation, as specified in clause 11 .....	"	"	60/-
44	Bluestone metal (clause 11), 1½-in. gauge, stacked .....	"	"	13/-
45	Sandstone metal (clause 11), 2-in. gauge, stacked .....	"	"	4/-
46	Bluestone metal (clause 8), 2½-in. gauge, stacked.....	"	"	12/-
47	Sharp, clean, washed sand (clause 2), stacked .....	"	"	7/6
48	Sawn hardwood, in scantlings or planks (clause 2) .....	cubic foot.	"	3/-
49	Oregon timber, in scantlings or planks .....	"	"	3/-
50	Wrought-iron, in bolts, screws, nails, spikes, straps, &c. (clause 2) .....	lb. ...	"	-/4
51	Portland cement (clause 2) .....	cask ...	"	13/-
52	Artizan or mechanic, supplied by Contractor .....	day ...	"	11/-
53	Quarryman or other skilled labourer, supplied by Contractor.....	"	"	10/-
54	Ordinary labourer, supplied by Contractor .....	"	"	8/-
55	Cart, with one horse and driver, supplied by Contractor .....	"	"	11/-
56	One additional horse, supplied by Contractor .....	"	"	5/-

The quantities are not guaranteed as correct, and are merely for the guidance of Tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 52, 53, 54, 55, and 56, are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads and other surfaces, &c, and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

## No. 5.—HOLLOWAY BROTHERS' TENDER.

## TENDER FORM.

In pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Northern Main Sewer, Leichhardt and Annandale section (Contract No. 77), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by us, at 18 $\frac{1}{4}$  per cent. under the prices affixed to each item in the schedule of quantities and prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates quoted above, or, if not in schedule, at a price to be agreed upon at the time; and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and we enclose herewith our cheque for the sum of £180 as a preliminary deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said tender is opened withdraw the same, or if in the event of this tender being accepted we fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 12th day of March, 1895.

RICHARD HOLLOWAY,  
WILLIAM HOLLOWAY,  
LEONARD HOLLOWAY,  
Goulburn.

## TENDER BOARD REGULATIONS.

No tender shall be received after 11 a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive...	...	...	...	...	...	£5	0	0
For amounts exceeding £500 and not exceeding £1,000...	...	...	...	...	...	£10	0	0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

CONTRACT

CONTRACT No. 77.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate per Unit.
	Excavation in open trenches in more or less hard materials, and in hard rock, for foundations of abutment-piers, and piers of arches of aqueducts, main sewers, retaining walls, gullies, seats of embankments for road deviations, road cuttings, storm-water overflow and storm-water discharge and other pipe-sewers, &c., including removing pitching, masonry, brick or concrete work, drains, &c., met with in excavations as specified in clauses 3, 4, 6, 10, and 21 :—			
1	Excavation in road surfaces, soil, sand, loam, clay, ironstone, soft rock only .....	cubic yard	4,243	2/-
2	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	140	7/-
3	Excavation in hard rock where charges of powder 4 in. in length x 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted...	"	1,160	6/-
	Excavation in tunnels in solid rock for main and branch sewers, junctions, subducts, curves, &c., as specified in clauses 3, 4, 10, and 21 :—			
4	Excavation in hard rock where guttering and gadding only is permitted .....	"	90	65/-
5	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted.....	"	100	60/-
6	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	1,000	57/6
	Excavation in more or less hard materials and in solid rock, in shafts and shaft-chambers, as specified in clauses 3, 6, 10, and 21 :—			
7	Excavation in road surfaces, loam, ironstone, shale, and soft rock only.....	"	70	6/-
8	Excavation in hard rock where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	4	22/6
9	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	70	20/-
10	Excavation in hard rock where guttering and gadding only is permitted .....	"	2	30/-
11	Filling in at sides, round and over all concrete and brickwork of main sewer in open cutting round manhole shafts, chambers, retaining walls, gullies, round abutment piers, and piers of arches of aqueducts, round all pipe-sewers in tunnels and open trenches, into embankments for road deviations, including all sand-filling over main sewer between parapets of aqueducts and in tunnels, restoring all road and other surfaces, trimming, &c., as specified in clauses 5, 6, 10, and 21 .....	"	2,300	1/-
12	Tarred metal deck over sand-filling between parapet walls of aqueducts, and where ordered, complete, including all screenings, hot coal-tar coatings, &c., as specified in clause 9.....	"	95	48/-
13	Sandstone ballast provided, placed in position, and spread 8 in. thick on road formation, 3 feet thick ballast-packing between heads of piles when directed and where ordered, as specified in clause 8 .....	"	740	4/-
14	Bluestone road metal provided, placed in position, and spread 4 in. thick on road formations, and where ordered, as specified in clause 8 .....	"	370	12/-
15	Bluestone screenings provided, placed in position, and spread over road formations, as specified in clause 8 .....	"	180	5/-
16	Subducts in more or less hard materials, when ordered, of glazed stoneware pipe of 6 in. internal diameter, provided and executed as specified in clause 4 .....	lineal yard	50	1/6
17	Timber ordered in writing to be left in excavations, as specified in clause 6, including all iron used in fixing same .....	cubic foot	300	1/8
18	Supplying and fixing hardwood round timber in piles, where ordered, including providing and fixing all iron shoes and other ironwork used in driving same.....	lineal foot	960	4/-
19	Sandstone concrete, in any situation, in any shape, form or thickness, as specified in clauses 10, 11, and 21 .....	cubic yard	2,350	28/-
20	Bluestone concrete, in any situation, in any shape, form, or thickness, as specified in clauses 10, 11, and 21 .....	"	590	50/-
21	Special bluestone concrete in inner lining of sewers (between brick facings) of aqueducts, including providing, placing in position, and walling in of iron bond rods, as specified in clauses 10, 11, and 21 .....	"	1,000	60/-
22	Brickwork in cement in facings, arches, circular panels, pilasters, corbels, piers, spandrels, parapets, of specially selected white and red bricks, in sewer linings, and in any situation, as specified in clauses 2, 10, 13, and 21 .....	"	2,020	50/-
23	Cement facing, 1 to 2, in any situation where ordered, as specified in clause 12.....	sq. yard...	2,960	2/3
24	Special cement facing, 1 to 1, to all internal surfaces of concrete lining of sewers over aqueducts, as specified in clause 12 .....	" ...	2,750	2/6

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate per Unit.
25	Plymouth bottom-block sandstone ashlar, set in cement, in skewbacks to arches over Nelson and White Streets, to string courses and copings of aqueducts, in stop-blocks at ends of aqueducts and in any situation where ordered, as specified in clauses 2, 10, 14, and 21.....	cubic foot.	13,250	3/6
26	Freestone ashlar set in cement in steps along lines of raised footpaths as specified in clauses 2, 10, 14, and 21.....	"	130	3/-
27	Supply and set in position freestone curbing as specified in clause 17 .....	lineal foot	650	2/6
28	Supply and set freestone gully-covers, where ordered, as specified in clause 17 .....	each ...	4	18/6
29	Supply, place in position, and set in cement, slate-covers over cistern heads of scupper-pipes on lines of aqueducts, as specified in clause 19 .....	" ...	40	2/-
30	Supply and set round manhole covers, and where ordered, squared bluestone pitchers, as specified in clause 15 .....	sq. yard ...	8	12/6
31	Squared freestone pitchers to be supplied and set in any situation, 6 in. deep, as specified in clause 16 .....	" ...	320	8/-
32	Supply and fix two-rail ordnance fencing, complete with all ironwork, painting and tarring, as specified in clause 7 .....	rod ...	50	18/-
33	Supply and fix, where ordered, hardwood, split, two-rail and wire fence, as specified in clauses 212 to 220 of the schedule to specification .....	" ...	100	8/-
	Providing laying, and jointing glazed stoneware plain, junction and bend pipes in trenches, shafts, &c., including providing and fixing discs complete, as specified in clause 18, as viz. :-			
34	24-in. diameter storm-water overflow pipes .....	lineal yard	120	33/-
35	12-in. diameter vertical drop pipes from weir chambers .....	"	20	6/9
36	9-in. diameter pipes in shafts .....	"	15	5/-
37	4-in. diameter scupper-pipes .....	"	64	1/6
	Removal of surplus materials from all excavations as specified in clauses 98 to 107 of the schedule to specification, as viz. :-			
38	For the first half-mile of lead .....	cubic yard	4,580	1/9
39	For every further quarter of a mile of lead .....	"	4,580	1/4
40	Receiving, fixing, and jointing any metalwork as cast-iron frames with manhole coverings or gully gratings, gas-check frames, galvanised wrought-iron step-irons, &c., supplied by Government at the site of the works, as specified in clause 20 .....	cwt. ...	125	4/-
41	Flap-traps, providing, delivering, and building in, including providing and fixing discs .....	each ...	10	25/-
42	Permanent puddle, where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 22 of the schedule to specification, including spreading in 9-in. layers and ramming, complete.....	cubic yard	Rate only	10/-
43	Special bluestone concrete, in any situation, as specified in clause 11 .....	"	"	60/-
44	Bluestone metal (clause 11), 1½-in. gauge, stacked .....	"	"	13/-
45	Sandstone metal (clause 11), 2-in. gauge, stacked .....	"	"	4/-
46	Bluestone metal (clause 8), 2½-in. gauge, stacked.....	"	"	12/-
47	Sharp, clean, washed sand (clause 2), stacked .....	"	"	7/6
48	Sawn hardwood, in scantlings or planks (clause 2) .....	"	"	3/-
49	Oregon timber, in scantlings or planks .....	cubic foot.	"	3/-
50	Wrought-iron, in bolts, screws, nails, spikes, straps, &c. (clause 2) .....	lb. ...	"	1/4
51	Portland cement (clause 2) .....	cask ...	"	13/-
52	Artizan or mechanic, supplied by Contractor .....	day ...	"	11/-
53	Quarryman or other skilled labourer, supplied by Contractor.....	" ...	"	10/-
54	Ordinary labourer, supplied by Contractor .....	" ...	"	8/-
55	Cart, with one horse and driver, supplied by Contractor .....	" ...	"	11/-
56	One additional horse, supplied by Contractor .....	" ...	"	5/6

The quantities are not guaranteed as correct, and are merely for the guidance of Tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 52, 53, 54, 55, and 56, are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads and other surfaces, &c., and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

## No. 6.—J. STEWART &amp; CO.'S TENDER.

## TENDER FORM.

IN pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Northern Main Sewer, Leichhardt and Annandale section (Contract No. 77), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by us, at 18½ per cent. below the prices affixed to each item in the schedule of quantities and prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates quoted above, or, if not in schedule, at a price to be agreed upon at the time; and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and we enclose herewith our cheque for the sum of £220 as a preliminary deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said tender is opened withdraw the same, or if in the event of this tender being accepted we fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 13th day of March, 1895.

Witness,—DANIEL STEWART.

J. STEWART & CO.,  
4 Mercantile Chambers, Castlereagh-street.

## TENDER BOARD REGULATIONS.

No tender shall be received after 11 a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive... ..	£5 0 0
For amounts exceeding £500 and not exceeding £1,000... ..	£10 0 0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

CONTRACT

## CONTRACT No. 77.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Works.	Unit.	Probable Quantity	Rate per Unit.
	Excavation in open trenches in more or less hard materials, and in hard rock, for foundations of abutment-piers, and piers of arches of aqueducts, main sewers, retaining walls, gullies, seats of embankments for road deviations, road cuttings storm-water overflow and storm-water discharge and other pipe-sewers, &c., including removing pitching, masonry, brick or concrete work, drains, &c., met with in excavations as specified in clauses 3, 4, 6, 10, and 21 :—			
1	Excavation in road surfaces, soil, sand, loam, clay, ironstone, soft rock only .....	cubic yard	4,243	2/-
2	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	140	7/-
3	Excavation in hard rock where charges of powder 4 in. in length x 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted .	"	1,160	6/-
	Excavation in tunnels in solid rock for main and branch sewers, junctions, subducts, curves, &c., as specified in clauses 3, 4, 10, and 21 :—			
4	Excavation in hard rock where guttering and gadding only is permitted .....	"	90	65/-
5	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted.....	"	100	60/-
6	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted..	"	1,000	57/6
	Excavation in more or less hard materials and in solid rock, in shafts and shaft-chambers, as specified in clauses 3, 6, 10, and 21 :—			
7	Excavation in road surfaces, loam, ironstone, shale, and soft rock only.....	"	70	6/-
8	Excavation in hard rock where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted..	"	4	22/6
9	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore holes as shall be directed only are permitted .	"	70	20/-
10	Excavation in hard rock where guttering and gadding only is permitted .....	"	2	30/-
11	Filling in at sides, round and over all concrete and brickwork of main sewer in open cutting round manhole shafts, chambers, retaining walls, gullies, round abutment piers, and piers of arches of aqueducts, round all pipe-sewers in tunnels and open trenches, into embankments for road deviations, including all sand-filling over main sewer between parapets of aqueducts and in tunnels, restoring all road and other surfaces, trimming, &c., as specified in clauses 5, 6, 10, and 21 .....	"	2,300	1/-
12	Tarred metal deck over sand-filling between parapet walls of aqueducts, and where ordered, complete, including all screenings, hot coal-tar coatings, &c., as specified in clause 9.....	"	95	48/-
13	Sandstone ballast provided, placed in position, and spread 8 in. thick on road formation, 3 feet thick ballast-packing between heads of piles when directed and where ordered, as specified in clause 8 .....	"	740	4/-
14	Bluestone road metal provided, placed in position, and spread 4 in. thick on road formations, and where ordered, as specified in clause 8 .....	"	370	12/-
15	Bluestone screenings provided, placed in position, and spread over road formations, as specified in clause 8 .....	"	180	5/-
16	Subducts in more or less hard materials, when ordered, of glazed stoneware pipe of 6 in. internal diameter, provided and executed as specified in clause 4 .....	lineal yard	50	1/6
17	Timber ordered in writing to be left in excavations, as specified in clause 6, including all iron used in fixing same .....	cubic foot	300	1/8
18	Supplying and fixing hardwood round timber in piles, where ordered, including providing and fixing all iron shoes and other ironwork used in driving same.....	lineal foot	960	4/-
19	Sandstone concrete, in any situation, in any shape, form or thickness, as specified in clauses 10, 11, and 21 .....	cubic yard	2,350	28/-
20	Bluestone concrete, in any situation, in any shape, form, or thickness, as specified in clauses 10, 11, and 21 .....	"	590	50/-
21	Special bluestone concrete in inner lining of sewers (between brick facings) of aqueducts, including providing, placing in position, and walling in of iron bond rods, as specified in clauses 10, 11, and 21 .....	"	1,000	60/-
22	Brickwork in cement in facings, arches, circular panels, pilasters, corbels, piers spandrels, parapets, of specially selected white and red bricks, in sewer linings, and in any situation, as specified in clauses 2, 10, 13, and 21 .....	"	2,020	50/-
23	Cement facing, 1 to 2, in any situation where ordered, as specified in clause 12.....	sq yard...	2,960	2/3
24	Special cement facing, 1 to 1, to all internal surfaces of concrete lining of sewers over aqueducts, as specified in clause 12 .....	"	2,700	2/3

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate per Unit.
25	Plymouth bottom-block sandstone ashlar, set in cement, in skewbacks to arches over Nelson and White Streets, to string courses and copings of aqueducts, in stop-blocks at ends of aqueducts and in any situation where ordered, as specified in clauses 2, 10, 14, and 21.....	cubic foot.	13,250	3/6
26	Freestone ashlar set in cement in steps along lines of raised footpaths as specified in clauses 2, 10, 14, and 21.....	"	130	3/-
27	Supply and set in position freestone curbing as specified in clause 17 .....	lineal foot	650	2/6
28	Supply and set freestone gully-covers, where ordered, as specified in clause 17 .....	each ...	4	18/6
29	Supply, place in position, and set in cement, slate-covers over cistern heads of scupper-pipes on lines of aqueducts, as specified in clause 19 .....	" ...	40	2/-
30	Supply and set round manhole covers, and where ordered, squared bluestone pitchers, as specified in clause 15 .....	sq. yard...	8	12/6
31	Squared freestone pitchers to be supplied and set in any situation, 6 in. deep, as specified in clause 16 .....	" ...	320	8/-
32	Supply and fix two-rail ordnance fencing, complete with all ironwork, painting and tarring, as specified in clause 7 .....	rod ...	50	18/-
33	Supply and fix, where ordered, hardwood, split, two-rail and wire fence, as specified in clauses 212 to 220 of the schedule to specification .....	" ...	100	8/-
	Providing laying, and jointing glazed stoneware plain, junction and bend pipes in trenches, shafts, &c., including providing and fixing discs complete, as specified in clause 18, as viz. :-			
34	24-in. diameter storm-water overflow pipes .....	lineal yard	120	33/-
35	12-in. diameter vertical drop pipes from weir chambers .....	"	20	6/0
36	9-in. diameter pipes in shafts .....	"	15	5/-
37	4-in. diameter scupper-pipes .....	"	64	1/6
	Removal of surplus materials from all excavations as specified in clauses 98 to 107 of the schedule to specification, as viz. :-			
38	For the first half-mile of lead .....	cubic yard	4,580	-/0
39	For every further quarter of a mile of lead .....	"	4,580	-/4
40	Receiving, firing, and jointing any metalwork as cast-iron frames with manhole coverings or gully gratings, gas-check frames, galvanised wrought-iron step-irons, &c., supplied by Government at the site of the works, as specified in clause 20 .....	cwt. ...	125	4/-
41	Flap-traps, providing, delivering, and building in, including providing and fixing discs .....	each ...	10	25/-
42	Permanent puddle, where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 22 of the schedule to specification, including spreading in 9-in. layers and ramming, complete.....	cubic yard	Rate only ...	10/-
43	Special bluestone concrete, in any situation, as specified in clause 11 .....	"	"	60/-
44	Bluestone metal (clause 11), 1½-in. gauge, stacked .....	"	"	13/-
45	Sandstone metal (clause 11), 2-in. gauge, stacked .....	"	"	4/-
46	Bluestone metal (clause 8), 2½-in. gauge, stacked.....	"	"	12/-
47	Sharp, clean, washed sand (clause 2), stacked .....	"	"	7/6
48	Sawn hardwood, in scantlings or planks (clause 2) .....	cubic foot.	"	3/-
49	Oregon timber, in scantlings or planks .....	lb. "	"	3/-
50	Wrought-iron, in bolts, screws, nails, spikes, straps, &c. (clause 2) .....	lb. ...	"	-/4
51	Portland cement (clause 2) .....	cask ...	"	13/-
52	Artizan or mechanic, supplied by Contractor .....	day ...	"	11/-
53	Quarryman or other skilled labourer, supplied by Contractor.....	" ...	"	10/-
54	Ordinary labourer, supplied by Contractor .....	" ...	"	8/-
55	Cart, with one horse and driver, supplied by Contractor .....	" ...	"	11/-
56	One additional horse, supplied by Contractor .....	" ...	"	5/6

The quantities are not guaranteed as correct, and are merely for the guidance of Tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 52, 53, 54, 55, and 56, are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads and other surfaces, &c., and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

## No. 7.—HOWIE BROTHERS' TENDER.

## TENDER FORM.

IN pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Northern Main Sewer, Leichhardt and Annandale section (Contract No. 77), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by us, at 17½ per cent. under the prices affixed to each item in the schedule of quantities and prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates quoted above, or, if not in schedule, at a price to be agreed upon at the time; and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and we enclose herewith our cheque for the sum of £182 as a preliminary deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said tender is opened withdraw the same, or if in the event of this tender being accepted we fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 13th day of March, 1895.

ARCHIBALD HOWIE,  
JOHN HOWIE,  
Darling-street, Balmain.

## TENDER BOARD REGULATIONS.

No tender shall be received after 11 a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive...	... ..	£5 0 0
For amounts exceeding £500 and not exceeding £1,000...	... ..	£10 0 0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

CONTRACT

CONTRACT No. 77.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Worka.	Unit.	Probable Quantity.	Rate per Unit.
	Excavation in open trenches in more or less hard materials, and in hard rock, for foundations of abutment-piers, and piers of arches of aqueducts, main sewers, retaining walls, gullies, seats of embankments for road deviations, road cuttings, storm-water overflow and storm-water discharge and other pipe-sewers, &c., including removing pitching, masonry, brick or concrete work, drains, &c., met with in excavations as specified in clauses 3, 4, 6, 10, and 21 :—			
1	Excavation in road surfaces, soil, sand, loam, clay, ironstone, soft rock only .....	cubic yard	4,243	2/-
2	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	140	7/-
3	Excavation in hard rock where charges of powder 4 in. in length x 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted...	"	1,160	6/-
	Excavation in tunnels in solid rock for main and branch sewers, junctions, subducts, curves, &c., as specified in clauses 3, 4, 10, and 21 :—	"		
4	Excavation in hard rock where guttering and gadding only is permitted .....	"	90	65/-
5	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted.....	"	100	60/-
6	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	1,000	67/6
	Excavation in more or less hard materials and in solid rock, in shafts and shaft-chambers, as specified in clauses 3, 6, 10, and 21 :—			
7	Excavation in road surfaces, loam, ironstone, shale, and soft rock only.....	"	70	6/-
8	Excavation in hard rock where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	4	22/6
9	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	70	20/-
10	Excavation in hard rock where guttering and gadding only is permitted .....	"	2	30/-
11	Filling in at sides, round and over all concrete and brickwork of main sewer in open cutting round manhole shafts, chambers, retaining walls, gullies, round abutment piers, and piers of arches of aqueducts, round all pipe-sewers in tunnels and open trenches, into embankments for road deviations, including all sand-filling over main sewer between parapets of aqueducts and in tunnels, restoring all road and other surfaces, trimming, &c., as specified in clauses 5, 6, 10, and 21 .....	"	2,300	1/-
12	Tarred metal deck over sand-filing between parapet walls of aqueducts, and where ordered, complete, including all screenings, hot coal-tar coatings, &c., as specified in clause 9.....	"	95	48/-
13	Sandstone ballast provided, placed in position, and spread 8 in. thick on road formation, 3 feet thick ballast-packing between heads of piles when directed and where ordered, as specified in clause 8 .....	"	740	4/-
14	Bluestone road metal provided, placed in position, and spread 4 in. thick on road formations, and where ordered, as specified in clause 8 .....	"	370	12/-
15	Bluestone screenings provided, placed in position, and spread over road formations, as specified in clause 8 .....	"	180	5/-
16	Subducts in more or less hard materials, when ordered, of glazed stoneware pipe of 6 in. internal diameter, provided and executed as specified in clause 4 .....	lineal yard	50	1/6
17	Timber ordered in writing to be left in excavations, as specified in clause 6, including all iron used in fixing same .....	cubic foot	300	1/8
18	Supplying and fixing hardwood round timber in piles, where ordered, including providing and fixing all iron shoes and other ironwork used in driving same.....	lineal foot	960	4/-
19	Sandstone concrete, in any situation, in any shape, form or thickness, as specified in clauses 10, 11, and 21 .....	cubic yard	2,350	28/-
20	Bluestone concrete, in any situation, in any shape, form, or thickness, as specified in clauses 10, 11, and 21 .....	"	590	60/-
21	Special bluestone concrete in inner lining of sewers (between brick facings) of aqueducts, including providing, placing in position, and walling in of iron bond rods, as specified in clauses 10, 11, and 21 .....	"	1,000	60/-
22	Brickwork in cement in facings, arches, circular panels, pilasters, corbels, piers, spandrels, parapets, of specially selected white and red bricks, in sewer linings, and in any situation, as specified in clauses 2, 10, 13, and 21 .....	"	2,020	50/-
23	Cement facing, 1 to 2, in any situation where ordered, as specified in clause 12.....	sq. yard...	2,960	2/3
24	Special cement facing, 1 to 1, to all internal surfaces of concrete lining of sewers over aqueducts, as specified in clause 12 .....	"	2,760	2/6

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate per Unit.
25	Plymouth bottom-block sandstone ashlar, set in cement, in skewbacks to arches over Nelson and White Streets, to string courses and copings of aqueducts, in stop-blocks at ends of aqueducts and in any situation where ordered, as specified in clauses 2, 10, 14, and 21.....	cubic foot.	13,250	3/6
26	Freestone ashlar set in cement in steps along lines of raised footpaths as specified in clauses 2, 10, 14, and 21.....	"	180	3/-
27	Supply and set in position freestone curbing as specified in clause 17 .....	lineal foot.	650	2/6
28	Supply and set freestone gully-covers, where ordered, as specified in clause 17 .....	each ...	4	18/6
29	Supply, place in position, and set in cement, slate-covers over cistern heads of scupper-pipes on lines of aqueducts, as specified in clause 19 .....	" ...	40	2/-
30	Supply and set round manhole covers, and where ordered, squared bluestone pitchers, as specified in clause 15 .....	sq. yard ...	8	12/6
31	Squared freestone pitchers to be supplied and set in any situation, 6 in. deep, as specified in clause 16 .....	" ...	320	8/-
32	Supply and fix two-rail ordnance fencing, complete with all ironwork, painting and tarring, as specified in clause 7 .....	rod ...	50	18/-
33	Supply and fix, where ordered, hardwood, split, two-rail and wire fence, as specified in clauses 212 to 220 of the schedule to specification .....	" ...	100	8/-
	Providing laying, and jointing glazed stoneware plain, junction and bend pipes in trenches, shafts, &c., including providing and fixing discs complete, as specified in clause 18, as viz. :—			
34	24-in. diameter storm-water overflow pipes .....	lineal yard	120	33/-
35	12-in. diameter vertical drop pipes from weir chambers .....	"	20	6/9
36	9-in. diameter pipes in shafts .....	"	15	5/-
37	4-in. diameter scupper-pipes .....	"	64	1/6
	Removal of surplus materials from all excavations as specified in clauses 98 to 100 of the schedule to specification, as viz. :—			
38	For the first half-mile of lead .....	cubic yard	4,580	-/9
39	For every further quarter of a mile of lead .....	"	4,580	-/4
40	Receiving, fixing, and jointing any metalwork as cast-iron frames with manhole coverings or gully gratings, gas-check frames, galvanised wrought-iron step-irons, &c., supplied by Government at the site of the works, as specified in clause 20 .....	cwt. ...	125	4/-
41	Flap-traps, providing, delivering, and building in, including providing and fixing discs .....	each ...	10	25/-
42	Permanent puddle, where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 22 of the schedule to specification, including spreading in 9-in. layers and ramming, complete.....	cubic yard	Rate only ...	10/-
43	Special bluestone concrete, in any situation, as specified in clause 11 .....	"	"	60/-
44	Bluestone metal (clause 11), 1½-in. gauge, stacked .....	"	"	13/-
45	Sandstone metal (clause 11), 2-in. gauge, stacked .....	"	"	4/-
46	Bluestone metal (clause 8), 2½-in. gauge, stacked .....	"	"	12/-
47	Sharp, clean, washed sand (clause 2), stacked .....	"	"	7/6
48	Sawn hardwood, in scantlings or planks (clause 2) .....	cubic foot.	"	3/-
49	Oregon timber, in scantlings or planks .....	"	"	3/-
50	Wrought-iron, in bolts, screws, nails, spikes, straps, &c. (clause 2) .....	lb. ...	"	-/4
51	Portland cement (clause 2) .....	cask ...	"	13/-
52	Artizan or mechanic, supplied by Contractor .....	day ...	"	11/-
53	Quarryman or other skilled labourer, supplied by Contractor.....	" ...	"	10/-
54	Ordinary labourer, supplied by Contractor .....	" ...	"	8/-
55	Cart, with one horse and driver, supplied by Contractor .....	" ...	"	11/-
56	One additional horse, supplied by Contractor .....	" ...	"	5/6

The quantities are not guaranteed as correct, and are merely for the guidance of Tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 52, 53, 54, 55, and 56, are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads and other surfaces, &c. and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

## No. 8.—HUGH OWEN'S TENDER.

## TENDER FORM.

IN pursuance of advertisement in the *Government Gazette*, I, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Northern Main Sewer, Leichhardt and Annandale section (Contract No. 17), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by me, at 15 per cent. below the prices affixed to each item in the schedule of quantities and prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this tender; and I do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates quoted above, or, if not in schedule, at a price to be agreed upon at the time; and I hereby undertake that I will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and I enclose herewith my cheque for the sum of £190 as a preliminary deposit; and I agree that such sum shall be absolutely forfeited if I at any time within thirty days after the said tender is opened withdraw the same, or if in the event of this tender being accepted I fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board regulations, printed on the back hereof, and by which I agree to be bound.

Dated this 13th day of March, 1895.

HUGH OWEN,  
99 Elizabeth-street, Paddington.

Witness,—ALEX. AMOSS.

## TENDER BOARD REGULATIONS.

No tender shall be received after 11 a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive...	...	...	...	...	...	...	£5 0 0
For amounts exceeding £500 and not exceeding £1,000...	...	...	...	...	...	...	£10 0 0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

CONTRACT

CONTRACT No. 77.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate per Unit.
	Excavation in open trenches in more or less hard materials, and in hard rock, for foundations of abutment-piers, and piers of arches of aqueducts, main sewers, retaining walls, gullies, seats of embankments for road deviations, road cuttings, storm-water overflow and storm-water discharge and other pipe-sewers, &c., including removing pitching, masonry, brick or concrete work, drains, &c., met with in excavations as specified in clauses 3, 4, 6, 10, and 21 :—			
1	Excavation in road surfaces, soil, sand, loam, clay, ironstone, soft rock only .....	cubic yard	4,243	2/-
2	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	140	7/-
3	Excavation in hard rock where charges of powder 4 in. in length x 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted...	"	1,160	6/-
	Excavation in tunnels in solid rock for main and branch sewers, junctions, subducts, curves, &c., as specified in clauses 3, 4, 10, and 21 :—			
4	Excavation in hard rock where guttering and gadding only is permitted .....	"	90	65/-
5	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted.....	"	100	60/-
6	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	1,000	57/6
	Excavation in more or less hard materials and in solid rock, in shafts and shaft-chambers, as specified in clauses 3, 6, 10, and 21 :—			
7	Excavation in road surfaces, loam, ironstone, shale, and soft rock only.....	"	70	6/-
8	Excavation in hard rock where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	4	22/6
9	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	70	20/-
10	Excavation in hard rock where guttering and gadding only is permitted .....	"	2	30/-
11	Filling in at sides, round and over all concrete and brickwork of main sewer in open cutting round manhole shafts, chambers, retaining walls, gullies, round abutment piers, and piers of arches of aqueducts, round all pipe-sewers in tunnels and open trenches, into embankments for road deviations, including all sand-filling over main sewer between parapets of aqueducts and in tunnels, restoring all road and other surfaces, trimming, &c., as specified in clauses 5, 6, 10, and 21 .....	"	2,300	1/-
12	Tarred metal deck over sand-filling between parapet walls of aqueducts, and where ordered, complete, including all screenings, hot coal-tar coatings, &c., as specified in clause 9.....	"	95	48/-
13	Sandstone ballast provided, placed in position, and spread 8 in. thick on road formation, 3 feet thick ballast-packing between heads of piles when directed and where ordered, as specified in clause 8 .....	"	740	4/-
14	Bluestone road metal provided, placed in position, and spread 4 in. thick on road formations, and where ordered, as specified in clause 8 .....	"	370	12/-
15	Bluestone screenings provided, placed in position, and spread over road formations, as specified in clause 8 .....	"	180	5/-
16	Subducts in more or less hard materials, when ordered, of glazed stoneware pipe of 6 in. internal diameter, provided and executed as specified in clause 4 .....	lineal yard	50	1/6
17	Timber ordered in writing to be left in excavations, as specified in clause 6, including all iron used in fixing same .....	cubic foot	300	1/8
18	Supplying and fixing hardwood round timber in piles, where ordered, including providing and fixing all iron shoes and other ironwork used in driving same.....	lineal foot	960	4/-
19	Sandstone concrete, in any situation, in any shape, form or thickness; as specified in clauses 10, 11, and 21 .....	cubic yard	2,350	28/-
20	Bluestone concrete, in any situation, in any shape, form, or thickness, as specified in clauses 10, 11, and 21 .....	"	590	50/-
21	Special bluestone concrete in inner lining of sewers (between brick facings) of aqueducts, including providing, placing in position, and walling in of iron bond rods, as specified in clauses 10, 11, and 21 .....	"	1,000	60/-
22	Brickwork in cement in facings, arches, circular panels, pilasters, corbels, piers, spandrels, parapets, of specially selected white and red bricks, in sewer linings, and in any situation, as specified in clauses 2, 10, 13, and 21 .....	"	2,020	50/-
23	Cement facing, 1 to 2, in any situation where ordered, as specified in clause 12.....	sq. yard...	2,960	2/3
24	Special cement facing, 1 to 1, to all internal surfaces of concrete lining of sewers over aqueducts, as specified in clause 12 .....	" ...	2,750	2/6

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate per Unit.
25	Plymouth bottom-block sandstone ashlar, set in cement, in skewbacks to arches over Nelson and White Streets, to string courses and copings of aqueducts, in stop-blocks at ends of aqueducts and in any situation where ordered, as specified in clauses 2, 10, 14, and 21.....	cubic foot.	13,250	3/6
26	Freestone ashlar set in cement in steps along lines of raised footpaths as specified in clauses 2, 10, 14, and 21.....	"	130	3/-
27	Supply and set in position freestone curbing as specified in clause 17 .....	lineal foot	650	2/6
28	Supply and set freestone gully-covers, where ordered, as specified in clause 17 .....	each	4	18/6
29	Supply, place in position, and set in cement, slate-covers over cistern heads of scupper-pipes on lines of aqueducts, as specified in clause 19 .....	"	40	2/-
30	Supply and set round manhole covers, and where ordered, squared bluestone pitchers, as specified in clause 15 .....	sq. yard	8	12/6
31	Squared freestone pitchers to be supplied and set in any situation, 6 in. deep, as specified in clause 16 .....	"	320	8/-
32	Supply and fix two-rail ordnance fencing, complete with all ironwork, painting and tarring, as specified in clause 7 .....	rod	50	18/-
33	Supply and fix, where ordered, hardwood, split, two-rail and wire fence, as specified in clauses 212 to 220 of the schedule to specification .....	"	100	8/-
	Providing laying, and jointing glazed stoneware plain, junction and bend pipes in trenches, shafts, &c., including providing and fixing discs complete, as specified in clause 18, as viz. :-			
34	24-in. diameter storm-water overflow pipes .....	lineal yard	120	33/-
35	12-in. diameter vertical drop pipes from weir chambers .....	"	20	6/9
36	9-in. diameter pipes in shafts .....	"	15	5/-
37	4-in. diameter scupper-pipes .....	"	64	1/6
	Removal of surplus materials from all excavations as specified in clauses 98 to 100 of the schedule to specification, as viz. :-			
38	For the first half-mile of lead .....	cubic yard	4,580	-/9
39	For every further quarter of a mile of lead .....	"	4,580	-/4
40	Receiving, fixing, and jointing any metalwork as cast-iron frames with manhole coverings or gully gratings, gas-check frames, galvanised wrought-iron step-irons, &c., supplied by Government at the site of the works, as specified in clause 20 .....	cwt.	125	4/-
41	Flap-traps, providing, delivering, and building in, including providing and fixing discs .....	each	10	25/-
42	Permanent puddle, where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 22 of the schedule to specification, including spreading in 9-in. layers and ramming, complete.....	cubic yard	Rate only	10/-
43	Special bluestone concrete, in any situation, as specified in clause 11 .....	"	"	60/-
44	Bluestone metal (clause 11), 1½-in. gauge, stacked .....	"	"	13/-
45	Sandstone metal (clause 11), 2-in. gauge, stacked .....	"	"	4/-
46	Bluestone metal (clause 8), 2½-in. gauge, stacked.....	"	"	12/-
47	Sharp, clean, washed sand (clause 2), stacked .....	"	"	7/6
48	Sawn hardwood, in scantlings or planks (clause 2) .....	cubic foot.	"	3/-
49	Oregon timber, in scantlings or planks .....	"	"	3/-
50	Wrought-iron, in bolts, screws, nails, spikes, straps, &c. (clause 2) .....	lb.	"	-/4
51	Portland cement (clause 2) .....	cask	"	13/-
52	Artizan or mechanic, supplied by Contractor .....	day	"	11/-
53	Quarryman or other skilled labourer, supplied by Contractor .....	"	"	10/-
54	Ordinary labourer, supplied by Contractor .....	"	"	8/-
55	Cart, with one horse and driver, supplied by Contractor .....	"	"	11/-
56	One additional horse, supplied by Contractor .....	"	"	5/6

The quantities are not guaranteed as correct, and are merely for the guidance of Tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 52, 53, 54, 55, and 56, are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads and other surfaces, &c., and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

## No. 9.—PHILLIPS, RHODES, AND BROUGHTON'S TENDER.

## TENDER FORM.

IN pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Northern Main Sewer, Leichhardt and Annandale section (Contract No 77), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by us, at 13 per cent. below the prices affixed to each item in the schedule of quantities and prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates quoted above, or, if not in schedule, at a price to be agreed upon at the time; and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and we enclose herewith our cheque for the sum of £190 as a preliminary deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said tender is opened withdraw the same, or if in the event of this tender being accepted we fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 13th day of March, 1895.

T. S. PHILLIPS,  
B. RHODES,  
A. BROUGHTON,  
335A George-street, City.

## TENDER BOARD REGULATIONS.

No tender shall be received after 11 a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive ... ..	£5 0 0
For amounts exceeding £500 and not exceeding £1,000 ... ..	£10 0 0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

CONTRACT

CONTRACT No. 77.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Works.	Unit.	Probable Quantity	Rate per Unit.
	Excavation in open trenches in more or less hard materials, and in hard rock, for foundations of abutment-piers, and piers of arches of aqueducts, main sewers, retaining walls, gullies, seats of embankments for road deviations, road cuttings, storm-water overflow and storm-water discharge and other pipe-sewers, &c., including removing pitching, masonry, brick or concrete work, drains, &c., met with in excavations as specified in clauses 3, 4, 6, 10, and 21 :—			
1	Excavation in road surfaces, soil, sand, loam, clay, ironstone, soft rock only .....	cubic yard	4,243	2/-
2	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	140	7/-
3	Excavation in hard rock where charges of powder 4 in. in length x 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted...	"	1,160	6/-
	Excavation in tunnels in solid rock for main and branch sewers, junctions, subducts, curves, &c., as specified in clauses 3, 4, 10, and 21 :—			
4	Excavation in hard rock where guttering and gadding only is permitted .....	"	90	65/-
5	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted.....	"	100	60/-
6	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	1,000	57/6
	Excavation in more or less hard materials and in solid rock, in shafts and shaft-chambers, as specified in clauses 3, 6, 10, and 21 :—			
7	Excavation in road surfaces, loam, ironstone, shale, and soft rock only.....	"	70	6/-
8	Excavation in hard rock where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	4	22/6
9	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	70	20/-
10	Excavation in hard rock where guttering and gadding only is permitted .....	"	2	30/-
11	Filling in at sides, round and over all concrete and brickwork of main sewer in open cutting round manhole shafts, chambers, retaining walls, gullies, round abutment piers, and piers of arches of aqueducts, round all pipe-sewers in tunnels and open trenches, into embankments for road deviations, including all sand-filling over main sewer between parapets of aqueducts and in tunnels, restoring all road and other surfaces, trimming, &c., as specified in clauses 5, 6, 10, and 21 .....	"	2,300	1/-
12	Tarred metal deck over sand-filling between parapet walls of aqueducts, and where ordered, complete, including all screenings, hot coal-tar coatings, &c., as specified in clause 9.....	"	95	48/-
13	Sandstone ballast provided, placed in position, and spread 8 in. thick on road formation, 3 feet thick ballast-packing between heads of piles when directed and where ordered, as specified in clause 8 .....	"	740	4/-
14	Bluestone road metal provided, placed in position, and spread 4 in. thick on road formations, and where ordered, as specified in clause 8 .....	"	870	12/-
15	Bluestone screenings provided, placed in position, and spread over road formations, as specified in clause 8 .....	"	130	5/-
16	Subducts in more or less hard materials, when ordered, of glazed stoneware pipe of 6 in. internal diameter, provided and executed as specified in clause 4 .....	lineal yard	50	1/6
17	Timber ordered in writing to be left in excavations, as specified in clause 6, including all iron used in fixing same .....	cubic foot	800	1/8
18	Supplying and fixing hardwood round timber in piles, where ordered, including providing and fixing all iron shoes and other ironwork used in driving same.....	lineal foot	960	4/-
19	Sandstone concrete, in any situation, in any shape, form or thickness, as specified in clauses 10, 11, and 21 .....	cubic yard	2,350	28/-
20	Bluestone concrete, in any situation, in any shape, form, or thickness, as specified in clauses 10, 11, and 21 .....	"	590	50/-
21	Special bluestone concrete in inner lining of sewers (between brick facings) of aqueducts, including providing, placing in position, and walling in of iron bond rods, as specified in clauses 10, 11, and 21 .....	"	1,000	60/-
22	Brickwork in cement in facings, arches, circular panels, pilasters, corbels, piers, spandrels, parapets, of specially selected white and red bricks, in sewer linings, and in any situation, as specified in clauses 2, 10, 13, and 21 .....	"	2,020	50/-
23	Cement facing, 1 to 2, in any situation where ordered, as specified in clause 12.....	sq. yard...	2,960	2/3
24	Special cement facing, 1 to 1, to all internal surfaces of concrete lining of sewers over aqueducts, as specified in clause 12 .....	"	2,760	2/6

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate per Unit.
25	Pyrmont bottom-block sandstone ashlar, set in cement, in skewbacks to arches over Nelson and White Streets, to string courses and copings of aqueducts, in stop-blocks at ends of aqueducts and in any situation where ordered, as specified in clauses 2, 10, 14, and 21.....	cubic foot.	13,250	3/6
26	Freestone ashlar set in cement in steps along lines of raised footpaths as specified in clauses 2, 10, 14, and 21.....	"	180	3/-
27	Supply and set in position freestone curbing as specified in clause 17 .....	lineal foot	650	2/0
28	Supply and set freestone gully-covers, where ordered, as specified in clause 17 .....	each ...	4	18/6
29	Supply, place in position, and set in cement, slate-covers over cistern heads of scupper-pipes on lines of aqueducts, as specified in clause 19 .....	" ...	40	2/-
30	Supply and set round manhole covers, and where ordered, squared bluestone pitchers, as specified in clause 15 .....	sq. yard...	8	12/6
31	Squared freestone pitchers to be supplied and set in any situation, 6 in. deep, as specified in clause 16 .....	" ...	320	8/-
32	Supply and fix two-rail ordnance fencing, complete with all ironwork, painting and tarring, as specified in clause 7 .....	rod ...	50	18/-
33	Supply and fix, where ordered, hardwood, split, two-rail and wire fence, as specified in clauses 212 to 220 of the schedule to specification .....	" ...	100	8/-
	Providing laying, and jointing glazed stoneware plain, junction and bend pipes in trenches, shafts, &c., including providing and fixing discs complete, as specified in clause 18, as viz. :—			
34	24-in. diameter storm-water overflow pipes .....	lineal yard	120	33/-
35	12-in. diameter vertical drop pipes from weir chambers .....	"	20	6/9
36	9-in. diameter pipes in shafts .....	"	15	5/-
37	4-in. diameter scupper-pipes .....	"	64	1/6
	Removal of surplus materials from all excavations as specified in clauses 98 to 100 of the schedule to specification, as viz. :—		^	
38	For the first half-mile of lead .....	cubic yard	4,580	-/9
39	For every further quarter of a mile of lead .....	"	4,580	-/4
40	Receiving, fixing, and jointing any metalwork as cast-iron frames with manhole coverings or gully gratings, gas-check frames, galvanised wrought-iron step-irons, &c., supplied by Government at the site of the works, as specified in clause 20 .....	cwt. ...	125	4/-
41	Flap-traps, providing, delivering, and building in, including providing and fixing discs .....	each ...	10	25/-
42	Permanent puddle, where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 22 of the schedule to specification, including spreading in 9-in. layers and ramming, complete.....	cubic yard	Rate only	10/-
43	Special bluestone concrete, in any situation, as specified in clause 11 .....	"	"	60/-
44	Bluestone metal (clause 11), 1½-in. gauge, stacked .....	"	"	13/-
45	Sandstone metal (clause 11), 2-in. gauge, stacked .....	"	"	4/-
46	Bluestone metal (clause 8), 2½-in. gauge, stacked.....	"	"	12/-
47	Sharp, clean, washed sand (clause 2), stacked .....	"	"	7/6
48	Sawn hardwood, in scantlings or planks (clause 2) .....	cubic foot.	"	3/-
49	Oregon timber, in scantlings or planks .....	"	"	3/-
50	Wrought-iron, in bolts, screws, nails, spikes, straps, &c. (clause 2) .....	lb. ...	"	-/4
51	Portland cement (clause 2) .....	cask ...	"	13/-
52	Artizan or mechanic, supplied by Contractor .....	day ...	"	11/-
53	Quarryman or other skilled labourer, supplied by Contractor.....	" ...	"	10/-
54	Ordinary labourer, supplied by Contractor .....	" ...	"	8/-
55	Cart, with one horse and driver, supplied by Contractor .....	" ...	"	11/-
56	One additional horse, supplied by Contractor .....	" ...	"	5/6

The quantities are not guaranteed as correct, and are merely for the guidance of Tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 52, 53, 54, 55, and 56, are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads and other surfaces, &c., and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

## No. 10.—R. AND S. BUTCHER'S TENDER.

## TENDER FORM.

IN pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Northern Main Sewer, Leichhardt and Annandale section (Contract No. 77), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by us, at 11 per cent. below the prices affixed to each item in the schedule of quantities and prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates quoted above, or, if not in schedule, at a price to be agreed upon at the time; and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and we enclose herewith our cheque for the sum of £200 as a preliminary deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said tender is opened withdraw the same, or if in the event of this tender being accepted we fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 13th day of March, 1895.

R. AND S. BUTCHER,  
Holtermann-street, North Sydney.

## TENDER BOARD REGULATIONS.

No tender shall be received after 11 a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive...	...	...	...	...	...	...	£5	0	0
For amounts exceeding £500 and not exceeding £1,000...	...	...	...	...	...	...	£10	0	0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

CONTRACT

CONTRACT No. 77.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Works.	Unit.	Probable Quantity	Rate per Unit.
	Excavation in open trenches in more or less hard materials, and in hard rock, for foundations of abutment-piers, and piers of arches of aqueducts, main sewers, retaining walls, gullies, scuts of embankments for road deviations, road cuttings, storm-water overflow and storm-water discharge and other pipe-sewers, &c., including removing pitching, masonry, brick or concrete work, drains, &c., met with in excavations as specified in clauses 3, 4, 8, 10, and 21 :—			
1	Excavation in road surfaces, soil, sand, loam, clay, ironstone, soft rock only .....	cubic yard	4,243	2/-
2	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	140	7/-
3	Excavation in hard rock where charges of powder 4 in. in length x 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted...	"	1,160	6/-
	Excavation in tunnels in solid rock for main and branch sewers, junctions, subducts, curves, &c., as specified in clauses 3, 4, 10, and 21 :—			
4	Excavation in hard rock where guttering and gadding only is permitted .....	"	90	65/-
5	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted.....	"	100	60/-
6	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted..	"	1,000	57/6
	Excavation in more or less hard materials and in solid rock, in shafts and shaft-chambers, as specified in clauses 3, 6, 10, and 21 :—			
7	Excavation in road surfaces, loam, ironstone, shale, and soft rock only.....	"	70	6/-
8	Excavation in hard rock where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted..	"	4	22/6
9	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted..	"	70	20/-
10	Excavation in hard rock where guttering and gadding only is permitted .....	"	2	30/-
11	Filling in at sides, round and over all concrete and brickwork of main sewer in open cutting round manhole shafts, chambers, retaining walls, gullies, round abutment piers, and piers of arches of aqueducts, round all pipe-sewers in tunnels and open trenches, into embankments for road deviations, including all sand-filling over main sewer between parapets of aqueducts and in tunnels, restoring all road and other surfaces, trimming, &c., as specified in clauses 5, 6, 10, and 21 .....	"	2,300	1/-
12	Tarred metal deck over sand-filling between parapet walls of aqueducts, and where ordered, complete, including all screenings, hot coal-tar coatings, &c., as specified in clause 9.....	"	95	48/-
13	Sandstone ballast provided, placed in position, and spread 8 in. thick on road formation, 3 feet thick ballast-packing between heads of piles when directed and where ordered, as specified in clause 8 .....	"	740	4/-
14	Bluestone road metal provided, placed in position, and spread 4 in. thick on road formations, and where ordered, as specified in clause 8 .....	"	370	12/-
15	Bluestone screenings provided, placed in position, and spread over road formations, as specified in clause 8 .....	"	180	5/-
16	Subducts in more or less hard materials, when ordered, of glazed stoneware pipe of 6 in. internal diameter, provided and executed as specified in clause 4 .....	lineal yard	50	1/6
17	Timber ordered in writing to be left in excavations, as specified in clause 6, including all iron used in fixing same .....	cubic foot	300	1/8
18	Supplying and fixing hardwood round timber in piles, where ordered, including providing and fixing all iron shoes and other ironwork used in driving same.....	lineal foot	960	4/-
19	Sandstone concrete, in any situation, in any shape, form or thickness, as specified in clauses 10, 11, and 21 .....	cubic yard	2,350	28/-
20	Bluestone concrete, in any situation, in any shape, form, or thickness, as specified in clauses 10, 11, and 21 .....	"	590	50/-
21	Special bluestone concrete in inner lining of sewers (between brick facings) of aqueducts, including providing, placing in position, and walling in of iron bond rods, as specified in clauses 10, 11, and 21 .....	"	1,000	60/-
22	Brickwork in cement in facings, arches, circular panels, pilasters, corbels, piers, spandrels, parapets, of specially selected white and red bricks, in sewer linings, and in any situation, as specified in clauses 2, 10, 13, and 21 .....	"	2,020	50/-
23	Cement facing, 1 to 2, in any situation where ordered, as specified in clause 12.....	sq. yard	2,960	2/3
24	Special cement facing, 1 to 1, to all internal surfaces of concrete lining of sewers over aqueducts, as specified in clause 12 .....	"	2,750	2/6

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate per Unit.
25	Plymouth bottom-block sandstone ashlar, set in cement, in skewbacks to arches over Nelson and White Streets, to string courses and copings of aqueducts, in stop-blocks at ends of aqueducts and in any situation where ordered, as specified in clauses 2, 10, 14, and 21.....	cubic foot.	13,250	3/0
26	Freestone ashlar set in cement in steps along lines of raised footpaths as specified in clause 2, 10, 14, and 21 .....	"	130	3/-
27	Supply and set in position freestone curbing as specified in clause 17 .....	lineal foot	650	2/6
28	Supply and set freestone gully-covers, where ordered, as specified in clause 17 .....	each	4	18/6
29	Supply, place in position, and set in cement, slate-covers over cistern heads of scupper-pipes on lines of aqueducts, as specified in clause 19 .....	"	40	2/-
30	Supply and set round manhole covers, and where ordered, squared bluestone pitchers, as specified in clause 15 .....	sq. yard	8	12/6
31	Squared freestone pitchers to be supplied and set in any situation, 6 in. deep, as specified in clause 16 .....	"	320	8/-
32	Supply and fix two-rail ordnance fencing, complete with all ironwork, painting and tarring, as specified in clause 7 .....	rod	50	18/-
33	Supply and fix, where ordered, hardwood, split, two-rail and wire fence, as specified in clauses 212 to 220 of the schedule to specification .....	"	100	8/-
	Providing laying, and jointing glazed stoneware plain, junction and bend pipes in trenches, shafts, &c., including providing and fixing discs complete, as specified in clause 18, as viz. :—			
34	24-in. diameter storm-water overflow pipes .....	lineal yard	120	33/-
35	12-in. diameter vertical drop pipes from weir chambers .....	"	20	6/9
36	9-in. diameter pipes in shafts .....	"	15	5/-
37	4-in. diameter scupper-pipes .....	"	64	1/6
	Removal of surplus materials from all excavations as specified in clauses 98 to 105 of the schedule to specification, as viz. :—			
38	For the first half-mile of lead .....	cubic yard	4,580	-/9
39	For every further quarter of a mile of lead .....	"	4,580	-/4
40	Receiving, fixing, and jointing any metalwork as cast-iron frames with manhole coverings or gully gratings, gas-check frames, galvanised wrought-iron step-irons, &c., supplied by Government at the site of the works, as specified in clause 20 .....	cwt.	125	4/-
41	Flap-traps, providing, delivering, and building in, including providing and fixing discs .....	each	10	25/-
42	Permanent puddle, where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 22 of the schedule to specification, including spreading in 9-in. layers and ramming, complete.....	cubic yard	Rate only	10/-
43	Special bluestone concrete, in any situation, as specified in clause 11 .....	"	"	60/-
44	Bluestone metal (clause 11), 1½-in. gauge, stacked .....	"	"	13/-
45	Sandstone metal (clause 11), 2-in. gauge, stacked .....	"	"	4/-
46	Bluestone metal (clause 8), 2½-in. gauge, stacked.....	"	"	12/-
47	Sharp, clean, washed sand (clause 2), stacked.....	"	"	7/6
48	Sawn hardwood, in scantlings or planks (clause 2) .....	cubic foot.	"	3/-
49	Oregon timber, in scantlings or planks .....	"	"	3/-
50	Wrought-iron, in bolts, screws, nails, spikes, straps, &c. (clause 2) .....	lb.	"	-/4
51	Portland cement (clause 2) .....	cask	"	13/-
52	Artizan or mechanic, supplied by Contractor .....	day	"	11/-
53	Quarryman or other skilled labourer, supplied by Contractor.....	"	"	10/-
54	Ordinary labourer, supplied by Contractor .....	"	"	8/-
55	Cart, with one horse and driver, supplied by Contractor .....	"	"	11/-
56	One additional horse, supplied by Contractor .....	"	"	5/6

The quantities are not guaranteed as correct, and are merely for the guidance of Tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 52, 53, 54, 55, and 56, are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads and other surfaces, &c., and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

## No. 11.—E. TAYLOR'S TENDER.

## TENDER FORM.

IN pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Northern Main Sewer, Leichhardt and Amundale section (Contract No. 77), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by us, at 10½ per cent. under the prices affixed to each item in the schedule of quantities and prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates quoted above, or, if not in schedule, at a price to be agreed upon at the time; and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and we enclose herewith our cheque for the sum of £192 as a preliminary deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said tender is opened withdraw the same, or if in the event of this tender being accepted we fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 13th day of March, 1895.

E. TAYLOR,  
CHARLES J. FOORD,  
408 Darling Road, Balmain.

Witness,—J. BENELDRUM.

## TENDER BOARD REGULATIONS.

No tender shall be received after 11 a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz:—

For amounts up to £500 inclusive...	£5 0 0
For amounts exceeding £500 and not exceeding £1,000...	£10 0 0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened, and declared.

CONTRACT

CONTRACT No. 77.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate per Unit
	Excavation in open trenches in more or less hard materials, and in hard rock, for foundations of abutment-piers, and piers of arches of aqueducts, main sewers, retaining walls, gullies, seats of embankments for road deviations, road cuttings, storm-water overflow and storm-water discharge and other pipe-sewers, &c., including removing pitching, masonry, brick or concrete work, drains, &c., met with in excavations as specified in clauses 3, 4, 6, 10, and 21:—			
1	Excavation in road surfaces, soil, sand, loam, clay, ironstone, soft rock only .....	cubic yard	4,243	2/-
2	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	140	7/-
3	Excavation in hard rock where charges of powder 4 in. in length x 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted ..	"	1,160	6/-
	Excavation in tunnels in solid rock for main and branch sewers, junctions, subducts, curves, &c., as specified in clauses 3, 4, 10, and 21:—			
4	Excavation in hard rock where guttering and gadding only is permitted .....	"	90	65/-
5	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted.....	"	100	60/-
6	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	1,000	57/6
	Excavation in more or less hard materials and in solid rock, in shafts and shaft-chambers, as specified in clauses 3, 6, 10, and 21:—			
7	Excavation in road surfaces, loam, ironstone, shale, and soft rock only.....	"	70	6/-
8	Excavation in hard rock where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	4	22/6
9	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	70	20/-
10	Excavation in hard rock where guttering and gadding only is permitted .....	"	2	30/-
11	Filling in at sides, round and over all concrete and brickwork of main sewer in open cutting round manhole shafts, chambers, retaining walls, gullies, round abutment piers, and piers of arches of aqueducts, round all pipe-sewers in tunnels and open trenches, into embankments for road deviations, including all sand-filling over main sewer between parapets of aqueducts and in tunnels, restoring all road and other surfaces, trimming, &c., as specified in clauses 5, 6, 10, and 21 .....	"	2,300	1/-
12	Tarred metal deck over sand-filling between parapet walls of aqueducts, and where ordered, complete, including all screenings, hot coal-tar coatings, &c., as specified in clause 9.....	"	95	48/-
13	Sandstone ballast provided, placed in position, and spread 8 in. thick on road formation, 3 feet thick ballast-packing between heads of piles when directed and where ordered, as specified in clause 8 .....	"	740	4/-
14	Bluestone road metal provided, placed in position, and spread 4 in. thick on road formations, and where ordered, as specified in clause 8 .....	"	370	12/-
15	Bluestone screenings provided, placed in position, and spread over road formations, as specified in clause 8 .....	"	180	5/-
16	Subducts in more or less hard materials, when ordered, of glazed stoneware pipe of 6 in. internal diameter, provided and executed as specified in clause 4 .....	lineal yard	50	1/6
17	Timber ordered in writing to be left in excavations, as specified in clause 6, including all iron used in fixing same .....	cubic foot	300	1/8
18	Supplying and fixing hardwood round timber in piles, where ordered, including providing and fixing all iron shoes and other ironwork used in driving same.....	lineal foot	960	4/-
19	Sandstone concrete, in any situation, in any shape, form or thickness, as specified in clauses 10, 11, and 21 .....	cubic yard	2,350	28/-
20	Bluestone concrete, in any situation, in any shape, form, or thickness, as specified in clauses 10, 11, and 21 .....	"	590	50/-
21	Special bluestone concrete in inner lining of sewers (between brick facings) of aqueducts, including providing, placing in position, and walling in of iron bond rods, as specified in clauses 10, 11, and 21 .....	"	1,000	60/-
22	Brickwork in cement in facings, arches, circular panels, pilasters, corbels, piers, spandrels, parapets, of specially selected white and red bricks, in sewer linings, and in any situation, as specified in clauses 2, 10, 13, and 21 .....	"	2,020	50/-
23	Cement facing, 1 to 2, in any situation where ordered, as specified in clause 12.....	sq. yard...	2,960	2/3
24	Special cement facing, 1 to 1, to all internal surfaces of concrete lining of sewers over aqueducts, as specified in clause 12 .....	"	2,750	2/6

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate per Unit.
25	Pymont bottom-block sandstone ashlar, set in cement, in skewbacks to arches over Nelson and White Streets, to string courses and copings of aqueducts, in stop-blocks at ends of aqueducts and in any situation where ordered, as specified in clauses 2, 10, 14, and 21.....	cubic foot.	13,250	3/6
26	Freestone ashlar set in cement in steps along lines of raised footpaths as specified in clauses 2, 10, 14, and 21.....	"	180	3/-
27	Supply and set in position freestone curbing as specified in clause 17 .....	lineal foot	650	2/6
28	Supply and set freestone gully-covers, where ordered, as specified in clause 17 .....	each ...	4	18/6
29	Supply, place in position, and set in cement, slate-covers over cistern heads of scupper-pipes on lines of aqueducts, as specified in clause 19 .....	" ...	40	2/-
30	Supply and set round manhole covers, and where ordered, squared bluestone pitchers, as specified in clause 15 .....	sq. yard...	8	12/6
31	Squared freestone pitchers to be supplied and set in any situation, 6 in. deep, as specified in clause 16 .....	" ...	320	8/-
32	Supply and fix two-rail ordnance fencing, complete with all ironwork, painting and tarring, as specified in clause 7 .....	rod ...	50	18/-
33	Supply and fix, where ordered, hardwood, split, two-rail and wire fence, as specified in clauses 212 to 220 of the schedule to specification .....	" ...	100	8/-
	Providing laying, and jointing glazed stoneware plain, junction and bend pipes in trenches, shafts, &c., including providing and fixing discs complete, as specified in clause 18, as viz. :—			
34	24-in. diameter storm-water overflow pipes .....	lineal yard	120	83/-
35	12-in. diameter vertical drop pipes from weir chambers .....	"	20	6/9
36	9-in. diameter pipes in shafts .....	"	15	5/-
37	4-in. diameter scupper-pipes .....	"	64	1/6
	Removal of surplus materials from all excavations as specified in clauses 98 to 100 of the schedule to specification, as viz. :—			
38	For the first half-mile of lead .....	cubic yard	4,580	-/9
39	For every further quarter of a mile of lead .....	"	4,580	-/4
40	Receiving, fixing, and jointing any metalwork as cast-iron frames with manhole coverings or gully gratings, gas-check frames, galvanised wrought-iron step-irons, &c., supplied by Government at the site of the works, as specified in clause 20 .....	cwt. ...	125	4/-
41	Flap-traps, providing, delivering, and building in, including providing and fixing discs .....	each ...	10	25/-
42	Permanent puddle, where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 22 of the schedule to specification, including spreading in 9-in. layers and ramming, complete.....	cubic yard	Rate only ...	10/-
43	Special bluestone concrete, in any situation, as specified in clause 11 .....	"	"	60/-
44	Bluestone metal (clause 11), 1½-in. gauge, stacked .....	"	"	13/-
45	Sandstone metal (clause 11), 2-in. gauge, stacked .....	"	"	4/-
46	Bluestone metal (clause 8), 2½-in. gauge, stacked .....	"	"	12/-
47	Sharp, clean, washed sand (clause 2), stacked .....	"	"	7/6
48	Sawn hardwood, in scantlings or planks (clause 2) .....	cubic foot.	"	3/-
49	Oregon timber, in scantlings or planks .....	"	"	3/-
50	Wrought-iron, in bolts, screws, nails, spikes, straps, &c. (clause 2) .....	lb. ...	"	-/4
51	Portland cement (clause 2) .....	cask ...	"	13/-
52	Artizan or mechanic, supplied by Contractor .....	day ...	"	11/-
53	Quarryman or other skilled labourer, supplied by Contractor.....	" ...	"	10/-
54	Ordinary labourer, supplied by Contractor .....	" ...	"	8/-
55	Cart, with one horse and driver, supplied by Contractor .....	" ...	"	11/-
56	One additional horse, supplied by Contractor .....	" ...	"	5/5

The quantities are not guaranteed as correct, and are merely for the guidance of Tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 52, 53, 54, 55, and 56, are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads and other surfaces, &c., and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

## No. 12.—MADDISON AND EWING'S TENDER.

## TENDER FORM.

In pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Northern Main Sewer, Leichhardt and Annandale section (Contract No. 77), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by us, at  $8\frac{1}{2}$  per cent. below the prices affixed to each item in the schedule of quantities and prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates quoted above, or, if not in schedule, at a price to be agreed upon at the time; and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and we enclose herewith our cheque for the sum of £220 as a preliminary deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said tender is opened withdraw the same, or if in the event of this tender being accepted we fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 13th day of March, 1895.

GEORGE MADDISON,  
PETER EWING,  
Palace-street, Petersham.

## TENDER BOARD REGULATIONS.

No tender shall be received after 11 a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive...	£5 0 0
For amounts exceeding £500 and not exceeding £1,000...	£10 0 0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

CONTRACT

## CONTRACT No. 77.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate per Unit.
	Excavation in open trenches in more or less hard materials, and in hard rock, for foundations of abutment-piers, and piers of arches of aqueducts, main sewers, retaining walls, gullies, seats of embankments for road deviations, road cuttings, storm-water overflow and storm-water discharge and other pipe-sewers, &c., including removing pitching, masonry, brick or concrete work, drains, &c., met with in excavations as specified in clauses 3, 4, 6, 10, and 21 :—			
1	Excavation in road surfaces, soil, sand, loam, clay, ironstone, soft rock only .....	cubic yard	4,243	2/-
2	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	140	7/-
3	Excavation in hard rock where charges of powder 4 in. in length x 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted...	"	1,160	6/-
	Excavation in tunnels in solid rock for main and branch sewers, junctions, subducts, curves, &c., as specified in clauses 3, 4, 10, and 21 :—			
4	Excavation in hard rock where guttering and gadding only is permitted .....	"	90	65/-
5	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted.....	"	100	60/-
6	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	1,000	57/6
	Excavation in more or less hard materials and in solid rock, in shafts and shaft-chambers, as specified in clauses 3, 6, 10, and 21 :—			
7	Excavation in road surfaces, loam, ironstone, shale, and soft rock only.....	"	70	6/-
8	Excavation in hard rock where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	4	22/6
9	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	70	20/-
10	Excavation in hard rock where guttering and gadding only is permitted .....	"	2	30/-
11	Filling in at sides, round and over all concrete and brickwork of main sewer in open cutting round manhole shafts, chambers, retaining walls, gullies, round abutment piers, and piers of arches of aqueducts, round all pipe-sewers in tunnels and open trenches, into embankments for road deviations, including all sand-filling over main sewer between parapets of aqueducts and in tunnels, restoring all road and other surfaces, trimming, &c., as specified in clauses 5, 6, 10, and 21 .....	"	2,300	1/-
12	Tarred metal deck over sand-filling between parapet walls of aqueducts, and where ordered, complete, including all screenings, hot coal-tar coatings, &c., as specified in clause 9.....	"	95	48/-
13	Sandstone ballast provided, placed in position, and spread 8 in. thick on road formation, 3 feet thick ballast-packing between heads of piles when directed and where ordered, as specified in clause 8 .....	"	740	4/-
14	Bluestone road metal provided, placed in position, and spread 4 in. thick on road formations, and where ordered, as specified in clause 8 .....	"	370	12/-
15	Bluestone screenings provided, placed in position, and spread over road formations, as specified in clause 8 .....	"	180	5/-
16	Subducts in more or less hard materials, when ordered, of glazed stoneware pipe of 6 in. internal diameter, provided and executed as specified in clause 4 .....	lineal yard	50	1/6
17	Timber ordered in writing to be left in excavations, as specified in clause 6, including all iron used in fixing same .....	cubic foot	300	1/8
18	Supplying and fixing hardwood round timber in piles, where ordered, including providing and fixing all iron shoes and other ironwork used in driving same.....	lineal foot	960	4/-
19	Sandstone concrete, in any situation, in any shape, form or thickness, as specified in clauses 10, 11, and 21 .....	cubic yard	2,350	28/-
20	Bluestone concrete, in any situation, in any shape, form, or thickness, as specified in clauses 10, 11, and 21 .....	"	590	50/-
21	Special bluestone concrete in inner lining of sewers (between brick facings) of aqueducts, including providing, placing in position, and walling in of iron bond rods, as specified in clauses 10, 11, and 21 .....	"	1,000	60/-
22	Brickwork in cement in facings, arches, circular panels, pilasters, corbels, piers spandrels, parapets, of specially selected white and red bricks, in sewer linings, and in any situation, as specified in clauses 2, 10, 13, and 21 .....	"	2,020	50/-
23	Cement facing, 1 to 2, in any situation where ordered, as specified in clause 12.....	sq. yard	2,960	2/3
24	Special cement facing, 1 to 1, to all internal surfaces of concrete lining of sewers over aqueducts, as specified in clause 12 .....	"	2,750	2/6

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate per Unit.
25	Fyrmont bottom-block sandstone ashlar, set in cement, in skewbacks to arches over Nelson and White Streets, to string courses and copings of aqueducts, in stop-blocks at ends of aqueducts and in any situation where ordered, as specified in clauses 2, 10, 14, and 21.....	cubic foot.	13,250	3/6
26	Freestone ashlar set in cement in steps along lines of raised footpaths as specified in clauses 2, 10, 14, and 21.....	"	130	3/-
27	Supply and set in position freestone curbing as specified in clause 17 .....	lineal foot	650	2/6
28	Supply and set freestone gully-covers, where ordered, as specified in clause 17 .....	each	4	18/6
29	Supply, place in position, and set in cement, slate-covers over cistern heads of scupper-pipes on lines of aqueducts, as specified in clause 19 .....	"	40	2/-
30	Supply and set round manhole covers, and where ordered, squared bluestone pitchers, as specified in clause 15 .....	sq. yard...	8	12/6
31	Squared freestone pitchers to be supplied and set in any situation, 6 in. deep, as specified in clause 16 .....	"	320	8/-
32	Supply and fix two-rail ordnance fencing, complete with all ironwork, painting and tarring, as specified in clause 7 .....	rod	50	18/-
33	Supply and fix, where ordered, hardwood, split, two-rail and wire fence, as specified in clauses 212 to 220 of the schedule to specification .....	"	100	8/-
	Providing laying, and jointing glazed stoneware plain, junction and bend pipes in trenches, shafts, &c., including providing and fixing discs complete, as specified in clause 18, as viz. :—			
34	24-in. diameter storm-water overflow pipes .....	lineal yard	120	33/-
35	12-in. diameter vertical drop pipes from weir chambers .....	"	20	6/9
36	9-in. diameter pipes in shafts .....	"	15	5/-
37	4-in. diameter scupper-pipes .....	"	64	1/6
	Removal of surplus materials from all excavations as specified in clauses 98 to 100 of the schedule to specification, as viz. :—			
38	For the first half-mile of lead .....	cubic yard	4,580	-/9
39	For every further quarter of a mile of lead .....	"	4,580	-/4
40	Receiving, fixing, and jointing any metalwork as cast-iron frames with manhole coverings or gully gratings, gas-check frames, galvanised wrought-iron step-irons, &c., supplied by Government at the site of the works, as specified in clause 20 .....	cwt.	125	4/-
41	Flap-traps, providing, delivering, and building in, including providing and fixing discs .....	each	10	25/-
42	Permanent puddle, where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 22 of the schedule to specification, including spreading in 9-in. layers and ramming, complete.....	cubic yard	Rate only	10/-
43	Special bluestone concrete, in any situation, as specified in clause 11 .....	"	"	60/-
44	Bluestone metal (clause 11), 1½-in. gauge, stacked .....	"	"	13/-
45	Sandstone metal (clause 11), 2-in. gauge, stacked .....	"	"	4/-
46	Bluestone metal (clause 8), 2½-in. gauge, stacked.....	"	"	12/-
47	Sharp, clean, washed sand (clause 2), stacked .....	"	"	7/6
48	Sawn hardwood, in scantlings or planks (clause 2) .....	cubic foot	"	3/-
49	Oregon timber, in scantlings or planks .....	"	"	3/-
50	Wrought-iron, in bolts, screws, nails, spikes, straps, &c. (clause 2) .....	lb.	"	-/4
51	Portland cement (clause 2) .....	cask	"	13/-
52	Artizan or mechanic, supplied by Contractor .....	day	"	11/-
53	Quarryman or other skilled labourer, supplied by Contractor.....	"	"	10/-
54	Ordinary labourer, supplied by Contractor .....	"	"	8/-
55	Cart, with one horse and driver, supplied by Contractor .....	"	"	11/-
56	One additional horse, supplied by Contractor .....	"	"	5/6

The quantities are not guaranteed as correct, and are merely for the guidance of Tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 52, 53, 54, 55, and 56, are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads, and other surfaces, &c., and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

## No. 13.—T. WILLIAMS'S TENDER.

## TENDER FORM.

IN pursuance of advertisement in the *Government Gazette*, I, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Northern Main Sewer, Leichhardt and Annandale section (Contract No. 77), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by me, at 6½ per cent. under the prices affixed to each item in the schedule of quantities and prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this tender; and I do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates quoted above, or, if not in schedule, at a price to be agreed upon at the time; and I hereby undertake that I will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and I enclose herewith my cheque for the sum of £ as a preliminary deposit; and I agree that such sum shall be absolutely forfeited if I at any time within thirty days after the said tender is opened withdraw the same, or if in the event of this tender being accepted I fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board regulations, printed on the back hereof, and by which I agree to be bound.

Dated this 13th day of March, 1895.

THOS. WILLIAMS,  
Islington Terrace, Forest Lodge.

## TENDER BOARD REGULATIONS.

No tender shall be received after 11 a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive...	£5	0	0
For amounts exceeding £500 and not exceeding £1,000...	£10	0	0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

CONTRACT

CONTRACT No. 77.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate per Unit.
	Excavation in open trenches in more or less hard materials, and in hard rock, for foundations of abutment-piers, and piers of arches of aqueducts, main sewers, retaining walls, gullies, seats of embankments for road deviations, road cuttings, storm-water overflow and storm-water discharge and other pipe-sewers, &c., including removing pitching, masonry, brick or concrete work, drains, &c., met with in excavations as specified in clauses 3, 4, 6, 10, and 21 :—			
1	Excavation in road surfaces, soil, sand, loam, clay, ironstone, soft rock only .....	cubic yard	4,243	2/-
2	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	140	7/-
3	Excavation in hard rock where charges of powder 4 in. in length x 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted.	"	1,160	6/-
	Excavation in tunnels in solid rock for main and branch sewers, junctions, subducts, curves, &c., as specified in clauses 3, 4, 10, and 21 :—			
4	Excavation in hard rock where guttering and gadding only is permitted .....	"	90	65/-
5	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted.....	"	100	60/-
6	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	1,000	57/6
	Excavation in more or less hard materials and in solid rock, in shafts and shaft-chambers, as specified in clauses 3, 6, 10, and 21 :—			
7	Excavation in road surfaces, loam, ironstone, shale, and soft rock only.....	"	70	6/-
8	Excavation in hard rock where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	4	22/6
9	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted..	"	70	20/-
10	Excavation in hard rock where guttering and gadding only is permitted .....	"	2	30/-
11	Filling in at sides, round and over all concrete and brickwork of main sewer in open cutting round manhole shafts, chambers, retaining walls, gullies, round abutment piers, and piers of arches of aqueducts, round all pipe-sewers in tunnels and open trenches, into embankments for road deviations, including all sand-filling over main sewer between parapets of aqueducts and in tunnels, restoring all road and other surfaces, trimming, &c., as specified in clauses 5, 6, 10, and 21 .....	"	2,300	1/-
12	Tarred metal deck over sand-filling between parapet walls of aqueducts, and where ordered, complete, including all screenings, hot coal-tar coatings, &c., as specified in clause 9.....	"	95	48/-
13	Sandstone ballast provided, placed in position, and spread 8 in. thick on road formation, 3 feet thick ballast-packing between heads of piles when directed and where ordered, as specified in clause 8 .....	"	740	4/-
14	Bluestone road metal provided, placed in position, and spread 4 in. thick on road formations, and where ordered, as specified in clause 8 .....	"	370	12/-
15	Bluestone screenings provided, placed in position, and spread over road formations, as specified in clause 8 .....	"	180	5/-
16	Subducts in more or less hard materials, when ordered, of glazed stoneware pipe of 6 in. internal diameter, provided and executed as specified in clause 4 .....	lineal yard	50	1/6
17	Timber ordered in writing to be left in excavations, as specified in clause 6, including all iron used in fixing same .....	cubic foot	300	1/8
18	Supplying and fixing hardwood round timber in piles, where ordered, including providing and fixing all iron shoes and other ironwork used in driving same.....	lineal foot	960	4/-
19	Sandstone concrete, in any situation, in any shape, form or thickness, as specified in clauses 10, 11, and 21 .....	cubic yard	2,350	28/-
20	Bluestone concrete, in any situation, in any shape, form, or thickness, as specified in clauses 10, 11, and 21 .....	"	590	50/-
21	Special bluestone concrete in inner lining of sewers (between brick facings) of aqueducts, including providing, placing in position, and walling in of iron bond rods, as specified in clauses 10, 11, and 21 .....	"	1,000	60/-
22	Brickwork in cement in facings, arches, circular panels, pilasters, corbels, piers, spandrels, parapets, of specially selected white and red bricks, in sewer linings, and in any situation, as specified in clauses 2, 10, 13, and 21 .....	"	2,020	50/-
23	Cement facing, 1 to 2, in any situation where ordered, as specified in clause 12.....	sq. yard	2,960	2/3
24	Special cement facing, 1 to 1, to all internal surfaces of concrete lining of sewers over aqueducts, as specified in clause 12 .....	"	2,750	2/6

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate per Unit.
25	Pyrmont bottom-block sandstone ashlar, set in cement, in skewbacks to arches over Nelson and White Streets, to string courses and copings of aqueducts, in stop-blocks at ends of aqueducts and in any situation where ordered, as specified in clauses 2, 10, 14, and 21.....	cubic foot.	13,250	3/6
26	Freestone ashlar set in cement in steps along lines of raised footpaths as specified in clauses 2, 10, 14, and 21.....	"	130	2/-
27	Supply and set in position freestone curbing as specified in clause 17 .....	lineal foot	650	2/6
28	Supply and set freestone gully-covers, where ordered, as specified in clause 17 .....	each ...	4	18/6
29	Supply, place in position, and set in cement, slate-covers over cistern heads of scupper-pipes on lines of aqueducts, as specified in clause 19 .....	" ...	40	2/-
30	Supply and set round manhole covers, and where ordered, squared bluestone pitchers, as specified in clause 15 .....	sq. yard ...	8	12/6
31	Squared freestone pitchers to be supplied and set in any situation, 6 in. deep, as specified in clause 16 .....	" ...	320	8/-
32	Supply and fix two-rail ordnance fencing, complete with all ironwork, painting and tarring, as specified in clause 7 .....	rod ...	50	18/-
33	Supply and fix, where ordered, hardwood, split, two-rail and wire fence, as specified in clauses 212 to 220 of the schedule to specification .....	" ...	100	8/-
	Providing laying, and jointing glazed stoneware plain, junction and bend pipes in trenches, shafts, &c., including providing and fixing discs complete, as specified in clause 18, as viz. :-			
34	24-in. diameter storm-water overflow pipes .....	lineal yard	120	32/-
35	12-in. diameter vertical drop pipes from weir chambers .....	"	20	6/9
36	9-in. diameter pipes in shafts .....	"	15	5/-
37	4-in. diameter scupper-pipes .....	"	64	1/6
	Removal of surplus materials from all excavations as specified in clauses 98 to 100 of the schedule to specification, as viz. :-			
38	For the first half-mile of lead .....	cubic yard	4,580	-/9
39	For every further quarter of a mile of lead .....	"	4,580	-/4
40	Receiving, fixing, and jointing any metalwork as cast-iron frames with manhole coverings or gully gratings, gas-check frames, galvanised wrought-iron step-irons, &c., supplied by Government at the site of the works, as specified in clause 20 .....	cwt. ...	125	4/-
41	Flap-traps, providing, delivering, and building in, including providing and fixing discs .....	each ...	10	25/-
42	Permanent puddle, where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 22 of the schedule to specification, including spreading in 9-in. layers and ramming, complete .....	cubic yard	Rate only	10/-
43	Special bluestone concrete, in any situation, as specified in clause 11 .....	"	"	60/-
44	Bluestone metal (clause 11), 1½-in. gauge, stacked .....	"	"	12/-
45	Sandstone metal (clause 11), 2-in. gauge, stacked .....	"	"	4/-
46	Bluestone metal (clause 8), 2½-in. gauge, stacked.....	"	"	12/-
47	Sharp, clean, washed sand (clause 2), stacked .....	"	"	7/6
48	Sawn hardwood, in scantlings or planks (clause 2) .....	cubic foot.	"	3/-
49	Oregon timber, in scantlings or planks .....	"	"	3/-
50	Wrought-iron, in bolts, screws, nails, spikes, straps, &c. (clause 2) .....	lb. ...	"	-/4
51	Portland cement (clause 2) .....	cask ...	"	18/-
52	Artizan or mechanic, supplied by Contractor .....	day ...	"	11/-
53	Quarryman or other skilled labourer, supplied by Contractor.....	"	"	10/-
54	Ordinary labourer, supplied by Contractor .....	"	"	8/-
55	Cart, with one horse and driver, supplied by Contractor .....	"	"	11/-
56	One additional horse, supplied by Contractor .....	"	"	5/6

The quantities are not guaranteed as correct, and are merely for the guidance of Tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 52, 53, 54, 55, and 56, are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads and other surfaces, &c., and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

## No. 14.—T. E. SPENCER'S TENDER.

## TENDER FORM.

In pursuance of advertisement in the *Government Gazette*, I, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Northern Main Sewer, Leichhardt and Annandale section (Contract No. 77), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by me, at 5 per cent. under the prices affixed to each item in the schedule of quantities and prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this tender; and I do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates quoted above, or, if not in schedule, at a price to be agreed upon at the time; and I hereby undertake that I will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and I enclose herewith my cheque for the sum of £200 as a preliminary deposit; and I agree that such sum shall be absolutely forfeited if I at any time within thirty days after the said tender is opened withdraw the same, or if in the event of this tender being accepted I fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board regulations, printed on the back hereof, and by which I agree to be bound.

Dated this 13th day of March, 1895.

THOS. E. SPENCER,  
17 Boyce-street, Glebe Point.

## TENDER BOARD REGULATIONS.

No tender shall be received after 11 a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive...	... ..	£5 0 0
For amounts exceeding £500 and not exceeding £1,000...	... ..	£10 0 0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

CONTRACT

## CONTRACT No. 77.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate per Unit.
	Excavation in open trenches in more or less hard materials, and in hard rock, for foundations of abutment-piers, and piers of arches of aqueducts, main sewers, retaining walls, gullies, seats of embankments for road deviations, road cuttings, storm-water overflow and storm-water discharge and other pipe-sewers, &c., including removing pitching, masonry, brick or concrete work, drains, &c., met with in excavations as specified in clauses 3, 4, 6, 10, and 21 :—			
1	Excavation in road surfaces, soil, sand, loam, clay, ironstone, soft rock only .....	cubic yard	4,243	2/-
2	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	140	7/-
3	Excavation in hard rock where charges of powder 4 in. in length x 1½ in. in diameter, and such depths of bore-holes as shall be directed only are permitted ..	"	1,160	6/-
	Excavation in tunnels in solid rock for main and branch sewers, junctions, subducts, curves, &c., as specified in clauses 3, 4, 10, and 21 :—			
4	Excavation in hard rock where guttering and gadding only is permitted .....	"	90	65/-
5	Excavation in hard rock where charges of powder 2 in. in length x 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted.....	"	100	60/-
6	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	1,000	57/6
	Excavation in more or less hard materials and in solid rock, in shafts and shaft-chambers, as specified in clauses 3, 6, 10, and 21 :—			
7	Excavation in road surfaces, loam, ironstone, shale, and soft rock only.....	"	70	6/-
8	Excavation in hard rock where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed only are permitted...	"	4	22/6
9	Excavation in hard rock where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore holes as shall be directed only are permitted..	"	70	20/-
10	Excavation in hard rock where guttering and gadding only is permitted .....	"	2	30/-
11	Filling in at sides, round and over all concrete and brickwork of main sewer in open cutting round manhole shafts, chambers, retaining walls, gullies, round abutment piers, and piers of arches of aqueducts, round all pipe-sewers in tunnels and open trenches, into embankments for road deviations, including all sand-filling over main sewer between parapets of aqueducts and in tunnels, restoring all road and other surfaces, trimming, &c., as specified in clauses 5, 6, 10, and 21 .....	"	2,300	1/-
12	Tarred metal deck over sand-filling between parapet walls of aqueducts, and where ordered, complete, including all screenings, hot coal-tar coatings, &c., as specified in clause 9.....	"	95	48/-
13	Sandstone ballast provided, placed in position, and spread 8 in. thick on road formation, 3 feet thick ballast-packing between heads of piles when directed and where ordered, as specified in clause 8 .....	"	740	4/-
14	Bluestone road metal provided, placed in position, and spread 4 in. thick on road formations, and where ordered, as specified in clause 8 .....	"	370	12/-
15	Bluestone screenings provided, placed in position, and spread over road formations, as specified in clause 8 .....	"	180	5/-
16	Subducts in more or less hard materials, when ordered, of glazed stoneware pipe of 6 in. internal diameter, provided and executed as specified in clause 4 .....	lineal yard	50	1/6
17	Timber ordered in writing to be left in excavations, as specified in clause 6, including all iron used in fixing same .....	cubic foot	300	1/8
18	Supplying and fixing hardwood round timber in piles, where ordered, including providing and fixing all iron shoes and other ironwork used in driving same.....	lineal foot	960	4/-
19	Sandstone concrete, in any situation, in any shape, form or thickness, as specified in clauses 10, 11, and 21 .....	cubic yard	2,350	28/-
20	Bluestone concrete, in any situation, in any shape, form, or thickness, as specified in clauses 10, 11, and 21 .....	"	590	50/-
21	Special bluestone concrete in inner lining of sewers (between brick facings) of aqueducts, including providing, placing in position, and walling in of iron bond rods, as specified in clauses 10, 11, and 21 .....	"	1,000	60/-
22	Brickwork in cement in facings, arches, circular panels, pilasters, corbels, piers, spandrels, parapets, of specially selected white and red bricks, in sewer linings, and in any situation, as specified in clauses 2, 10, 13, and 21 .....	"	2,020	50/-
23	Cement facing, 1 to 2, in any situation where ordered, as specified in clause 12.....	sq. yard...	2,960	2/3
24	Special cement facing, 1 to 1, to all internal surfaces of concrete lining of sewers over aqueducts, as specified in clause 12 .....	"	2,750	2/6

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate per Unit.
25	Pyrmont bottom-block sandstone ashlar, set in cement, in skewbacks to arches over Nelson and White Streets, to string courses and copings of aqueducts, in stop-blocks at ends of aqueducts and in any situation where ordered, as specified in clauses 2, 10, 14, and 21.....	cubic foot.	13,250	3/6
26	Freestone ashlar set in cement in steps along lines of raised footpaths as specified in clauses 2, 10, 14, and 21.....	"	130	3/-
27	Supply and set in position freestone curbing as specified in clause 17 .....	lineal foot.	650	2/6
28	Supply and set freestone gully-covers, where ordered, as specified in clause 17 .....	each	4	18/6
29	Supply, place in position, and set in cement, slate-covers over cistern heads of scupper-pipes on lines of aqueducts, as specified in clause 19 .....	"	40	2/-
30	Supply and set round manhole covers, and where ordered, squared bluestone pitchers, as specified in clause 15 .....	sq. yard...	8	12/6
31	Squared freestone pitchers to be supplied and set in any situation, 6 in. deep, as specified in clause 16 .....	"	320	8/-
32	Supply and fix two-rail ordnance fencing, complete with all ironwork, painting and larring, as specified in clause 7 .....	rod	50	18/-
33	Supply and fix, where ordered, hardwood, split, two-rail and wire fence, as specified in clauses 212 to 220 of the schedule to specification .....	"	100	8/-
	Providing laying, and jointing glazed stoneware plain, junction and bend pipes in trenches, shafts, &c., including providing and fixing discs complete, as specified in clause 18, as viz. :—			
34	24-in. diameter storm-water overflow pipes .....	lineal yard	120	33/-
35	12-in. diameter vertical drop pipes from weir chambers .....	"	20	6/3
36	9-in. diameter pipes in shafts .....	"	15	5/-
37	4-in. diameter scupper-pipes .....	"	64	1/6
	Removal of surplus materials from all excavations as specified in clauses 98 to 100 of the schedule to specification, as viz. :—			
38	For the first half-mile of lead .....	cubic yard	4,580	-/0
39	For every further quarter of a mile of lead .....	"	4,580	-/4
40	Receiving, fixing, and jointing any metalwork as cast-iron frames with manhole coverings or gully gratings, gas-check frames, galvanised wrought-iron step-irons, &c., supplied by Government at the site of the works, as specified in clause 20 .....	cwt.	125	4/-
41	Flap-traps, providing, delivering, and building in, including providing and fixing discs .....	each	10	25/-
42	Permanent puddle, where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 22 of the schedule to specification, including spreading in 2-in. layers and ramming, complete.....	cubic yard	Rate only	10/-
43	Special bluestone concrete, in any situation, as specified in clause 11 .....	"	"	60/-
44	Bluestone metal (clause 11), 1½-in. gauge, stacked .....	"	"	13/-
45	Sandstone metal (clause 11), 2-in. gauge, stacked .....	"	"	4/-
46	Bluestone metal (clause 8), 2½-in. gauge, stacked.....	"	"	12/-
47	Sharp, clean, washed sand (clause 2), stacked .....	"	"	7/6
48	Sawn hardwood, in scantlings or planks (clause 2) .....	cubic foot.	"	3/-
49	Oregon timber, in scantlings or planks .....	"	"	3/-
50	Wrought-iron, in bolts, screws, nails, spikes, straps, &c. (clause 2) .....	lb.	"	-/4
51	Portland cement (clause 2) .....	cask	"	13/-
52	Artizan or mechanic, supplied by Contractor .....	day	"	11/-
53	Quarryman or other skilled labourer, supplied by Contractor.....	"	"	10/-
54	Ordinary labourer, supplied by Contractor .....	"	"	8/-
55	Cart, with one horse and driver, supplied by Contractor .....	"	"	11/-
56	One additional horse, supplied by Contractor .....	"	"	5/6

The quantities are not guaranteed as correct, and are merely for the guidance of Tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 52, 53, 54, 55, and 56, are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads and other surfaces, &c., and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

No. 15.—CARTER, GUMMOW, & CO.'S TENDER.  
(Bound up with Bend.)

No. 3.

The Principal Assistant Engineer to The Engineer-in-Chief for Sewerage.

*Minute Paper.*

Department of Public Works, Roads and Bridges and Sewerage Branch,  
Sydney, 14 March, 1894.

*Subject*:—Fifteen tenders for the construction of the Northern Main Sewer, Annandale and Leichhardt sections, Contract No. 77.

THE tenders for the construction of the Northern Main Sewer, Annandale and Leichhardt sections, Contract No. 77, have now been checked, the lowest being that of Messrs. Carter, Gummow, & Co., at 28½ per cent. below schedule rates, amounting to £15,757 1s. 9d.

The following are the other tenderers:—

Messrs.				At 25½ per cent. below schedule rates.
J. M'Sweeney	...	...	...	At 25½ per cent. below schedule rates.
J. F. Carson	...	...	...	„ 20¼ ” ”
Gilliver and Curtis	...	...	...	„ 18¾ ” ”
Holloway Bros.	...	...	...	„ 18¾ ” ”
J. Stewart & Co.	...	...	...	„ 18½ ” ”
Howie Bros.	...	...	...	„ 17½ ” ”
Hugh Owen	...	...	...	„ 15 ” ”
Phillips, Rhodes, and Broughton	...	...	...	„ 13 ” ”
R. and S. Butcher	...	...	...	„ 11 ” ”
E. Taylor...	...	...	...	„ 10½ ” ”
Maddison and Ewing	...	...	...	„ 8½ ” ”
T. Williams	...	...	...	„ 6½ ” ”
T. E. Spencer	...	...	...	„ 5 ” ”
Carter, Gummow, & Co.	...	...	...	Lump sum of £15,500.

With respect to Messrs. Carter, Gummow, & Co.'s second tender for a lump sum of £15,500, I find that it is accompanied by a special design on the "Monier" system.

The plans for the White's Creek and Johnstone's Creek aqueducts as designed in this office, for which tenders were invited, were prepared with a view to securing the most substantial and enduring structure at the most reasonable cost. At the time that this design was made, I had as full particulars regarding the "Monier" principle as it was possible to obtain in the colonies. I would also like to point out that in Europe this class of work is made a speciality, being patented, and is wholly in the hands of private companies, who are required to give a substantial guarantee for the stability of their work. I think it would not be advisable to construct at the outset a work of such importance on the "Monier" principle.

The total for the office design amounts to	...	...	...	...	£15,757
„ contractor's Monier design	...	...	...	...	15,500
Difference	...	...	...	...	£257

C. H. OILFSEN-BAGGÉ.

No. 4.

Report by Board of Reference.

Board of Reference.—Tenders for Contract No. 77, Main Northern Sewer, Annandale and Leichhardt sections.

THE tenders for this work were submitted to the Board to-day. In doing so, Mr. Hickson pointed out that fifteen tenders had been received, the lowest being that of Carter, Gummow, & Co., at 28½ per cent. below schedule rates—amounting approximately to £15,757 1s. 9d. The same firm also submitted a lump sum tender for carrying out the work according to a plan sent in by them, for the sum of £15,500. The plan submitted is for constructing the work on the "Monier" arch principle. This system has been extensively used during recent years on the Continent of Europe, with successful results, and Mr. Hickson sees no reason why, under certain restrictions, the opportunity should not be taken to introduce the system in the public works of this Colony. The advantages claimed by the patentees are that works can be carried out at a much cheaper rate wherever this method of construction is used. Mr. Hickson said he had no doubt that the design submitted was thoroughly suitable, and likely to be effective, and as the main principles as regards size and inclination of sewer were as provided for in the Departmental design, he was prepared to recommend it for adoption; but if it was decided to accept the tender, a short specification of the work should be included in the bond, and provision also made for the maintenance of the work by the contractors for a certain period after completion.

Mr. Hickson further said, that as Mr. Darley would be the responsible officer for carrying out this work, he had gone into the matter very thoroughly with that gentleman, and Mr. Darley was quite prepared to endorse his views.

The

The Board, in view of the fact that Messrs. Darley and Hickson are satisfied that the principle is a sound one, and that the adoption of the plan will result in considerable economy, are prepared to endorse the recommendation of these gentlemen, and now submit the matter for the Minister's consideration.

J. BARLING,  
Chairman.  
C. W. DARLEY,  
Engineer-in-Chief, Harbours and Rivers.  
ROBERT HICKSON,  
Commissioner for Roads.  
H. DEANE,  
Engineer-in-Chief, Railway Construction.  
W. L. VERNON,  
Government Architect.

J. W. HOLLIMAN, Secretary,  
20 March, 1895.

Submitted.—J.B., 27/3/95. Before approving of this proposal I should like an estimate of the actual value of the work to be carried out by the contractors under the substituted scheme.—J.H.Y., 27/3/95. Mr. Hickson.—J.B., 28/3/95.

To comply fully with the Minister's minute would mean the taking out of quantities in the plan submitted by Messrs. Carter and Gummow. This would take at least a week to do. I think, however, I can answer sufficiently for the Minister to come to a decision. When plans were being prepared for the extension of the sewers on to the sewage farm, estimates were made for the work on the Monier system, as well as on the Department's designs. The result was that the estimate of both works was practically the same. Applying that comparison to this case, it would mean that the Departmental estimate for the work under consideration would be £22,000.—ROBT. HICKSON, 28/3/95. Under Secretary.

Submitted.—J. BARLING, Under Secretary for Public Works, 28/3/95. This is quite sufficient for me, and I now approve of the recommendation of the Board being carried out.—J.H.Y., 29/3/95. Accept.—D.C.McL. (*pro. U.S.*), 29/3/95.

#### No. 5.

The Under Secretary for Public Works to Messrs. Carter, Gummow, & Co.

Gentlemen,

Department of Public Works, Sydney, 11 April, 1895.

I have the honor, by direction of the Secretary for Public Works, to inform you that your tender, dated the 13th March last, is accepted for the construction of the northern main sewer, Leichhardt and Annandale sections No. 77, at the sum of £15,500, in the terms set out in the supplementary specification, a copy of which is sent herewith, and subject to the following special conditions, viz. :—

That if it shall be represented to the Secretary for Public Works at any time during the progress of this contract that an undue number of men are being employed thereon who have not been domiciled in this Colony for six months previously to such employment, and such allegation be proved to his satisfaction, the Minister shall have the power to call upon you to discharge any or all such men, and on such direction being conveyed to you, under the hand of the Under Secretary for Public Works, you shall discharge such men forthwith; and in the event of your non-compliance with any such direction, the Minister shall have the power to declare this contract to be cancelled as if this stipulation had been expressly set out in the cancellation clause of the general conditions relating to this contract.

The work is to be carried out in strict accordance with the several contract exhibits relating to this contract, modified by the supplementary specification above referred to, and the plan submitted with your tender, and to be completed within seventy-eight weeks from this date.

A fixed deposit receipt, in favour of the Secretary for Public Works, for the sum of £775, will be required as security for the due performance of contract within the stipulated time, and a personal bond in the sum of £12,000, and two bondsmen in the sum of £6,000 each, in connection with the maintenance as set out in the supplementary specification. Will you be good enough to notify to me your assent to these terms, and at the same time submit the names of two responsible persons who are willing to act as your sureties.

I have to refer you to the Engineer-in-Chief for Metropolitan Sewerage Construction for further information, and to request that you will, when required to do so, call upon the officer in charge of bonds and contracts at this office with your sureties for the purpose of executing the necessary documents for the due observance of your contract.

I have, &c.,

J. BARLING,  
Under Secretary.

#### No. 6.

#### Draft of Supplementary Specification.

THE structure above the level of the skewbacks of main arches to be constructed as shown on drawing, which accompanied the contractor's tender, of cement mortar (except the cement facing), composed of one part of cement to three parts of sand, and wrought-iron rods on the "Monier system."

The foundations of piers are to be in conformity to the drawings attached to the contract, except as regards the extra size necessitated by the larger pier shown on the contractor's plan, and are to be to the satisfaction of the Engineer.

Should the piers be required to be put down to a greater depth than shown on the drawings, or a greater number of them require piling than shown, the work is to be executed as ordered, without extra payment being made.

The piers are to be built with sandstone concrete of the quality specified, and faced with cement mortar composed of one part of cement and two parts of sand.

The cement facing of the structure above the level of the springing of main arches is to be composed of one part of cement and one part of sand.

The works generally are to be carried out in accordance with the specification, schedule to specification, and the plans therein referred to, save and except such structure parts as are to be carried out under the "Monier system," or necessarily enlarged to meet the requirements of the contractor's plan, and within the time set out in the general conditions.

The

The contractors shall continue to maintain the said works at their own cost after the period of maintenance set forth in the general conditions, for a further period of three years, computed from such date to the satisfaction of the Engineer, whose decision shall be final and conclusive upon all points concerning workmanship and materials, and the permanency and durability of the said sewer works, and the contractors shall enter into a bond with Her Majesty the Queen with two sufficient sureties in the penal sum of £12,000 to secure the removal of so much of the said works as shall have been constructed on the "Monier system," if the Engineer shall be dissatisfied with the same at any time during the said periods of maintenance, and to re-erect and construct the said works at their own cost and expense, in accordance with all things with the specification, and schedule to specification and plans, therein referred to, and within weeks from the date of being called upon so to do.

Would it not be desirable to take this opportunity for connecting the President of the Water Supply and Sewerage Board and Engineer-in-Chief for Sewerage Construction with the contract, in lieu of the Engineer-in-Chief for Roads, Bridges, and Sewerage? Would it not be possible for the contractors to take objection hereafter?—C.D., 4/4/95.

Mr. Norrie.—J.D., 4/4/95.

I suggested to Mr. Hickson yesterday the desirability of blotting out his signature and printed title on the conditions, substituting those of Mr. Darley, which was at once assented to. A reference will, too, be made in the agreement and bond to the plans being in Mr. Darley's office.—HAROLD F. NORRIE, 4/4/95.

Mr. Darley is to be styled, so far as he is connected with this Department, "Engineer-in-Chief for Metropolitan Sewerage Construction."—J.B., 5/4/95. Mr. Darley has the other papers; forward these to be placed with them.—Jno. P., 6/4/95.

### No. 7.

#### Estimate of the value of work to be performed.

CONTRACT No. 77.—Johnstone's Creek and White's Creek Aqueduct, above Footings.

Description of Work.	Unit.	Probable Quantity.	Rate.	£	s.	d.
Brickwork .....	cubic yard	1,935	2/10/-	4,837	10	0
Tarred metal decking .....	"	95	2/8/-	228	0	0
Special bluestone concrete .....	"	1,000	3/-/-	3,000	0	0
Sandstone concrete .....	"	1,260	1/8/-	1,764	0	0
Sand filling between parapets.....	"	130	1/-	6	10	0
Pyramont ashlar .....	cubic foot	13,250	3/6	2,318	16	0
Cement facing .....	square yard	2,750	2/6	342	15	0
Slate covers .....	each	40	2/-	4	0	0
				£	12,501	10 0

### No. 8.

#### The Clerk in charge of Bonds and Contracts to The Engineer-in-Chief for Public Works.

*Minute Paper.*

Department of Public Works, Bonds and Contracts Branch, Sydney, 18 April, 1895.

*Subject:*—Cont. No. 77, Northern Main Sewer.

In order to enable me to prepare the necessary bond herein, I should be furnished with the plans at your earliest convenience.

H. F. NORRIE,  
Officer in charge  
(Per V.C.L.)

These plans were sent to the Water and Sewerage Board on the 17/4/95.—H. T. EVANS, 20/4/95. Received by Water and Sewerage Board; returned herewith.—T.G., 23/4/95. Mr. Davis. The necessary plans, specification, and conditions have been sent to W. and S. Board. Now forwarded to Mr. Norrie.—J. DAVIS, for Engineer-in-Chief for Public Works.

### No. 9.

#### Messrs. Carter, Gummow, & Co., to The Minister for Public Works.

Sir,

North Sydney, 4 April, 1895.

We have the honor to draw your attention to the conditions upon which the acceptance of our tender depends for Contract No. 77, Balmain Sewerage Works, and to our conversation with you of even date in connection with security required for its due performance.

We respectfully submit that our personal sureties for the amount necessary should be taken for its completion and maintenance and as a sufficient guarantee for the proper carrying out of the work.

We are a firm of sound financial standing, well and favourably known to your Department as contractors for many large and important contracts extending over a period of eight or nine years under the Departments of Harbours and Rivers, and Roads, Bridges, and Sewerage, which facts we trust will satisfy you as to our *bona fides* in this matter.

We have, &c.,

CARTER, GUMMOW, & CO.

No. 10.

## No. 10.

## The Engineer-in-Chief for Sewerage to The Under Secretary for Public Works.

*Minute Paper.*

Department of Public Works, Roads and Bridges and Sewerage Branch,

Sydney, 5 April, 1895.

THE accompanying letter of 4th April, 1895, from Messrs. Carter, Gummow, & Co., is a protest against the stringent supplementary specification prepared by Mr. Norrie, at my suggestion, with regard to the alteration in the design of Contract No. 77.

The last paragraph of this specification states:—"And the contractors shall enter into a bond with Her Majesty the Queen in the penal sum of £12,000, with two sufficient sureties in the penal sum of £6,000 each, to secure the removal of so much of the said works as shall have been constructed on the Monier system, &c., &c."

The amount of £12,000 is the sum it would cost the Department, at Departmental rates, to renew that portion of this sewer which is built on the Monier system.

It is right, however, to say that the tendered rates for this portion of the work would only come to £9,000; but, prices being abnormally low, I think it is only right to put in a sum at which the Department really values the work.

Messrs. Carter and Gummow ask that their own "personal sureties for the amount named," *i.e.*, £12,000 (an amount which they do not dispute), "should be taken for its completion and maintenance, and as a sufficient guarantee for the proper carrying out of the work."

They go on to say that they are "a firm of sound financial standing, well and favourably known to the Department as contractors." This is quite true; they are a firm in which I have every confidence. They have done a great deal of work under me, and I can testify that their aim always has been to turn out the very best class of work possible. At the same time, misfortunes happen the very soundest firms of contractors, and the Department must look a little way into the future. Their own bond for £12,000 would be really of no use if they were unfortunate enough in the meantime to become bankrupt.

I think, therefore, it is right that the sureties should be insisted upon. They give the names of two men, Mr. George Forrest and Mr. James Gillen. From inquiries made I believe these men to be financially sound; and, I think, if their names were accepted as the sureties in the penal sum of £6,000 each the Department would be secured as far as it is reasonably possible to be.

This work will be carried out under Mr. Darley, and I recommend that the whole of the papers be sent him to give his opinion thereon.

ROBT. HICKSON,  
Engineer-in-Chief for Public Works.

Mr. Darley for report.—J.B., 5/4/95. I concur with Mr. Hickson. I think in accepting a new patent of this kind, and adopting it on a large and costly contract, that the Department cannot be too careful in securing its position by leaving all the risk on the hands of the contractors and patentees. I therefore recommend that the personal names be required for further surety. The names mentioned may, I think, be accepted.—C.D., Engineer-in-Chief, Metropolitan Sewerage Construction, 8/4/95.

For Minister's approval as to course suggested in regard to sureties.—J. BARLING, Under Secretary for Public Works, 9/4/95. Approved.—J.H.Y., 10/4/95. Mr. Norrie.—Jno. P., 10/4/95.

## No. 11.

## Contract of Agreement and Annexures.

*Minute Paper.*

Department of Public Works, Bonds and Contracts Branch, Sydney, 3 June, 1895.

*Subject*:—Contract No. 77, Northern Main Sewer, Annandale and Leichhardt Sections. (Carter, Gummow, & Co.)

THE agreement, &c., herein duly prepared, have been executed by the contractors and sureties, and stamped, and might now be forwarded to the Engineer-in-Chief for Public Works.

The tender, and all other papers herein, are sent herewith.

HAROLD F. NORRIE,  
Officer in Charge.

Engineer-in-Chief, Metropolitan Sewerage Construction, to note, and if he wishes to retain to place in a safe for security.—Jno. P. (*pro.* U.S.), 4/6/95. Mr. Smail.

Agreement made this 16th day of May, in the year of our Lord 1895, between John Carter, Frank Moorhouse Gummow, and David Graham Snodgrass, of North Sydney, in the Colony of New South Wales, contractors, carrying on business together under the name, style, or form of "Carter, Gummow, & Co." (and hereinafter styled or referred to as "the contractors"), of the one part, and Her Most Gracious Majesty Queen Victoria, of the other part.

WHEREAS the Minister for Public Works of the said Colony (hereinafter called the said Minister) recently called for tenders by notice published in the *Government Gazette* (of which notice a copy is hereunto annexed and marked "A"), for construction of the northern main sewer, Leichhardt and Annandale sections, Contract No. 77, Sydney Sewerage, as shown in the drawings relating thereto in the office of the Engineer-in-Chief for Metropolitan Sewerage Construction, and marked "No. 1" to "No. 10," both inclusive, and according to the specification, schedule to specification, general conditions, and special condition, which are hereunto annexed and marked respectively "B," "C," "D," and "E." And whereas the contractors made the tender hereunto annexed, marked "F," to provide the material and perform the various

works required in and about the full and proper construction, erection, and completion of the said sewerage works agreeably to the said drawings, specification, schedule to specification, general conditions, and special condition, as modified by the supplementary specification, also hereunto annexed and marked "G," and the contractors' drawing, marked "No. 11," now in the office of the said Engineer-in-Chief for Metropolitan Sewerage Construction, and at or for the price or sum set out in the said tender. And whereas the said tender was accepted by the said Minister, and such acceptance (a copy of which is annexed hereto, and marked "H"), was duly notified to the contractors on the 11th day of April now last past, and the contractors have assented thereto, as per their letter annexed hereto, marked "I." And whereas the contractors have deposited the sum of £775 in the Bank of New Zealand, at Sydney, in the said Colony, in the name of the Under Secretary for Public Works, at interest upon fixed deposit, No. 22,187, dated the 29th day of April now last past for twelve months, and have handed the receipt for the same to the said Minister to be held by him as such Minister or the Minister for Public Works for the time being of the said Colony, on behalf of Her Majesty, as security for the due performance of this contract, and all other matters and things herein contained, and which, on the part of the contractors, are to be done and performed. And whereas the said contractors have, with two approved sureties, entered into bonds to Her said Majesty conditioned to secure the due performance of the removal of so much of the said works at their own cost as shall have been constructed on the "Monier System" if the Engineer shall be dissatisfied with the same at any time during either of the periods of maintenance set out in the said general conditions and supplementary specification respectively, and for the re-erection and construction of the said works, and for the free and uninterrupted flow of sewage during the progress of such rebuilding at their own expense in accordance in all things with the said specification, schedule to specification, general conditions, special condition, and plans therein respectively referred to, and within thirty-nine weeks from the date of being called upon to do so. Now this agreement witnesseth that, in consideration of the premises, the contractors do hereby, for themselves, heirs, executors, and administrators, covenant with and to Her said Majesty the Queen, Her heirs, and successors: That they, the contractors, shall and will perform the various works required in and about the full and proper construction, erection, and completion of the said sewerage works in accordance in all things with the said specification, schedule to specification, general conditions, special condition, supplementary specification, and drawings, and at and after the price, and within the time in the said tender mentioned. And that they will well and truly remove so much of the said works at their own cost as shall have been constructed on the "Monier System" if the Engineer shall be dissatisfied with the same at any time during either of the respective periods of maintenance set out in the said general conditions and supplementary specification, and re-erect and construct the said works, and provide for the full and uninterrupted flow of sewage during progress of such rebuilding at their own expense, in accordance in all things with the said specification, schedule to specification, general conditions, and special condition, and the plans therein respectively referred to, within thirty-nine weeks from the date of being called upon to do so. And it is hereby agreed and declared between and by the said parties hereto that the said copy, notice, specification, schedule to specification, general conditions, special condition, supplementary specification, tender, copy, letter of acceptance of tender, and letter of assent thereto, marked as aforesaid, all being hereunto annexed as aforesaid, shall be read as incorporated in and forming part and parcel of these presents in like manner, and if the same had been herein written and set forth at length, and that the said several annexures, the said drawings, and these presents shall together be taken to be the contract between the said parties in respect of the said sewerage works amplified in manner following—that is to say, that the said general conditions shall at all times be read and construed as if the stipulation contained in the said letter of acceptance of tender as to the discharge of men (not domiciled in this Colony for six months previously to their employment on the said works) employed on the said works when called upon to do so, and the penalty for non-compliance therewith had been expressly set out in the said general conditions.

In witness whereof the said parties to these presents have hereunto set their hands and seals the day and year first before written.

Signed, sealed and delivered, by the said John Carter, in the presence of,—	} HAROLD F. NORRIE.	JOHN CARTER.
Signed, sealed and delivered, by the said Frank Moorhouse Gummow, by his attorney, John Carter, acting under power of attorney, dated the 2nd day of January, 1894, in the presence of,—	} HAROLD F. NORRIE.	FRANK MOORHOUSE GUMMOW. (By his Attorney, JOHN CARTER).
Signed, sealed and delivered, by the said David Graham Snodgrass, in the presence of,—	} HAROLD F. NORRIE.	D. G. SNODGRASS.

This is the agreement referred to in our respective bonds to Her Majesty the Queen.  
Dated this 16th day of May, A.D., 1895.

	GEORGE FORREST,	} Sureties.
	JAMES GILLAN,	

Witness—HAROLD F. NORRIE.

KNOW all men by these presents,—That we, John Carter, Frank Moorhouse Gummow, and David Graham Snodgrass, of North Sydney, in the Colony of New South Wales, contractors, carrying on business together under the name, style, or firm of "Carter, Gummow, & Co." (and hereinafter referred to as the said contractors), are jointly and severally held, and firmly bound unto Her Most Gracious Majesty Queen Victoria, in the penal sum of £12,000 sterling, to be paid in Sydney, in the said Colony, to Her said Majesty, her heirs, or successors, for which payment, well and truly to be made, we bind ourselves, and each of us, our and each and every of our heirs, executors, and administrators jointly and severally firmly by these presents.

Scaled with our seals dated the 16th day of May, in the year of our Lord, 1895.

WHEREAS, by agreement bearing even date herewith, and expressed to be made between the said contractors of the one part, and Her said Majesty of the other part, the said contractors covenanted to perform the various works required in and about the full and proper construction, erection, and completion of the northern

northern main sewer, Leichhardt and Annandale sections, Contract No. 77, Sydney Sewerage, according to the copy notice, specification, schedule to specification, general conditions, special condition, supplementary specification, tender, copy letter of acceptance of tender, and letter of assent thereto, thereunto annexed, and marked "A," "B," "C," "D," "E," "F," "G," "H," and "I" respectively, and certain drawings relating thereto, now in the office of the Engineer-in-Chief for Metropolitan Sewerage Construction, and marked No. 1 to No. 11, both inclusive.

And whereas the said contractors have severally offered to become and be bound to her said Majesty, her heirs, and successors, for the due removal of so much of the said works, at their own cost, as shall have been constructed on the "Monier System," if the Engineer shall be dissatisfied with the same, at any time during either of the periods of maintenance set out in the said general conditions and supplementary specification respectively, and for the re-erection and construction of the said works, and for the free and uninterrupted flow of sewage during the progress of such rebuilding, at their own expense, in accordance in all things with the said specification, schedule to specification, general conditions, special condition, and plans therein respectively referred to, and within thirty-nine weeks from the date of being called upon to do so. Now, the condition of the above-written bond and obligation is such that if the said contractors do, and shall well and truly remove so much of the said works at their own cost, as shall have been constructed on the "Monier System," if the Engineer shall be dissatisfied with the same at any time during the respective periods of maintenance set out in the said general conditions and supplementary specification, and re-erect and construct the said works, and provide for the free and uninterrupted flow of sewage during the progress of such rebuilding at their own expense, in accordance in all things with the said specification, schedule to specification, general conditions and special condition, and the plans therein respectively referred to, within thirty-nine weeks from the date of being called upon to do so. Then this obligation will be void and of none effect, otherwise to remain in full force and virtue.

Signed, sealed, and delivered by the abovenamed }  
John Carter, in the presence of,— } JOHN CARTER.  
HAROLD F. NORRIE.

Signed, sealed, and delivered by the abovenamed }  
Frank Moorhouse Gummow, by his duly } FRANK MOORHOUSE GUMMOW.  
constituted attorney, John Carter, acting } (By his Attorney, JOHN CARTER).  
under power of attorney, dated the 2nd }  
January, 1894, in the presence of,— }  
HAROLD F. NORRIE.

Signed, sealed, and delivered by the abovenamed }  
David Graham Snodgrass, in the presence } D. G. SNODGRASS.  
of,— }  
HAROLD F. NORRIE.

#### STATUTORY DECLARATION.

I, JOHN CARTER, of Sydney, in the Colony of New South Wales, contractor, do hereby solemnly declare and affirm that—

1. I am the duly constituted attorney of Frank Moorhouse Gummow, at present residing at Adelaide, in the province of South Australia, under and by virtue of a Deed Poll or Power of Attorney, under the hand and seal of the said Frank Moorhouse Gummow, dated the 2nd day of January, 1894.
2. From letters and telegrams recently received from the said Frank Moorhouse Gummow, I have every reason to believe, and I verily do believe, that the said Frank Moorhouse Gummow is still alive.
3. At the time of the execution by me as such Attorney as aforesaid of a bond to and agreement with Her Most Gracious Majesty Queen Victoria, and bearing date the 16th day of May, 1895, in connection with Contract No. 77, Sydney Sewerage Works, I had not nor have I since received notice of the revocation by death or otherwise of the abovementioned Deed Poll or Power of Attorney.

And I make this solemn declaration as to the matters aforesaid according to the law in this behalf, and subject to the punishment by law provided for any wilfully false statement in any such declaration.

Taken and declared at Sydney, this 16th }  
day of May, 1895, before,— } JOHN CARTER.  
HAROLD F. NORRIE, J.P.

Know all Men by these Presents,—That I, George Forrest, of Marrickville, in the Colony of New South Wales, householder, am held and firmly bound unto Her Most Gracious Majesty, Queen Victoria, in the penal sum of £6,000 sterling, to be paid in Sydney, in the said Colony, to Her said Majesty, her heirs or successors, for which payment well and truly to be made, I bind myself, my and each and every of my heirs, executors, and administrators firmly by these presents.

Sealed with my seal, dated the 16th day of May, in the year of our Lord, 1895.

WHEREAS by agreement, bearing even date herewith, and expressed to be made between John Carter, Frank Moorhouse Gummow, and David Graham Snodgrass, carrying on business together as contractors, under the name, style, or form of "Carter, Gummow, and Company," and therein and hereinafter called the contractors, of the one part, and Her said Majesty of the other part, the said contractors covenanted to perform the various works required in and about the full and proper construction, erection, and completion of the northern main sewer, Leichhardt and Annandale sections, Contract No. 77, Sydney Sewerage, according to the copy notice, specification, schedule to specification, general conditions, special condition, supplementary specification, tender, copy letter of acceptance of tender, and letter of assent thereto, thereunto annexed, and marked "A," "B," "C," "D," "E," "F," "G," "H," and "I," respectively, and certain drawings relating thereto, now in the office of the Engineer-in-Chief for Metropolitan Sewerage Construction, and marked "No. 1" to "No. 11," both inclusive. And

And whereas the contractors have entered into a bond to Her said Majesty, dated the 16th day of May, 1895, conditioned to remove at their own cost so much of the said works as shall have been constructed on the "Monier System" if the Engineer shall be dissatisfied with the same at any time during either of the periods of maintenance set out in the said General Conditions and Supplementary Specification respectively, and for the re-erection and construction of the said works, and to provide for the free and uninterrupted flow of sewage during the progress of such rebuilding, at their own expense, in accordance in all things with the said specification, schedule to specification, general conditions, special condition, and plans therein respectively referred to, and within thirty-nine weeks from the date of being called upon to do so. And whereas I, the said George Forrest, have offered to become bound to Her said Majesty, her heirs and successors, for the due performance and fulfilment of the said contract, according to the said agreement, and the several annexures thereto, so far as the removal of a portion of the said works constructed on the "Monier System" is concerned, if the Engineer shall be dissatisfied with the same at any time during either of the periods of maintenance referred to, and the re-erection of the said works, and for the free and uninterrupted flow of sewage during the progress of such rebuilding, at the contractor's expense, in the manner provided for in the original specification, schedule to specification, general conditions, and plans within the time lastly hereinbefore set out. Now the condition of the above-written bond and obligation is such that if the contractors do and shall well and truly remove so much of the said works as shall have been constructed on the "Monier System," if the Engineer shall be dissatisfied with the same at any time during the respective periods of maintenance set out in the said general conditions and supplementary specification, and re-erect and construct the said works, and provide for the free and uninterrupted flow of sewage during the progress of such rebuilding at their own expense, in accordance in all things with the said specification, schedule to specification, general conditions, and special condition, and the plans therein respectively referred to within thirty-nine weeks from the date of being called upon to do so. Then this obligation will be void, and of none effect, otherwise to remain in full force and virtue.

Signed, sealed, and delivered by the abovenamed }  
 George Forrest, in the presence of, — }  
 HAROLD F. NORRIS.

GEO. FORREST.

#### STATUTORY DECLARATION.

I, GEORGE FORREST, of Marrickville, in the Colony of New South Wales, householder, do hereby solemnly declare and affirm that I am possessed of property to the value of £6,000 sterling and more, and that such property consists of—Freehold property, £5,700; cash in bank, £300 sterling. And I make this solemn declaration as to the matters aforesaid, according to the law in this behalf made and subject to the punishment by law provided for any wilfully false statement in any such declaration.

Taken and declared at Marrickville, this 1st day }  
 of June, 1895, before me, — }  
 ROBERT ANDERSON, J.P.

GEO. FORREST.

Know all Men by these Presents,—That I, James Gillan, of Dulwich Hill, in the Colony of New South Wales, householder, am held and firmly bound unto Her Most Gracious Majesty Queen Victoria, in the penal sum of £6,000 sterling, to be paid in Sydney, in the said Colony, to Her said Majesty, her heirs or successors, for which payment well and truly to be made I bind myself, my and each and every of my heirs, executors, and administrators firmly by these presents.

Sealed with my seal, dated the 16th day of May, in the year of our Lord, 1895.

WHEREAS, by agreement bearing even date herewith, and expressed to be made between John Carter, Frank Moorhouse Gummow, and David Graham Snodgrass, carrying on business together as contractors, under the name, style, or form, of "Carter, Gummow, & Co.," and therein and hereinafter called the contractors of the one part, and Her said Majesty of the other part, the said contractors covenanted to perform the various works required in and about the full and proper construction, erection, and completion of the northern main sewer, Leichhardt and Annandale sections, contract No. 77, Sydney sewerage, according to the copy notice, specification, schedule to specification, general conditions, special condition, supplementary specification, tender, copy, letter of acceptance of tender, and letter of assent thereto, thereunto annexed and marked "A," "B," "C," "D," "E," "F," "G," "H," and "I" respectively, and certain drawings relating thereto, now in the office of the Engineer-in-Chief for Metropolitan Sewerage Construction, and marked "No. 1 to No. 11," both inclusive.

And whereas the contractors have entered into a bond to Her said Majesty, dated the 16th day of May, 1895, conditioned to remove at their own cost so much of the said works as shall have been constructed on the "Monier System" if the Engineer shall be dissatisfied with the same at any time during either of the periods of maintenance set out in the said general conditions and supplementary specifications respectively, and for the re-erection and construction of the said works, and for the free and uninterrupted flow of sewage during the progress of such rebuilding, at their own expense, in accordance in all things with the said specification, schedule to specification, general conditions, special condition and plans therein respectively referred to, and within thirty-nine weeks from the date of being called upon to do so. And whereas I, the said James Gillan, have offered to become bound to Her said Majesty, her heirs, and successors for the due performance and fulfilment of the said contract, according to the said agreement and the several annexures thereto, so far as the removal of the portion of the said works constructed on the "Monier System" is concerned, if the Engineer shall be dissatisfied with the same, at any time during the periods of maintenance referred to and the re-erection of the said works, and for the free and uninterrupted flow of sewage during the progress of such rebuilding at the contractors expense, in the manner provided for in the original specification, schedule to specification, general conditions, and plans within the time lastly hereinbefore set out. Now the condition of the above-written bond and obligation is such that if the contractors do and shall well and truly remove so much of the said works as shall have been constructed on the "Monier System," if the Engineer shall be dissatisfied with the same, at any time during either of the

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the respective periods of maintenance set out in the said general conditions and supplementary specification, and re-erect and construct the said works, and provide for the free and uninterrupted flow of sewage during the progress of such rebuilding at their own expense, in accordance in all things with the said specification, schedule to specification, general conditions, and special condition, and the plans therein respectively referred to within thirty-nine weeks from the date of being called upon to do so. Then this obligation will be void and of none effect, otherwise to remain in full force and virtue.

Signed, sealed, and delivered by the abovenamed }  
James Gillan, in the presence of,—

HAROLD F. NORRIE.

JAMES GILLAN.

#### STATUTORY DECLARATION.

I, JAMES GILLAN, of Dulwich Hill, in the Colony of New South Wales, householder, do hereby solemnly declare and affirm that I am possessed of property to the value of £6,000 sterling and more, and that such property consists of cash at bankers, freehold and other property. And I make this solemn declaration as to the matters aforesaid according to the law in this behalf made, and subject to the punishment by law provided for any wilfully false statement in any such declaration.

Taken and declared at Sydney, this 27th day }  
of May, 1895, before me,—

HAROLD F. NORRIE, J.P.

JAMES GILLAN.

“A.”

Department of Public Works, Sydney, 8 March, 1895.

#### TENDERS FOR PUBLIC WORKS.

TENDERS will be received at this office for the public works specified in the Schedule hereunder up to 11 o'clock a.m. of the various dates set forth in the second column.

All envelopes containing tenders must be addressed to the President of the Tender Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Tenderers may be in attendance when the tenders are opened, and the name of the lowest tenderer will be announced, if possible, before the duties of the Board have terminated.

The following conditions will have to be strictly complied with, otherwise the tenders will not be taken into consideration:—

- 1st.—Each tender must state the time within which it is proposed to complete the work, and in every instance the full christian and surname or names of persons tendering.
- 2nd.—Every tender must contain an undertaking on the part of the person tendering to make the cash deposit provided for in the General Conditions and to be answerable for the due performance of the contract in the event of the tender being accepted; and undertaking, in that event, to execute and deliver to the Minister for Public Works a valid legal contract with Her Majesty the Queen for securing such performance.
- 3rd.—No tender will be considered which shall have been received after 11 o'clock a.m. on the day upon which tenders are to be received, unless there are circumstances which, in the opinion of the Board, render it desirable that it should be received.
- 4th.—Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz:—

For amounts up to £500 inclusive ... ..	£5 0 0
For amounts exceeding £500 and not exceeding £1,000 ... ..	10 0 0

For all sums over £1,000, 1 per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the manager of the bank upon which it is drawn, or a bank draft.

- 5th.—Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.
- 6th.—In the event of any tenderer failing to take up his tender, complete the contract agreement, and proceed with the contract within the time specified, or withdrawing his tender within thirty days after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account of such contract shall be absolutely forfeited to the Crown and shall be paid to the credit of the Consolidated Revenue of the Colony.
- 7th.—Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted, but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.
- 8th.—In the event of any contract being tendered for at a schedule of rates, the approximate quantities as given of each item must be worked out and a total sum shown.

All deposits, with the exception of that of the lowest tenderer, when practicable, will be returned to the persons entitled thereto immediately after the Board shall have adjourned; and the deposit made by the successful tenderer shall be returned to him on executing the contract agreement for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender will not be returnable until the service is satisfactorily completed.

It is to be understood that the Government does not bind itself to accept the lowest or any tender; and no tender will be accepted until the head of the Branch under whose directions the work is to be carried out has reported upon the whole of the tenders received.

J. H. YOUNG.

Roads.

## Roads.

Description of Work or Supplies to be Tendered for.	Dates up to which Tenders will be received.	Where Plan, Specification, and form of Tender may be seen.	Remarks.
* * * * The Northern Main Sewer, Leichhardt and Annandale Sections. Contract No. 77, Sydney Sewerage.	* * * * 13 Mar., 1895	* * * * Office of the Commissioner and Engineer-in-Chief for Roads, Bridges, and Sewerage, Sydney.	* * * *

This is the copy notice marked "A," referred to in our agreement with Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

JOHN CARTER.  
FRANK MOORHOUSE GUMMOW.  
(By his Attorney, JOHN CARTER).  
D. G. SNODGRASS.

Witness,—HAROLD F. NORRIE.

This is the copy notice marked "A," referred to in my annexed bond to Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

Witness,—HAROLD F. NORRIE.

JAMES GILLAN.

This is the copy notice marked "A," referred to in my annexed bond to Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

Witness,—HAROLD F. NORRIE.

GEO. FORREST.

## "B."

## SPECIFICATION.

1. *Description of Contract.*

This contract comprises the provision by the contractor of all labour, machinery, tools, plant, and everything that may be necessary for the construction of the Northern Main Sewer, Leichhardt and Annandale Section, as described in detail in the specification, schedule to specification, special condition, and general conditions, and as shown on the following drawings:—

- No. 1. General plan showing sites of sewers, &c.
- No. 2. Longitudinal sections of main and branch sewers.
- No. 3. Cross-sections of road deviations, &c.
- No. 4. General elevation of Johnstone's Creek aqueduct, road crossings, and details.
- No. 5. Details of Nelson-street crossing, general cross-sections of sewer, &c.
- No. 6. General elevation of White's creek aqueduct, road crossings, &c.
- No. 7. Details of White's Creek aqueduct.
- No. 8. General details of White's Creek and Johnstone's Creek aqueducts.
- No. 9. Designs and details of shafts.
- No. 10. Details of Johnstone's Creek and White's Creek aqueducts.

2. *Materials.*

The materials are to be of the quality specified in clauses 7 to 39 of the schedule to specification.

The bricks to be used in these works to be of the quality and description specified in clauses 11 and 12 of the schedule to specification, excepting all red bricks to be used in piers, arches, haunches, spandrels, parapets, and in approaches to aqueducts, up to the level of underside of coping, which are to be as specified, but to be dry-pressed bricks of approved manufacture, dimensions, form, and colour, as per sample to be seen at the Engineer's office. The dry-pressed red bricks, when immersed in water twenty-four hours, not to increase in weight more than 7.85 per cent., and the average breaking strain of twelve bricks to be taken from each parcel not to be less than 5,553 lb. All brickwork is tinted red on plans and sections; the areas on elevations of aqueducts as arches, abutments, piers, spandrels, circular panels over piers, parapets, pilasters, corbels, &c., which are to be specially faced with red and white bricks, are tinted red and white accordingly. The white bricks round circular panels to be specially formed and radiated bricks. All white bricks to be double pressed-plastic bricks, and as hereinbefore specified.

The sandstone to be used in these works to be of the quality specified in clause 15 of the schedule to specification, but the stone to be used in stop-blocks at ends of aqueducts, in copings, string-courses, and skewbacks of the aqueducts herein described, to be Pymont bottom block sandstone, and as specified.

3. *Excavation.*

The excavation for all the works comprised in this contract to be executed in accordance with clauses 40 to 80, 83 to 87, and 107 of the schedule to specification.

The excavation for the foundations of piers, abutment-piers, and approaches to aqueducts, to be executed as specified in the schedule to specification, and to the various depths, widths, steps, &c., as shown on drawings, or to such lesser or greater depths and widths as may be directed, said excavations to be measured to the outside of timbering where such has been approved of.

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All logs, existing pitching, masonry, brick, or concrete work, oval or circular drains, sewers, &c., met with in excavations shall, in the first instance, be put aside beyond actual site of works in separate spoil-banks, to be measured and paid for at schedule prices under items of excavation of open trenches, tunnels, shafts, &c.

In connection with clause 63 of the schedule to specification it is to be understood that the Engineer may, according to the nature of the ground, allow a margin of lining round sewer not exceeding 3 inches, consisting of concrete below level of springing and of sand-packing above level of springing. The filling round brick or concrete shafts to be executed as specified in clause 90 of the schedule to specification.

In connection with clauses 72 and 73 of the schedule to specification it is to be distinctly understood that all sumps which the contractor may think necessary to sink on lines of sewers shall be sunk only of approved dimensions, and the cost of sinking, timbering, unwatering, removing the excavated materials, timbering, &c., and the filling in, to be defrayed entirely by the contractor.

Shafts are to be sunk as specified in clauses 65, 66, 68 to 71, and 76 of the schedule to specification, and as shown on drawing; but if during the progress of the works the Engineer may deem it necessary to omit any of the shafts shown, the contractor shall omit such shaft or shafts where ordered, and such omission shall not entitle him to any claim for loss, damage, or compensation; he shall be only entitled to be paid for the shafts ordered to be sunk at schedule rates.

The price of 1 cubic yard of excavation for all work comprised in this contract (excepting refilling and disposing of surplus materials) shall include the cost of all work herein specified and described in the various clauses of the schedule to specification herein enumerated.

#### 4. *Subducts.*

Subducts to be constructed on lines of tunnels and open trenches, where ordered, as specified in clauses 78 and 79 of the schedule to specification.

#### 5. *Filling.*

The filling in of all excavations, and in any situation comprised in this contract, including the filling in round shafts, concrete foundations of piers, abutment piers, approaches to aqueducts, retaining walls, and sand-packing over and round closing arch of sewers, &c., to be executed as shown, and as specified in clauses 85 to 97, and 101 to 107 of the schedule to specification.

The price of 1 cubic yard of filling in any situation comprised in this contract (except disposing of surplus materials) shall include the cost of all work herein specified and described in the various clauses of the schedule to specification herein enumerated.

#### 6. *Temporary and Permanent Shoring, Timbering, Piling, &c.*

The shoring and timbering, including all iron used in fixing same, required in the construction of these works to be provided, erected, placed in position, withdrawn, covered up, and measured up as specified in clauses 87, 125, and 126 of the schedule to specification.

If during the progress of the contract, in the opinion of the Engineer, pile foundation under piers of aqueducts is considered necessary, it shall be executed as shown on drawing, and as specified in clauses 110 to 126 of schedule to specification.

The piles to be not less than 15 inches diameter at the small end, and 17.50 inches diameter at large end, and they are to be driven until a 20-cwt. ram falling 10 feet does not drive them more than  $\frac{1}{4}$  inch at the last stroke.

#### 7. *Ordnance Fences.*

Road embankments to be protected by sawn hardwood ordnance fences to the extent and as shown on drawings, and as specified in clauses 197, 210, and 211 of the schedule to specification. The fences required for this contract to be two-rail only, and all post to be 6 in. x 4 in. x 6 ft. long, the lower 2 feet to be walled into upper portion of concrete retaining walls. All woodwork, ironwork, &c., to be painted and tarred as specified in clauses 269, 270, and 273 of the schedule to specification.

#### 8. *Roadmaking.*

The different road deviations and roads under, over, and at sides of main sewer, within the resumed land or otherwise, along Crescent Lane, Nelson-street, Young-street, lanes on each side of same, along White's Creek and White-street, to be constructed on embankments, in excavations, and along surface of ground, to be formed, sloped, bored out, ballasted, metalled, &c., as shown on drawings, as may be directed and as specified in clauses 200 to 204 in the schedule to specification.

#### 9. *Tarred Metal Deck.*

All sand filling over sewer in aqueduct to be covered with tarred metal deck, as specified in clauses 205 to 208 of the schedule to specification. The metal to be used in decking for this contract to be of  $1\frac{1}{2}$ -inch gauge as specified in clause 140 of the schedule to specification. The tarred metal to be spread 3 inches thick over the sand-filling.

#### 10. *Sewers, Storm-water Channels, &c.*

The various works comprising this contract are to be executed in conformity with clauses 132 to 139 of the schedule to specification.

The Leichhardt and Annandale section of the Northern Main Sewer commences at 6 miles 51.2515 chains, to be built in open cutting of 4 ft. 6 in. x 3 ft. 6 in. internal dimensions, of concrete, extending for about 9 feet under Crescent Lane; it is then to cross the Johnstone Creek Valley, built of concrete, brick, and stone, on piers, and ten flat brick arches of 12-foot span for a length of about 159.6 feet; on pile foundations, where ordered, and on piers and twelve elliptical brick arches of 48-foot span for a length of about 633.316 feet; on abutment piers and one flat arch of 57-foot span, over Nelson-street, for a length of about 76.333 feet, and on rock foundation with one flat arch of 12-foot span, of concrete, brick, and stone facings, for a length of about 88 feet up to 6 miles 65.8478 chains. A water-escape drain consisting of 24-inch diameter stoneware pipe, about 130 feet in length, with gullies complete, and open rock cutting about 10 feet in length, from Nelson-street towards Johnstone's Creek, to be constructed as shown.

From 6 miles 65.8478 chains to 6 miles 67.30 chains the sewer to be built in open cutting of concrete; from 6 miles 67.30 chains to 6 miles 78.24 chains of brick and concrete in tunnel in rock, and from 6 miles 78.24 chains of 4 ft. 3 in. x 3 ft. 3 in. internal dimensions of brick and concrete in tunnel in rock up to 7 miles 5.1941 chains, and then of concrete only, in open cutting up to 7 miles 6.9091 chains.

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The sewer then to cross the White Creek Valley, built of concrete, brick, and stone, on rock foundation and on piers, and seventeen flat brick arches of 12-foot span for a length of about 359.1 feet, on piers, and nine elliptical arches of 48-foot span for a length of about 474.09 feet, on abutment piers and one flat arch of 33-foot span over White-street for a length of about 58 feet, on which length the sewer to be provided with two storm-water escape weirs and 12 inch diameter stoneware vertical offset pipes, discharging into a water-escape drain consisting of 24-inch diameter stoneware pipes about 200 feet in length, with gullies complete; and open cutting only about 10 feet in length, from White-street towards White's Creek, to be constructed as shown. The sewer then to be constructed on rock foundations and on piers and four flat brick arches of 12-foot span for a length of 241.79 feet up to 7 miles 23-0758 chains.

Then from 7 miles 23-0758 chains to 7 miles 23-9840 chains the sewer to be constructed of concrete only in open cutting, and from 7 miles 23-9840 chains to 7 miles 30-4840 chains the sewer to be constructed of brick and concrete in tunnel in rock, but the lining of this length of tunnel shall not be commenced until especially ordered.

A branch sewer in tunnel in rock of 3 ft. 3 in. x 2 ft. 2 in. internal dimensions, to be constructed along Johnstone-street, from Piper-street to Rose-street.

If, during the progress of the contract, the Engineer may deem it necessary to omit or alter any of the sewers, shafts, junctions, drops, inlets, or other works shown or described in the clauses herein quoted, then the contractor shall be bound to omit altogether, or alter, as may be ordered at the time, any sewers, shafts, junctions, drops, inlets, &c., as the case may be, and such omission or alteration shall not entitle him to any claim for loss, damage, or compensation. He shall be only entitled to be paid for the work actually ordered and carried out at the various schedule rates referring to such work.

#### 11. *Concrete Work.*

The concrete to be used in foundations of all piers, and in all piers and abutment piers, for the 12-foot, 33-foot, 48-foot, and 57-foot span arches up to level of springing and top of plinths, in haunches and spandrels, between and over all arches between external brick-facings, up to level of underside of string-course (6 inches below invert of sewer), in retaining walls along road deviations and roads, round storm-water discharge pipes, round stoneware pipe where directed, and where ordered in any situation in the construction of these works, to be sandstone concrete of the quality specified in clause 142 of the schedule to specification.

The concrete to be used in inner sewer lining (between brick facings) of aqueducts to be special bluestone concrete of the quality specified in clause 141 of the schedule to specification, except that in this instance the bluestone metal to be broken to a size to pass freely with its largest dimensions through a ring of  $\frac{3}{4}$  inch in diameter, to be screened and washed as specified in clause 140 of the schedule to specification.

The concrete to be used in lining sewers in tunnels, open cuttings, in ventilating shafts, drops, weir-chambers, inlets, flushing, gas-check, and other chambers, and where ordered in the construction of these works, to be bluestone concrete of the quality specified in clause 140 of the schedule to specification. The whole of the concrete work comprised in this contract to be commenced, executed, and completed (including the iron bond-rods in concrete lining of sewer on lines of aqueducts as described in clause 164 of the schedule to specification), as shown on drawings, and as specified in the schedule to specification in clauses 140 to 171.

#### 12. *Cement Facing.*

All exposed, internal, and external concrete surfaces to be protected by cement facing prepared of cement and sand in the proportion of one cement to two of sand, except all internal concrete surfaces of sewer over aqueducts, which are to be protected by special cement facing prepared in the proportion of one cement to one of sand. The cement facing to be executed as specified in clauses 180 and 181 of the schedule to specification complete with all battered faces, recesses, chamfers, weatherings, &c., as shown, and as shall be directed.

#### 13. *Brickwork.*

The brickwork comprised in this contract to be executed and completed as shown on drawings, and as specified in clauses 172 to 179 of the schedule to specification, and clause 2, except that in this instance the 12-foot span arches in aqueducts are not to be built in  $4\frac{1}{2}$ -inch rings, but they are to be built in radiating through courses of rubbed and gauged or radiated bricks, as shown, and as shall be directed. The 48-foot span arches to be built as specified, and to be thickened out at the haunches, so as to abut against the sandstone concrete filling over piers between the arches, and between the external brick facings as shown.

#### 14. *Masonry.*

All freestone ashlar in skewbacks, string-courses, copings, 6 ft. 8 in. x 2 ft. x 9 in. stop-blocks at ends of aqueducts, and steps, to be provided, dressed, set in cement and built in where shown on drawings and where directed, as specified in clauses 15, 182, and 183 of the schedule to specification, and in clause 2. The exposed faces of skewbacks to be finished with 2-inch parallel drafted margins along each exposed arris, stopped in at inner edges, and the surface of stones between to be picked down, the projecting parts to be level with true line of wall.

#### 15. *Squared Bluestone Pitching.*

Squared bluestone pitching to be provided and set round manhole covers, and where ordered, to be  $7\frac{3}{4}$  inches deep, and as specified in clause 186 of the schedule to specification.

#### 16. *Squared Freestone Pitching and Channelling.*

Squared freestone pitching to be set round gully gratings, and in road-channels as shown, and where ordered, as specified in clause 187 of the schedule to specification.

#### 17. *Freestone Curbing and Gully Covers.*

Freestone curbing to be set along edges of footpaths, at gully-gratings, &c., to be of the exact dimensions, dressed and sunk as shown, and as specified in clause 188 of the schedule to specification. Gully-covers, 3 ft. 3 in. x 3 ft. x 9 in., to be provided and set, dressed to the exact dimensions, where shown, as specified in clause 183 of the schedule to specification.

### 18. *Pipe-laying and Jointing.*

The providing, laying, and jointing of glazed stoneware pipes to be executed as specified in clauses 13, 14, 137, 170, 189 to 194 of the schedule to specification.

### 19. *Scupper Pipes, Slate Covers, &c.*

The 4-inch diameter glazed stoneware scupper-pipes along footpaths over sewer on lines of aqueducts to have cistern heads built of concrete, covered on top with 16 in. x 9 in. x 1 in. slate covers set in cement as shown.

### 20. *Cast-iron and Wrought-iron Work.*

All cast-iron ventilating grates and closed manhole covers with frames, gas-check frames, gully-gratings and frames, galvanised wrought-iron step-irons, &c., required for this contract to be supplied by the Government to the contractor, and to be received and removed by him when not required, as provided in clauses 264 and 265 of the schedule to specification. Contractor to place said ironwork in position, wall in, joint, and fix same in the works, as specified in clauses 138, 139, 168, and 170 of the schedule to specification, as shown on drawings, and as shall be directed.

### 21. *Order of Works.*

The excavation of all shafts to be commenced simultaneously within three weeks after the date the contract has been signed and all shafts to be completed within nine weeks after commencement of excavation. The five working shafts shown on lines of tunnels provide seven working faces. The driving of the tunnels to be commenced from all faces simultaneously, and the average total progress at all working faces during every day of twenty-four hours to be not less than 11.666 feet or 70 feet during every week of six working days of tunnel excavation complete.

The various excavations of open trenches for sewers, piers, and abutment piers of aqueducts, approaches to same, roads, &c., to be commenced in each length from the different faces simultaneously. The piling where such has been ordered for foundations of piers of aqueducts, all pipe-laying, concrete work, brickwork, masonry, &c., required in shafts, chambers, junctions, tunnels, foundations of piers, and abutment piers of aqueducts to level of top of plinths and springing of arches, and in sewers in open cuttings approaching aqueducts, &c., to form the first part of the works.

The construction and completion of all brickwork, concrete work, and masonry of all piers, abutment piers, with all arches of 12-foot, 33-foot, 48-foot, and 57-foot span and spandrels up to level of tops of said arches, to form the second part of the works.

The construction and completion of all concrete work, brickwork, masonry, &c., of all sewers over aqueducts from top of arches to level of top of all parapets, including weir chambers, storm-water discharge pipes, sand-filling and asphalt covering over aqueducts, road-making, road-repairing, and every other work required in the completion of the whole contract, to form the third part of the work.

In constructing the various items forming the first and second part of the works, it is to be distinctly understood that all piers and abutment piers for arches of 12-foot, 33-foot, 48-foot, and 57-foot span, must be built and completed up to level of springing and top of skewbacks, as the case may be, throughout each respective length of aqueduct over each valley, before any of the arches are commenced.

On completion and approval of all piers and abutment piers, each series of arches over each valley to be commenced (unless otherwise directed) at its eastern end, and to advance to its western end, with not less than six centres at a time for the arches of 48-foot span, and with five centres for the arches of 12-foot span, that is to say—

After the first six centres of 48-foot span and the first five centres of the 12-foot span arches are placed in position, the arches over same are to be built and completed one after another, then the spandrels between the 48-foot span arches are to be built with concrete between brick-facings to a height of 11 ft. 3 in. above the springing, after which the centres from underneath the first arch of each series, after the specified period allowed for settlement has expired, to be removed and at once to be re-erected over the sixth or seventh openings, as the case may be, then the centres from the second arch to be removed and re-erected over the seventh and eighth openings, and so on, and the same system to be continued until all arches of one aqueduct have been built and completed.

All centres of arches, cambered as shall be directed, to be strong enough in every part to carry the weight of each arch to be built thereon. Centres under the 12-foot span arches shall not be removed until fourteen days after the completion of each arch. Centres under the 48-foot span arches shall not be removed until twenty-eight days after completion of each arch, and the concrete and brickwork of spandrels between the arches from springing of arch to a height of 11 ft. 3 in. above same, and the centres of the 33-foot span and the 57-foot span arches shall not be removed until fourteen days after the completion of each arch, and until the centres of the adjoining arches at each side of each respective arch have been removed.

After all arches of one aqueduct have been completed as specified, and approved of, the concrete, brickwork, and masonry, as the case may be, to be built in between and above same, in horizontal layers transversely and parallel with gradient of sewer longitudinally, so that all arches of one aqueduct (except where otherwise directed) shall be gradually, uniformly, and equally weighted, as the superstructure rises to the levels hereinbefore specified.

### 22. *Schedule to Specification, Special Condition, and Conditions of Contract.*

Notwithstanding that certain clauses of the schedule to specification are especially enumerated, it is to be understood that the schedule to specification, special condition, and the general conditions attached to the specification, shall be held binding in all matters relating to this contract, as far as the Engineer may deem the same applicable.

### 23. *Note.*

Parties tendering are particularly requested to observe that they must name only one rate of percentage above or below all the prices in schedule, and not one rate of percentage upon certain items, and another rate or rates upon others.

This is the specification marked "B," referred to in our annexed agreement with Her Majesty the Queen, dated the 16th day of May, A.D. 1895,—

JOHN CARTER.  
FRANK MOORHOUSE GUMMOW.  
(By his Attorney, JOHN CARTER).  
D. G. SNODGRASS.

Witness,—HAROLD F. NORRIE.

This is the specification marked "B," referred to in my annexed bond to Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

Witness,—HAROLD F. NORRIE.

JAMES GILLAN.

This is the specification marked "B," referred to in my annexed bond to Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

Witness,—HAROLD F. NORRIE.

GEO. FORREST.

"C"

SCHEDULE TO SPECIFICATION.

*Land required for works.*

1. Access to the site of the works (other than by public roads) to be had by means of such land the Engineer may deem necessary.
2. For the purpose of sinking, working, and building shafts on lines of streets, and on private ground, the contractor to have temporary possession of an area of 24 feet by 17 feet at the site of each shaft, unless otherwise directed.
3. For the purpose of excavating open trenches, and for constructing the various works therein, and raising embankments over same, or where ordered, contractor to have temporary possession of such land, of the exact widths and lengths which, in the opinion of the Engineer, is required for these works.
4. The land herein referred to to be set out by the Engineer upon receiving written application from the contractor. Such application must be made four weeks prior to the time the said land is required.

*Setting-out work.*

5. The centre lines of sewers, &c., are shown on general plans by full lines, which will be marked on the surface of the ground, the same as on plans, as the works proceed.
6. Contractor shall at his own cost and expense at any time—by day or by night, either on working days or on Sundays or holidays—render all such assistance and supply all such labour, plant, and lighting as the Engineer or Superintending Officer may require, to set out, to check such setting-out, or to inspect any portion of the works, which must for that purpose be left clear and free from any obstruction or impediment. During and for the performance of those operations, contractors shall be obliged to suspend any or all of his work, if required to do so by the superintending officer, and without having any claim for loss or damage on account of such temporary suspension.

*Materials.*

7. All materials supplied by the contractor are to be of the best quality and description of their respective kinds. Samples of each kind to be submitted for the approval of the Engineer, and retained in office; and, on approval having been obtained, they are to be delivered on the works ready for use, as per sample.
8. The contractor shall inform the Engineer of the sources whence the various materials are supplied, or of the places of their manufacture, and afford him every facility to inspect their supply or manufacture at any stage of the same.
9. Due notice shall be given by contractor to the Superintending Officer when any material is brought on the ground, all of which must be neatly stacked in regular heaps, submitted for approval, and approved of in writing by the Superintending Officer, before it may be used in the works. None but that so approved shall be used.
10. The contractor to provide approved gauge-boxes or scales for measuring or weighing all materials supplied.
11. Bricks to be double-pressed, of well-mixed material of approved quality and uniform fineness; to be new, sound, hard, and well-burnt kiln bricks, free from cracks and all other defects, equal in every respect to the sample brick to be seen at the Engineer's office. They are to have sharp arrises, and to be of approved dimensions, form, and colour, and, when ordered, to be specially moulded. Radiating and specially-formed bricks to be provided for all segmental shafts. All bricks to be subjected to the following tests:—
- (a) *Tensile strength.*—The tensile strength to be tested, in the departmental testing machine, by laying the brick horizontally on its base of 3 inches, between supports 7 inches apart, and the strain applied across the centre of the brick. An average breaking strain of twelve bricks to be taken, which must not be less than 8,000 lb.
- (b) *Porosity.*—Bricks immersed in water for twenty-four hours must not increase in weight more than 3 per cent.
- Should the twelve bricks fracture under the foregoing average strain, or prove more porous than 3 per cent., then the Engineer may reject the whole stack of bricks from which the twelve bricks were taken.
12. In the event of the contractor delivering bricks of a mixed description and quality, the Superintending Officer shall have the power to require of the contractor to have those bricks which, in his opinion, are suitable for the works, picked out and stacked where directed, and those unsuitable removed from the site of the contract; and in the event of the contractor refusing or failing to comply with such request within twelve hours from the time it has been made, then in all such cases the Superintending Officer shall have the power of rejecting the whole of the bricks so delivered by the contractor.
13. Stoneware pipes to be of well-ground and mixed material, of tough, tenacious, impervious quality, well-burnt, sound, hard, uniform in thickness, true in section, straight longitudinally, uniformly glazed both inside and outside, free from fire and other cracks, flaws, and ash-holes, the collar perfectly joined to the barrel, and in every way equal to sample pipe to be seen at the Engineer's office.

Pipes

Pipes to be of the following thicknesses and depth of collars, namely:—

Dimensions.

Pipes, inside diameter, 9 inches; thickness,  $1\frac{1}{8}$  inch; depth of collar, 2 inches.

"	"	12	"	"	1	"	"	2	"
"	"	15	"	"	$1\frac{1}{4}$	"	"	$2\frac{1}{4}$	"
"	"	16	"	"	$1\frac{3}{8}$	"	"	$2\frac{1}{2}$	"
"	"	18	"	"	$1\frac{1}{2}$	"	"	$2\frac{3}{4}$	"
"	"	21	"	"	$1\frac{5}{8}$	"	"	$2\frac{5}{8}$	"
"	"	24	"	"	$1\frac{3}{4}$	"	"	$2\frac{3}{4}$	"

All parcels of pipes used in these works will be tested and submitted to the following crushing Tests, as applied in the departmental testing machine:—

24-inch diameter pipe, 165 lb. per square inch of bearing surface.

21	"	"	165	"	"	"
18	"	"	142	"	"	"
16	"	"	142	"	"	"
12	"	"	142	"	"	"
9	"	"	142	"	"	"

If the Engineer deems it necessary, the pipes will also be tested for porosity. Should the pipes fracture under the foregoing strains, or not prove impervious to water, then the Engineer may reject the whole parcel from which the pipes were taken.

14. In the event of the contractor delivering quantities of pipes, bends, and junctions of a mixed description and quality, the superintending officer shall have the power to require of the contractor to pick out and stack, where directed, those pipes, bends, and junctions which, in his opinion, are suitable for the works, and those unsuitable removed from the site of the contract; and in the event of the contractor refusing or failing to comply with such request within twelve hours from the time it has been made, then in all such cases the Superintending Officer shall have the power of rejecting the whole of the pipes, bends, and junctions so delivered by the contractor. Defective pipes, &c.

15. All sandstone used in the construction of these works to be hard, sound, and solid, of the best description, free from all defects, and as per sample to be seen in the Engineer's office, and to stand a crushing strain of 6,500 lb. per square inch. A tensile test will also be required; for this six stones must be prepared, 4 in. by 4 in. by 12 in.; these, when laid on their natural beds upon supports 10 inches apart, must give an average breaking strain of not less than 4,333 lb., the strain being applied across the centre of the stone. Sandstone.

16. All bluestone used in the construction of these works to be of the best description of basaltic bluestone obtainable, free from honeycomb and all defects, and as per sample to be seen at Engineer's office. Bluestone.

17. Sand to be sharp quartz sand, free from all earthy, loamy, or clayey matter, equal in quality to the sample of Nepcan River sand to be seen at the Engineer's office, and to be washed perfectly clean whenever the Engineer deems it necessary. Sand.

18. The cement to be used throughout these works to be well packed in strongly-made casks; to be the best Portland cement, of approved brands and manufacture, delivered in thoroughly sound condition, fit for immediate use, and without requiring seasoning or air-slacking; to be free from any symptoms of staleness, caking, damage to the packing, hard or set lumps; and no barrel or portion of same to be used until it has been examined and approved. The Engineer may delay approval of any parcel of cement pending tests extending over a longer period than hereinafter specified. Samples taken from various casks, from each parcel brought on the works, to be submitted for testing. Such samples shall be taken out of the package in an equal section, extending from the surface to the centre of the cask. The cement, when gauged with water to a stiff paste, must set in a damp atmosphere in from one and a half to six and a half hours. Neat cement, of the consistency abovementioned, will be made into pats, kept in moist air until set, and then placed in water at a temperature of between 65° and 80° F., and also in Deval's hot bath, at a temperature of 180° F. These test pats will be examined from day to day, and should they show symptoms of blowing, or any alteration or variation in form or volume, or imperfect setting capacity, the whole parcel from which the cement was taken will be rejected. The cement shall weigh not less than 100 lb. per imperial striked bushel, filled from the hopper. Each cask shall contain not less than 374 lb., exclusive of weight of packing. The specific gravity to be not less than 3.00; but cement up to or exceeding the specified degree of fineness, if of a lighter weight than herein stipulated, but otherwise equal to the specified tests, may be accepted subject to the decision of the Engineer, provided that the deficiency in weight is made up in quantity. The cement must be ground so fine that the residue on a sieve of 6,400 meshes per square inch, without rubbing shall not exceed 20 per cent., and on a sieve of 14,500 meshes not more than 30 per cent. For the test for tensile strength, the cement will be gauged with three times its weight of standard sand (viz., sand from crushed sandstone, washed, dried, and sifted through a sieve of 400 and retained upon one of 900 meshes to the square inch), and mixed with an average of about 10 per cent. of their weight of water, and made into briquettes formed in moulds of 1 inch sectional area at the weakest part. Such briquettes to be kept in a damp atmosphere, and put into water twenty-four hours after they have been made, and remain in water at a temperature of between 60° and 70° F., until their tensile strength is tested. These briquettes must bear a tensile stress of not less than 100 lb. per square inch after seven days, and 200 lb. per square inch after twenty-eight days from being moulded. Cement, when tested neat, must bear a tensile stress of at least 300 lb. to the square inch after three days, two of them in water; and 450 lb. after seven days, six of them in water; and 550 lb. after twenty-eight days, twenty-seven of them in water. Briquettes shall also, after being in a damp atmosphere for twenty-four hours, be kept in water at a temperature of 180° F. for six days, when the tensile stress must be equal to that specified for twenty-eight days at normal temperature. The tensile strength will be ascertained in the Government testing-machine, with the load increasing at the rate of 200 lb. per minute, and the average breaking weight of six briquettes will be taken for each test. Any cement which absorbs in proportion more than 2 milligrams of carbonic acid to 3 grains of cement shall be taken as containing more than the permissible quantity of free lime or magnesia. Should the sample fail in any or all of these tests, or show irregularity in quality, or not show a proper progressive increase Cement.  
Condition.  
Samples.  
Setting test.  
Hydraulicity.  
Weight.  
Specific gravity.  
Fineness.  
Tensile strength.  
Hot test.  
Rate in loading testing machine.  
Free lime.

in

in strength with age of briquette, then the Engineer may reject the whole parcel from which the sample was taken, and the contractor shall at once remove the said parcel of cement from the site of the works at his own expense; failing which, the Engineer may have it removed at the contractor's cost without further notice. Empty casks to be immediately broken up and removed from off the works. To facilitate the gauging of cement throughout the contract, cement casks will be taken as equal to holding 4 cubic feet; otherwise, the contractor to provide and make approved gauge-boxes, holding exactly 4 cubic feet, for measuring cement.

Contents of casks.

Delivery.

Cement is to be brought on the ground in quantities of not less than fifty casks, provided that this quantity is sufficient for fourteen days' supply, but in no case is less than fourteen days' supply (whatever that may prove to be) to be brought on the ground in one parcel; nor is the supply stored on works to be at any time less than fourteen days' supply. All cement to be kept on the ground in approved weather-tight sheds, under lock and key, which shall be in the custody of the Superintending Officer.

Storage.

Mortar.

19. The mortar to be used in these works to be composed of one part of Portland cement and of two parts of clean washed sharp sand, as described in clauses 17 and 18, the proportion of each to be correctly ascertained by measurement, the whole to be mixed with fresh water, as may be directed, to be well incorporated, and to be used fresh. Any mortar which has become hard or set to be at once rejected. All mortar to be mixed on approved sawn timber platforms close to where it is required.

Special mortar.

20. Special mortar, composed of 1 part of cement and 1 part of sand, and prepared as before described, to be provided and used in all portions of the work where specially specified or directed.

Grout.

21. The grout to be made of mortar as described in clause 20, to be mixed fluid in tubs, close to where it is required, and to be used fresh.

Puddle.

22. Puddle to consist of the best clay to be obtained in the district within a radius of 5 miles; to be carefully turned over and mixed with fresh clean water until the clay, in the opinion of the Engineer, has become of one even and uniform colour and plasticity.

Spun yarn.

23. Spun-yarn to be of the best description of  $\frac{3}{4}$  inch New Zealand flax.

Lead.

24. Lead to be of approved quality, of the best description of soft pig lead, and to be delivered in pigs, which must show the brand or mark of the manufacturer.

Wrought-iron and steel.

25. Wrought-iron and steel to be of the best description and quality, with square arrises, free from scales, blisters, laminations, and all other defects, and subject to tests hereinafter specified.

Tests.

26. The tests for rolled iron shall be as follows:—A piece of iron of such width as shall not exceed 2 inches, or exceed 1 square inch in cross-section, and of a sufficient length to have 10 inches under actual tension, shall be cut, as directed by the Engineer, from any plate or bar about to be used on the work, and the following tensile stresses shall be applied:—

	Stress per square inch without fracture.	Ultimate elongation.	Ultimate contraction of area.
Rolled girders...	20 tons	8 per cent.	10 per cent.
Plates—across grain ...	18 „	4 „	6 „
„ with grain ...	22 „	10 „	12 „
T, L, and bulb T bars ...	22 „	10 „	15 „
L bars ...	23 „	12 „	18 „
Square, flat, and round bars, and bolts over 4 inches sectional area ...	23 „	12 „	18 „
Square, flat, and round bars, and bolts up to 4 inches sectional area ...	24 „	12 „	25 „

Iron within 10 per cent. of above specified stress will be accepted if the contraction of area and elongation are proportionally higher.

The wrought-iron to be further tested for ductility, as follows:—

A plate planed and rounded on both edges, about 4 in. wide and 1 ft. long, shall bend cold over a slab, the corner of which is rounded to  $\frac{1}{2}$  inch radius, for the following angles, without showing any sign of injury or fracture:—

1 inch plate for	With grain.		Across grain.	
	15 degrees	5 degrees	10 degrees	5 degrees
3/4	25	10	12	10
1/2	30	12	15	12
1/4	35	15	20	15
1/8	52	20	30	20
1/4	70	30	30	30

27. Rivet-iron must be capable of being bent cold until the sides are in close contact, without sign of fracture on the convex side.

Steel.

28. The tests for rolled steel shall be as follows:—

The steel to be of a mild quality, having an ultimate tensile strength, either lengthways or crossways, of not less than 26 tons, and not more than 31 tons per square inch, on a test bar, cut in a similar manner to those for rolled iron, with a minimum elongation of 20 per cent., and a minimum contraction of area of 40 per cent.

Strips cut from any steel plate, angle, or bar, to be heated to a low cherry red, and cooled in water of 82 degrees Fahrenheit, must, when cold, stand bending double round a curve, of which the radius is not more than one-and-a-half times the thickness of the plates tested, without showing any sign of injury or fracture.

Cast-iron

29. Cast-iron to be equal to No. 2 pig-iron, or of a proper mixture of No. 1 and No. 3 pig-iron, according to the description of iron-work and pattern; said iron to be of the best quality, tough, close-grained, and capable of being chipped and drilled without difficulty.

Tests.

30. Branded test-bars, 2 in. x 1 in. x 3 ft. 6 in., to be cast vertically, in the presence of the Superintending Officer, from the cupola from which castings are being run, and to be then carefully marked with the date. These test-bars will be placed on bearings 3 feet apart, and submitted in the centre to a weight not exceeding 28 cwt., and the deflection caused by this weight must not be less than  $\frac{3}{8}$  inch before fracture; if the bars do not stand this test to the satisfaction of the Engineer, then the whole of the castings which have been cast of iron of the same quality, shall be at once rejected.

31. All castings of every description, before they leave the foundry, to be carefully examined and weighed, to be slung on chains above ground, and to be sounded with a hammer, and they are again to be carefully examined, slung, and sounded with a hammer when delivery of same is taken at the site of the works. Tests of castings.

32. All straight pipes required in the contract, before delivery of same is taken on the works, shall be, at the foundry or at the site of the works, as shall be directed, duly proved under hydrostatic pressure equal to a column of water of 200 feet, and when under pressure to be thoroughly sounded quickly all over with a hammer of not less than 4 lb. Tests of pipes.

33. The gun-metal required throughout these works to be an alloy composed of eight parts of copper to one part of tin, unless otherwise specified. Gun-metal.

34. The tests for cast-steel shall be as follows:—

Bars turned to  $\frac{3}{4}$ -inch diameter for a sufficient length to have 5 inches under actual tension, shall have an ultimate tensile strength of not less than 26 tons per square inch, and a minimum elongation of 18 per cent. Cast-steel tests.

35. The cost of providing the materials and wrought and cast iron works, &c., herein described, required by the Engineer for testing purposes, and the carriage of same to the Public Works testing-room, place of manufacture, site of works, or to the University, as the case may be, and as shall be directed, shall be borne solely by the contractor; and any of the materials, or any part of the wrought-iron and gun-metal work, or any of the pipes, castings, &c., injured or broken by the testing, shall be immediately replaced by new and sound materials at contractor's expense; wrought-iron, gun-metal, cast-iron pipes, or other castings, to be again tested as before described, until the whole have been tested to the entire satisfaction of the Engineer. Cost of tests.

36. Timber to be of the best description, sound, straight, free from sap, large or loose knots, wanes, shakes, gum-veins, pipes, or other defects. Timber.

37. Hardwood used in the works to be of approved timber.

Round timber to be carefully barked, the diameter given on drawing is to be measured at the small ends. Hardwood.

Hewn timber is to be squared true on all sides, and dressed fair and clean with the adze, so as to show no axe-marks, to be of full dimensions, free from sapwood, and no heart timber must appear on the outside.

Sawn timber to have clean sharp arrises, to be cut die square, free from heart timber, and of the full dimensions shown or specified.

38. Softwood timber to be of the best Baltic or yellow deals, and of the exact dimensions specified when finished. Softwood.

39. Split posts and rails for fencing must be perfectly straight and cleanly split, free from large knots, splinters, and other defects. Split fencing timber.

#### *Earth-borings.*

40. When earth-borings have been taken the results have been shown on drawings, but the Government undertake no guarantee whatever regarding the kinds of soil that will be met with or the firmness or stratification of the ground to be excavated, or the amount of unwatering to be done, or the strength of the timbering that may be required, or the nature and extent of other precautions which may have to be adopted.

#### *Clearing and Grubbing.*

41. The areas of the sites for all excavations and of all embankments, together with a margin of 10 feet in width beyond all these areas, to be cleared and grubbed of all trees, scrub, stumps, roots (to the depth of same), and dead timber, and the whole of such trees, scrub, stumps, roots, and dead timber thus grubbed and cleared to be removed and cleared away from any lands set apart for the purposes of this contract. The cost of all clearing and grubbing to be covered by and included in the schedule price for excavation.

#### *Excavation.*

42. No excavation to be commenced on any portion of the contract until, in the opinion of the Engineer, sufficient building materials are on the ground, together with the necessary appliances and plant to ensure the uninterrupted progress and continuance of the works, after they once have been commenced, at any locality, without any delay or stoppage.

43. It is to be distinctly understood that, when sinking shafts and driving tunnels, the materials excavated, on their arrival at level of staging above mouth of shaft, are to be at once removed; and when materials, &c., are to be conveyed through shafts to the tunnel works, that all such materials, on arrival at mouth of shafts, must be at once conveyed to the works underground, as the contractor cannot be allowed to occupy a larger area than that authorised by the Engineer.

44. When excavating in open trenches, if ordered, the materials excavated and raised to the surface are to be at once removed; and when materials are being conveyed to open trenches, where they occur in public roads, they must be at once taken into the work, so as not to impede the usual traffic.

45. The road metal, ballast, pitching, wood-paving, concrete, asphalt, flagging, sodding, &c., when they are met with in excavation, are to be carefully removed, put aside, and stacked where directed.

46. The cross-sections of tunnel excavation are shown on Drawings, but they will vary with the solidity of the ground, and as the Engineer directs. Cross-sections to vary.

47. Wherever the solidity of the ground permits it, the excavation in trenches for concrete or brickwork to be taken out with vertical sides to level of springing of sewer arch, and to the exact widths of concrete or brickwork shown on Drawings, and below that level to bottom of trench with curved or vertical sides, as shall be directed. Method of excavation in trenches without timbering.

48. Where timbering is required, trenches 8 feet deep and under shall have vertical sides, and shall be 1 ft. 3 in. wider to outside of polling-boards than width of concrete or brickwork. Where trenches are over 8 feet deep and require timbering, they shall have vertical sides, and shall be 1 ft. 3 in. wider to outside of polling-boards than the width of the concrete or brickwork for the lower 8 feet. Above that level they shall be 2 feet wider to outside of polling-boards than concrete or brickwork. Width of trenches where timbering is required.

For embankments.

49. The excavation for foundation of embankments to be taken out, where ordered, 12 inches below surface of ground, and to such widths and lengths as shall be directed, or as ordered for benching.

Width of trenches.

50. The excavation in solid rock for pipe-trenches shall have vertical sides, and shall be of the following sizes, viz. :—

For 24-inch diameter stoneware pipe sewers...	...	...	3 ft. 9 in. wide.
21-inch " " " " " " " " " " " "	...	...	3 ft. 4 in. "
18-inch " " " " " " " " " " " "	...	...	3 ft. 0 in. "
15-inch " " " " " " " " " " " "	...	...	2 ft. 6 in. "
12-inch " " " " " " " " " " " "	...	...	2 ft. 0 in. "
9-inch " " " " " " " " " " " "	...	...	2 ft. 0 in. "

51. When timbering is not required in excavation in all other ground for pipe-trenches, the trenches shall be of the same widths as those in solid rock. Where timbering is required, the excavation for pipe-trenches 8 feet deep and under shall have vertical sides, and shall be of the following sizes to the outside of the polling-boards, viz. :—

24-inch diameter stoneware pipe-sewers...	...	...	4 ft. 0 in. wide.
21-inch " " " " " " " " " " " "	...	...	3 ft. 7 in. "
18-inch " " " " " " " " " " " "	...	...	3 ft. 3 in. "
15-inch " " " " " " " " " " " "	...	...	2 ft. 9 in. "
12-inch " " " " " " " " " " " "	...	...	2 ft. 3 in. "
9-inch " " " " " " " " " " " "	...	...	2 ft. 3 in. "

Width of trenches.

52. Where timbering is required, the excavation for pipe-trenches more than 8 feet deep shall have vertical sides, and shall be the widths given in clause 61 for the lower 8 feet and for any depth over and above 8 feet, the trenches shall be of the following sizes to the outside of the  $1\frac{1}{2}$ -inch polling-boards (unless otherwise ordered in writing), viz. :—

24-inch diameter stoneware pipe-sewers...	...	...	4 ft. 9 in. wide.
21-inch " " " " " " " " " " " "	...	...	4 ft. 4 in. "
18-inch " " " " " " " " " " " "	...	...	4 ft. 0 in. "
15-inch " " " " " " " " " " " "	...	...	3 ft. 6 in. "
12-inch " " " " " " " " " " " "	...	...	3 ft. 0 in. "
9-inch " " " " " " " " " " " "	...	...	3 ft. 0 in. "

Checks.

53. Transverse and other checks to be excavated to receive pipe-sockets and junctions, and for the purpose of making the joints.

Cast-iron pipe trenches.

54. The trenches for the cast-iron pipe-sewers to be excavated to the depths and widths which the Engineer may order. Joint-holes to be excavated to the dimensions specified or ordered by the Engineer.

Trenches.

55. The excavation of trenches to be carried on in such a manner that they shall be always completed and approved for a length of 48 feet (unless otherwise directed) in advance of sewers or other works.

The use of explosives.

56. In ground which, in the opinion of the Engineer, does not require blasting, the excavation is to be carried on by means of picking, and when the ground, in the opinion of the Engineer, is hard and suitable for blasting, charges of compressed powder, not exceeding 4 inches in length by  $1\frac{3}{8}$  inch in diameter, shall be used. The Engineer, however, reserves to himself the right of ordering any excavation which he may consider blasting would facilitate, to be taken out by means of charges of compressed powder not exceeding 2 inches in length by  $1\frac{3}{8}$  inch diameter, or he may prohibit the use of explosives altogether, when the excavation shall then be done by means of guttering and gadding. If explosives, other than compressed powder, are permitted to be used, the charges thereof will be determined by the Engineer.

Precautions.

57. When the use of explosives is authorised, the contractor shall use every precaution and carry on such operations with such limited charges of powder only, or other approved explosives, as will loosen the shale, rock, &c., without shattering the same; and to employ approved means to prevent, effectually and thoroughly, all stones or other materials from being thrown out of trench, tunnel mouth, or shaft.

Working hours.

58. Blasting will not be allowed between the hours of 10 p.m. and 6 a.m., nor after 1 p.m. on Saturdays, except by the written authority of the Engineer.

Drilling and charging holes.

59. Every hole drilled for blasting purposes will be measured by an inspector, and charged under his supervision.

Storage of explosives.

60. No larger quantity of explosives shall be taken underground than is likely to be used during any current shift.

Pipe-sewer tunnels.

61. When pipe-sewers are to be laid in tunnels, the dimensions of tunnel to be 4 ft. x 3 ft., exclusive of timbering.

Excessive excavation.

62. If the contractor has exceeded the sectional area of excavation ordered, he shall remove such extra excavation, and in the case of trenches make good and fill in same at sides of trench with approved materials, and at bottom of trench with concrete described in clause 142, at his sole cost; the actual cubic contents only of the excavation and of the concrete work shown on drawings and ordered for each special length of sewer in open trench shall be paid for; and in the case of excavation in tunnels and shafts the contractor shall remove such extra excavation, and make good and fill in same with concrete or brickwork, in the manner herein specified, at his sole cost; the actual cubic contents only of the excavation and of the brick and concrete work shown on drawings, and ordered for each special length of tunnel or shaft, shall be paid for.

Maximum allowance.

63. If, however, in cases where the use of explosives is ordered (and in no other case) the Engineer considers it impracticable to excavate any particular length of tunnel or shaft to the exact sectional area ordered, then he may, according to the nature of the ground, allow a margin of concrete lining not exceeding 3 inches over and above that ordered.

Starting tunnel excavation

64. Unless otherwise directed, the excavation of the various tunnels to be commenced from the different faces described in the specification, simultaneously within the specified time after the date the contract has been signed.

Ventilation.

65. Ventilating fans or other approved means to be provided and worked by the contractor at all working shafts and tunnel faces where directed by the Engineer. 66.

66. In all cases where a greater thickness of lining, or a greater cross-section area of tunnel or shaft is ordered to be executed, from whatever cause, after the length of tunnel or shaft in question has been excavated to the profile ordered in the first instance, or if any portion of the excavation of open trench is ordered to be deepened, the excess of excavation so ordered shall be paid for at schedule rates for tunnel, shaft, or open trench excavation, as the case may be, and as the Engineer shall classify and direct at the time. Enlarging shaft or tunnel.

67. No concrete or brickwork shall be commenced until the portion of sewer excavation in tunnel or open trench to be operated upon has been cleaned and levelled, and until the Engineer has examined and approved of same. Inspection and approval.

68. Shafts are to be sunk at the various sites shown on longitudinal sections and on general plans, or in lieu of those shown, at such other sites as the Engineer from time to time may determine. Wherever shafts are ordered they are to be sunk truly plumb, and of the full dimensions shown on drawings, or as may be ordered at the time, clear of timbering. Shafts.

69. All excavation for shafts situated within the lengths of open trenches, is to be paid for as "excavation in open trench." Shafts in open trenches.

70. If the contractor desires, to suit his own convenience, to sink temporary shafts, they are to be sunk only at approved places, and on completion of work to be filled in, as specified in clause 95, to the satisfaction of the Engineer. The cost of sinking, timbering, unwatering, &c., and of filling in, withdrawing, or covering up timber of such shafts, to be defrayed entirely by the contractor. Temporary shafts.

All temporary shafts to be sunk to the dimensions directed, clear of timber.

71. All shafts, temporary or permanent, to be provided and fitted during their construction and completion, or during the progress of the contract, if deemed necessary by the Engineer, with approved winding engines and steel-wire ropes capable of resisting a strain equal to six times that of the working maximum strain, or with such other winding arrangements, ladders, staging, &c., as shall be directed and approved of by the Engineer. Shaft plant.

72. Where directed, sumps are to be sunk at the bottom of shafts not less than 6 feet deep below invert of sewer, and afterwards to be filled in with concrete, as specified in clause 142. Sumps.

73. Any other sumps which the contractor, for his own convenience, may think fit to sink on line of sewer, in tunnel, or in open trenches, during the construction of these works, are to be filled in with concrete, as specified in clause 142, and the cost of sinking, timbering, unwatering, and filling in with concrete and removing the materials, &c., to be defrayed entirely by the contractor.

74. The excavation for sub-ducts in tunnel and open trench to be made below invert of sewer, or as shall be directed, with a fall towards each working shaft or face, and of such dimensions and gradients as may be determined at the time. Sub-ducts.

75. Any material obtained from the excavation, which, in the opinion of the Engineer, is suitable for refilling or other works comprised in this contract, shall be put aside in separate spoil-banks beyond the site of the works. Material for "filling."

76. In the case of tunnel and shaft excavation, when "solid rock" or "more or less hard material," or "solid rock" and "more or less hard material" occur, provision is made on the longitudinal section and in the schedule of quantities for the materials to be classified under these headings. No guarantee is given as to the means which may be ordered for excavating such work. The actual excavation done in tunnels, shafts, and open trenches will, however, be paid for, not exceeding that ordered or specified. Classification of material from shafts and tunnels.

77. The schedule price for one (1) cubic yard of excavation in any situation shall include the cost of taking out and placing said excavation aside in separate temporary spoil-banks beyond the actual site of work, together with the works comprised in clauses 41 and 107. Works covered by 1 cubic yard of excavation.

#### *Sub-ducts.*

78. Sub-ducts to be constructed, when decided on, along lines of tunnels and open trenches, commencing on each length midway, or thereabouts, between two working shafts or faces, 33 inches below invert of sewer, &c., or as shall be directed at the time, and having a fall towards each working shaft, or face of such gradients as may be determined at the time. Sub-ducts of 9 inches, or of a greater or less internal diameter, to be laid immediately underneath the timber floor of tunnel or open trench, or at sides of sewer, in hardwood boxes varying in size and dimensions as shown on drawing. Said boxes to be laid straight and true to levels decided upon, and the pipes to be laid therein, upon, and surrounded by sandstone chippings and quarry refuse. Dry sandstone packing, 4-inch gauge, to be put over pipes.

79. In solid and disintegrated rock the excavation for sub-duct to be executed as shown on cross-sections, and as shall be directed, and the sub-duct to consist of glazed stoneware spigot and faucet pipes of 9 inch internal diameter, more or less, as the case may be. The pipes to be jointed dry, and the filling above same up to under side of sewer lining, to be of dry stone, hand-packed, as before described. The Engineer may also, if he deems it necessary, order the pipes to be jointed altogether, or in part, with tarred gasket,  $1\frac{1}{2}$  inch deep, and cement mortar  $1\frac{3}{8}$  inch deep. The mortar to be prepared of 1 part cement to 2 parts of sand.

#### *Existing Gas, Water, and Sewer Pipes, and Sewers.*

80. During the excavation and construction of these works, the contractor is to take every precaution and provide and execute all, which in the opinion of the Engineer is necessary, to prevent the existing gas, water, or sewer pipes, and sewers wherever met with, or that are adjacent to these works, from injury, and to maintain the same at his sole cost, until, in the opinion of the Engineer, the refilling of excavation and the general progress of the works render further precaution unnecessary. All damage to existing water, gas, or sewer pipes, and sewers, to be repaired at once by contractor at his own cost to the satisfaction of the Engineer.

#### *Railway and Tramway.*

81. Before proceeding to excavate underneath or near any railway or tramway, the contractor must give ample notice in writing to the District Railway or Tramway Engineer of his intention to commence operations; and he must adopt such precautions as the said Engineer may think necessary or prudent for the safety or preservation of the traffic over the said railway or tramway. The contractor will

will be held wholly responsible for all stoppage of traffic, delays, accidents &c., that he or his men may cause, no matter how brought about, during the execution of the work under or near any railway or tramway.

82. The Railway Commissioners may, if they consider it advisable, place a watchman or watchmen on all work to be executed under or near any railway or tramway, for the purpose of seeing that no danger to the traffic is allowed to occur; but this shall not relieve the contractor of any of the responsibilities set forth in the foregoing clause, and the expense of such watchman or watchmen is to be borne by the contractor.

*Diverting Water.*

83. During the construction of these works the contractor shall, at his own cost, do all work which may be required for the effectual diversion of surface-water, subsoil water, and storm-water across and beyond the site of the works, to keep the trenches free from water during the whole time the works are in progress, and in preventing any injury to the works by floods or any other causes.

*Diverting Sewage.*

84. During the construction of the works in general, and of all points of intersection of existing and new sewers, and until completion of all works connected therewith, the contractor, at his own cost, to execute all the works of every description required to prevent injury to private property or to the existing or new works by sewage, and erect and construct watertight fluming across sites of works for the purpose of conveying constantly the whole of the sewage which may flow in said sewers at any time, to the entire satisfaction of the Engineer.

*Unwatering.*

85. All water which, during the progress of the work, may drain into excavations, to be properly, effectively, and continually pumped out, and the whole to be kept dry until after the completion, setting, and hardening of all brick and concrete work and pipe sewers, at the sole cost of the contractor. The greatest care to be taken to prevent running water passing over any of the brick, concrete, and pipe-work until it has set perfectly hard; any concrete, mortar, and cement jointing exposed to wash of water must be taken up at once, and replaced by fresh concrete, mortar, and jointing, at contractor's expense.

*Temporary Bridges, Roads, Fences, &c.*

86. The contractor shall provide, erect, and maintain all necessary temporary bridges, footways, &c., over rivers, creeks, water-courses, open trenches, and underneath railways, tramways, roads, streets, and foot-paths, so as to ensure that the flow of water or traffic is uninterrupted, as the case may be, during the period of contract. He shall also provide, erect, and maintain all temporary fences, hoarding-barriers, night-lights, &c., necessary to thoroughly protect both the general public, land, and property; and shall also properly ballast the temporary roads which may be required for the convenience of the public, and which the Engineer may order.

In the event of the contractor refusing or neglecting to carry out any of the above work, the Engineer shall have power (after having given twenty-four hours' notice in writing of such intention) to do the same at the contractor's expense, and the cost thereof shall be charged to the contractor on account of this contract.

*Temporary Timbering.*

87. During the excavation the contractor to adopt every precaution, and provide all materials, as planking, strutting, shoring, timbering, piling, sheet-piling; all packing materials, as straw, asphalted felt, bags, tarred gasket, puddle, &c., and carefully execute (unless where otherwise specified) all piling, sheet-piling, timbering, &c., where they are required, and carefully and securely close up and pack against the outside of all joints and open spaces between polling-boards, sheet-piles, or timbering, wherever they occur, and caulk open joints where directed, and execute whatever may be required to prevent any buildings, or other superstructures, road and other surfaces over and adjacent to the line of sewer, from settling, cracking, being shaken, slipping, or falling in, and to prevent any portion of the floors, sides, roofs, and end faces of excavation, beyond the exact cross-sections and dimensions determined on, from slipping, falling, running in, or being forced through joints and open spaces in the timbering and sheet-piling, and maintain said timbering, piling, shoring, &c., where and when directed till completion of the works, to the entire satisfaction of the Engineer and at the contractor's sole cost.

*Filling.*

88. The materials referred to in clauses 75 and 93, to be used in filling in the spaces between sides of excavation, and of concrete and brickwork, over sewers, into headings, filling in abandoned open channels, low ground adjoining channels, into road and other embankments, &c., as shown on drawings and as ordered by the Engineer. Sand only to be used in filling over sewer between copings on lines of aqueducts. All filling, unless otherwise specified, to be brought up in level layers, spread 6 inches thick, each layer to be rammed (and watered if directed) until approved of, before the succeeding layer is put on. This filling to be carried up to the surface of the ground, or to such other level or slope, &c., as may be directed at the time. Embankments to be formed as shown on longitudinal sections, to be finished in horizontal layers 9 inches thick after spreading, to be well rammed (and watered when directed) until approved of before the succeeding layer is put on, with side slopes and top widths, as shown on drawings, or as may be determined at the time; to be finished with such benches and curves as shall be directed. Only iron-shod rammers of not less than 10 lb. weight, of approved pattern, to be used, and one man to be employed in ramming to each man employed in filling.

Embankments.

Rammers.

Filling pipe trenches.

89. Material only of approved quality shall be used in refilling the spaces between sides of pipes, &c., and sides of excavation, and over pipes, &c. The refilling to be done in level layers, spread 6 inches thick (and watered when directed), each layer to be carefully and separately rammed as hereinbefore specified. The lower layers up to level of top of pipes to be carefully packed and rammed solidly under and at sides of pipes and socket-joints with spades or other narrow tools. The filling to be done as above described, to such a distance below the level of the street, road, path, &c., as the case may be, to admit of the ballasting, metal, or other covering being replaced.

90. On completion of concrete, brickwork, &c., in shafts, the space between the sides of excavation and outer face of brickwork or concrete to be filled in in 6-inch layers, well rammed (and watered where directed) with materials provided for in clauses 75 and 93, great care being taken in lowering the materials to the bottom, so that stones do not fall on top, or against sides of pipe-shafts, brick or concrete lining. Where stones are permitted to be used as filling they are to be put in in alternate layers with the earth, and at least 12 inches of earth to be placed nearest and round the pipe-shafts, brick or concrete lining.

91. Shafts not required as manholes or ventilators, on completion of contract, or when directed by the Engineer, to have all timber withdrawn (as specified in clause 95), and to be carefully filled in.

92. Where it is found necessary to carry the excavation deeper than the underside of concrete foundations, in order to obtain a compact solid bottom, the portion so excavated to be filled in to the underside of concrete foundation, or as may be directed, with good quarry filling, spread 6 inches thick, rammed and watered until approved. The price per cubic yard for providing and putting in position quarry filling is to be 1 cubic yard of "filling." Quarry filling.

93. All soil, sand, and other materials which the excavations of this contract do not supply, and which it is necessary to obtain for the completion of the embankments and filling of every description, the contractor shall procure, of approved quality, from any other source or land outside the limits of this contract. The cost of providing to be included in the price per cubic yard for "filling." Extra material required.

94. As the works proceed, all shoring, timbering, staging, temporary bridges, piling, sheet-piling, &c., shall be withdrawn, excepting permanent timbering, as shown on drawings, and in all other cases where, in the opinion of the Engineer, the withdrawing of the same is impracticable, or would endanger the safety of the works, buildings, streets, and other surfaces over and adjacent to the works, when the contractor must obtain an order in writing, signed by the Engineer, to the effect that piling, sheet-piling, shoring, timbering, &c., may be covered up. Timber left in.

95. In withdrawing timbering from open trenches and shafts, the same shall be commenced from bottom of excavation, or, as the Engineer may direct, from lowest practicable portion of same, and continued upwards; the contractor to exercise every precaution by means of intermediate shoring, plankings, props, &c., and the filling in around and above sewer and shaft lining to be carried on simultaneously with the withdrawing of the timbering. The cost of withdrawing to be included in the price per cubic yard for "filling." Withdrawing timbering.

96. Refilling into excavation shall be measured, the net dimensions of excavation, less the actual displacement of any permanent works. Any other "filling" shall be measured the actual cross-sections ordered. Measurement of "filling."

97. The schedule price for one (1) cubic yard of filling in any situation shall include the cost of removing the materials from temporary spoil-banks, or from other sources outside the limits of this contract, and the depositing same in accordance with the plans and specification, together with the work and material described in clauses 92, 93, 95, and 107. Works covered by 1 cubic yard of filling.

#### *Surplus Material.*

98. The excavated material not required, or approved for filling, to be removed off the works to such places as shall be ordered, spread and trimmed, and to be paid for as lead. Lead on spoil.

99. The surplus materials to be measured, the actual net excavations less the actual net refilling. Measurements.

100. The distance of lead shall be measured from top of shaft or end of open cutting to centre of spoil-bank or other place of deposit. Length of lead.

#### *Restoration of Roads and other Surfaces.*

101. After the filling in of sewer trenches and shafts has been consolidated and approved, the surfaces of roads, streets, paths, &c., to be at once restored in the manner hereafter described, viz.: In the case of streets which are wood-blocked on concrete, the City Surveyor will replace same on behalf of the contractor, at the rate per square yard stated in specification; in the case of roads or streets which are ballasted and metalled, 9 inches of ballast shall be laid thereon, and after this has been blinded with selected and approved material, the metal put aside, as specified in clause No. 45, shall be evenly spread and rammed until approved; in the case of roads or streets which are ballasted only, 9 inches of ballast shall be laid thereon, and blinded as above; and in the case of other coverings, the surfaces to be restored to the same condition as they were before the commencement of the work. Materials damaged, injured, or otherwise not approved of as fit for reinstating surfaces, to be replaced by contractor with new, sound, and approved materials of their respective kinds, together with any additional ballast which may be required, over and above that found on the site of the excavation and referred to in clause 45. If, however, in the opinion of the Engineer, sufficient hard rock is excavated from the tunnels, shafts, and open cuttings, the contractor will be allowed to break such rock to a 4-inch gauge, and use same for restoring road surfaces. Wood-blocked streets.  
Ballasted and metalled streets.  
Ballasted only streets.  
Damaged materials from road surfaces.  
4-inch gauge sandstone ballast.

102. Immediately the pipes are laid, or concrete and other work in connection with shafts, manholes, lampholes, &c., are executed, and the ground filled in over same in any length of sewer, it is to be distinctly understood that all surplus material is to be carted away, the road cleaned until approved, and the road and other surface to be made good, flush with surrounding surfaces of roads, paths, &c., to the satisfaction of the Municipal authorities and the Engineer, in accordance with the specification; and if the contractor fails to do this, the Engineer shall be at liberty, without further notice, to get the roads cleaned, and the road and other surfaces made good at contractor's cost. Clearing roads and streets.

103. The contractor shall maintain the surface of the roads, streets, &c., after the excavations have been filled in, where the streets, roads, &c., have been broken up or injured during the progress of the work, during the period of the contract time, and afterwards during the period of maintenance, and shall from time to time make good any sinkings in the surface, and shall provide any additional metal, ballast, or other material that may be necessary during these periods. Maintenance of roads, streets, &c.

104. The whole cost of work and materials in connection with the restoration of road and other surfaces to be solely borne by the contractor. Cost.

105. The contractor shall, at the termination of the period of maintenance, procure certificates from the Municipal authorities concerned, that the roads, &c., in their respective districts are in a satisfactory condition. Municipal certificates.

*Restoring Buildings, Walls, Fences, &c.*

106. All buildings, walls, fences, and works of any description met with on the site of the works, that it is found necessary to remove or that may be disturbed, are to be replaced or repaired, at the sole cost of the contractor, and left, at the completion of the works, in the same order and condition as they were before the commencement of the works.

*Trimming.*

107. On completion of all embankments, cuttings, and filling, all top surfaces and slopes to be dressed and trimmed off to the specified inclinations and surfaces, and to such other inclinations, slopes, and surfaces as may be directed at the time, and all materials accumulating after trimming and levelling top surfaces and slopes, &c., shall at the completion of the works be removed, carted away, or spread about, as may be directed by the Engineer; and the schedule rates for filling and excavation shall include and cover all costs for trimming and dressing surfaces, and of removing, carting away, or spreading about all superfluous accumulations at the conclusion of contract.

*Sodding.*

108. On completion of embanking and filling, where ordered, all top surfaces and slopes to be protected by sodding. The surfaces to be sodded are to be boxed out the widths and depths required for the reception of turf-lining. The materials boxed out to be dealt with as provided in clause 107. The sods to be the best obtainable within a radius of 5 miles, of approved quality, not less than 3 inches in thickness and 10 inches square, full cut, with square arrises, to be laid in approved bond on their flat beds, close jointed over all top surfaces of filling or embanking, to be beaten down as the work proceeds with proper tools, as shall be directed, and when finished to present throughout perfectly smooth and plain surfaces. If the season requires it, the turfing to be properly and regularly watered to ensure the grass taking fresh root. The boxing out and turfing to be carried out simultaneously, and no greater area to be boxed out at any time than can be covered with turfing during two working days. The price for sodding to cover all the work described in this clause.

*Soiling and Sowing.*

109. All slopes of embankments, cuttings, and filling, after they have been trimmed, to be covered, when directed, with a layer of surface soil, to be carefully rolled, and when finished to be of a thickness of not less than 3 inches. All slopes, soiled or not soiled, or embankments, cuttings, or filling (where not sodded), after they have been trimmed, &c., and when ordered, to be sown with couch grass seed, as shall be directed, and to be rolled afterwards.

*Piling, Timbering, &c.*

Quantities of piling.

110. Piling to be executed as required and ordered, but the actual quantities required can only be ascertained during the progress of the excavations, and as the trial piles are sunk.

Delivery. Stacking.

111. The whole of the timber which in the opinion of the Engineer is required for each part of the various works, or for such portions of the same as he may determine at the time, shall be cut and delivered on the ground prior to contractor commencing the excavation of such part or portion of said work. All timber, when brought on the ground to be at once properly and carefully stacked on even plain surfaces, and all timbers to lay perfectly straight in the stacks; all timbers bent, split, unsound, or objected to on other grounds by the Engineer shall be removed by the contractor from the ground within twenty-four hours after such objections have been made known to him, and if he neglects to do so they shall be removed without further notice by the Engineer, at contractor's cost; all rejected timbers to be marked by a brand or axe-mark.

Rejection.

Dimensions.

112. All timbers required and delivered for each respective part of works, to be, when dressed, pointed, placed, and fixed in position, of the various lengths and dimensions indicated and shown on the drawings referring to such works, or of such other dimensions which the Engineer may deem suitable for the works.

Pointing piling.

113. All square or round piles shall be sharpened (pointed) at the lower end, the sharpened sides to be cut to a batter of 1 to 6, finished at lowest end with a flatter diamond-cut point, as shown on drawings; the lowest point to be exactly in the straight line of the true axis of the pile, and the sharpened sides to be cut true to the axis of pile to prevent same from twisting and slanting when being driven.

Pointing sheet-piles.

114. All lower ends of sheet-piles to be sharpened on one side only to an inclined edge as shown on drawings, and as shall be directed, to ensure the pile when being driven to drift towards the pile last driven; all sheet-piles of the same length and thickness within each respective panel to have their ends sharpened exactly the same as regards length of cut surface and inclination of bottom edge.

Dressing piles.

115. All round, square, and sheet piles to be straight-grown timber, and before being driven, all square, angle and guide piles to be faced truly straight on the sides against which sheet-piles are to be driven and finished as shown on plans; all round piles for staging across rivers, against which planked sides for concrete filling are to be fixed, to be finished with a straight adzed face the depth required for reception of said planking.

Ring and shoeing piles.

116. All sheet-piles to be perfectly parallel, and, before being driven, to be truly faced and fitted to each other within each panel (between each pair of guide-piles), as shown on drawings, forming a straight close joint.

117. All round, square, and sheet-piles are to be hooped with wrought-iron rings at the top, such rings to be of not less than 2 in. x 1 in. iron for the square and round piles, and of not less than 2 in. x 1/2 in. iron for the sheet-piles; stronger rings to be provided and used when directed. All piles are to be pointed, as hereinbefore described, and where driven into hard ground, when directed and ordered, the points to be protected by wrought-iron steel-pointed shoes, weighing, except where otherwise directed, 28 lb. each for the main and guide piles, and 8 lb. each for the sheet-piles. All shoes to be provided and made of such shape and workmanship as the Engineer shall approve of. They are to be carefully and truly fitted and fixed on to points of piles, and the lowest points of shoes for the round and square piles to be fixed exactly in a straight line with the axis of each pile.

Lining out, &c.

118. The exact lines and positions of all piles shall be carefully and correctly ascertained and staked out by the contractor, to the satisfaction of the Engineer, and all stakes fixed in water or river-beds

to

to extend above high-water level before any piles are placed and driven. After the staking out, piles to be placed truly plumb, or to such batters as may be directed, in their respective positions between guide-wales. All sheet-piles to be placed, truly plumb, between each pair of guide-piles, and lowered into their respective positions between two walings, fitted and fixed on both sides of guide-piles, as shown on drawings.

119. After the excavations for the various foundations have been completed, timbered, and approved, the pile-driving as indicated on drawings, or where ordered, to be proceeded with as follows:— In order to ascertain the lengths of piles required for the foundations of the different piers and abutments, as indicated on drawings, the contractor is first to drive trial piles, in the manner hereinafter specified, in positions required for permanent purposes, one for each alternate pier, or as shall be directed. Any extra expense in connection with trial piles to be borne by the contractor. After the different lengths of piles required for the works have been in this manner ascertained, the permanent piles to be placed in their exact positions, and then to be driven perfectly plumb (or to such batters as may be directed) until tested and approved, as specified. Pile-driving.

120. Long piles from 25 feet and upwards, of 12 inches and greater diameters, to be driven with a ram weighing from 20 to 30 cwt., having a drop over head of pile of not less than 5 feet, the drop to increase in height as the pile is driven, as shall be directed. Any pile driven with a ram of 20 cwt. or more, as the case may be, falling 10 feet, to be driven until at the last stroke it does not drive more than the specified depth, and any pile not standing this test to be drawn when ordered, and to be replaced by a longer pile. Shorter piles may be driven with a ram of less weight than 20 cwt.; and when rams of lighter weight are allowed to be used over shorter piles, sheet-piles, &c., the height of drop to vary from 12 to 18 feet, as the Engineer shall direct. Weight and fall of ram.

121. All piles to be pitched of such lengths as will ensure good sound heads at the levels shown on drawings, or as may be given at the time by the Engineer. No pile shall be pitched until measured and marked by an officer of the Department, nor cut off until tested and approved. Tenons, 8 in. x 4 in. x 6 in. deep, to be neatly cut on pile heads. Any pile which may be too short, or which may have been driven out of plumb, or out of the stipulated batter, or which may split below the level of the required height when driven, to be at once drawn, and to be replaced by a sound pile, driven plumb, or battered, as the case may be, of the required length, at contractor's cost. The contractor must be careful not to pitch any pile which he is not satisfied will be long enough. Scarfing of piles is not permitted. The driving of piles to be commenced and carried on in such order of works as specified, and as shall be directed. Pitching piles.  
Short piles.

122. Where close piling is shown on drawings, all angle-piles and guide-piles to be driven first, after which the upper guide-wales are to be fitted and fixed on to heads of main piles, and then the whole of the sheet-piles of one panel, after being prepared and fitted, to be lowered and placed into position for driving, after which they are to be driven each a few feet at a time, so that the whole panel of sheet-piles shall be driven to the specified depth, as near as possible together; in this manner each panel is to be driven, one after another, unless otherwise ordered. Close and sheet-piling.

123. As the sheet-piling and excavation between same proceeds, the lower guide-wales to be fitted and fixed together with all transverse, diagonal, and angle struts as shown on drawings, and with such additional and intermediate struts as the Engineer may deem necessary during the progress of the works. Timbering, framing, staging.

124. Capsills to be accurately mortised, placed upon bearing piles, and to bear truly on pile-heads. Transverse sleepers to be spaced as shown, placed upon capsills, halved out 1½ inch deep at points of intersection; and planks to be laid and close-fitted between sleepers upon the capsills. Sleepers and planks to be secured to capsills with wrought-iron ½-inch square 9-inch spikes. Capsills, transverse sleepers.

125. The net quantities of all permanent timbering, planking, and piling, as shown on drawing, and where ordered, and of all other shoring, timbering, piling, sheet-piling, which the Engineer has ordered to be covered up, shall be ascertained by measurement before any timbers are covered up, and paid for at schedule rates, which shall cover and include the cost of timber fixed in works, iron used in fixing same, wrought-iron shoes for piles, packing materials, &c. Net quantities.

126. The measurements to be taken to ascertain the net quantities of timber to be paid for under this contract, shall be as under, viz.:—For all hewn and sawn timber where ordered, in any situation in the construction of these works, the width multiplied by the depth and the actual length (tenons included) shall be the net measurement. For round timber, other than piles, ordered to be covered up, the diameter given is to be measured, exclusive of bark, at the smallest end, and the area of such diameter multiplied by the actual length fixed in the works, shall be the net measurement. For piles where ordered, in any situation in the construction of these works, the measurement shall be the actual number of lineal feet (tenons included) of each such pile as placed in position, driven, and fixed in the works. Measurements.

#### *Carpenter's Work.*

127. The whole of the carpenter's work for girders, planks, working-platforms, railings, &c., to be of the timbers specified or approved, and of the best workmanship, to be framed, fitted and fixed, finished, cleaned off, rough parts sand-papered (where directed), and completed in the best possible manner, in strict accordance with drawings, and measurements indicated and dimensions figured thereon, with all necessary nails, spikes, screw-bolts, drift-bolts, wood-screws, coach-screws, wrought-iron straps, stays, and other fastenings of the best quality and approved workmanship. All holes for bolts, spikes, nails, &c., to be bored with the exact augers, and all mortise holes and tenons, &c., to be cut so as to fit exactly, to prevent timbers from splitting. All timber split during the progress of the work and its term of maintenance to be at once replaced by sound timber. All scantlings requiring scarfing in places are to be joined together as shown on sections, and as shall be directed.

#### *Cylinders.*

128. The cylinders for piers, buildings, &c., to be bolted up in the necessary lengths, accurately placed in position, lowered, and the sinking proceeded with by weighting as long as cylinders continue to go down, the tops to be finished at same level. As the cylinders are sinking into the ground the materials inside to be removed by such excavating appliances as may be approved. On completing the excavation of each cylinder to secure and approved foundations, the water to be expelled by pressure of air or other approved

approved method, and on having ascertained the cylinder to be perfectly true in position and plumb, the bottom to be thoroughly cleaned and levelled, after which the concrete, as specified in clauses 140 to 145, and 148, to be filled in for the first 6 feet under air pressure, or as shall be directed, till twenty-four hours after having deposited same in position. Above this level the cylinders to be filled in with concrete, as specified, to level of top of cast-iron cap.

Concrete filling. Sinking to greater depths. 129. The sinking of cylinders to be continued, if required, to greater depths than shown on drawings; such additional depths to be paid for at schedule rate, which is to include all charges, except cost of extra lengths of cast-iron cylinder; a corresponding deduction to be made if secure foundations are obtained at lesser depths.

Rock, &c. 130. If rock, boulders, dead logs, &c., are met with in an irregular manner, or at one side, while sinking cylinders, the air-lock, or other approved method, must be applied, and the obstructions removed, so as to ensure the cylinders to sink plumb, and to rest on a perfectly flat and solid bottom; no powder or other explosives to be used in the removal of such obstacles. The sinking to be proceeded with as soon as possible after delivery of ironwork, to ensure the erection of bridges, &c., without delay.

Fitting lengths. 131. After the sinking is completed, making up or fitting lengths are to be provided and cast, at schedule rate, so as to bring the top of the cylinders to the exact level shown on drawings.

#### *Sewers, Storm-water Channels, &c.*

132. As the cross-section area of each respective length of tunnel and open trench has been excavated, cleaned, and approved, the sewers, storm-water channels, and other works specified, shown on drawing and determined by the Engineer, to be built therein.

Tunnel lining. 133. In rock and other compact formation the concrete and brick lining to be filled in solid between internal surfaces of sewer, storm-water channel, &c. (less, in the case of concrete,  $\frac{1}{8}$ -inch space required for cement facing), and surfaces of tunnel or open trench.

Relieving arches. 134. Under all shafts, when ordered, relieving arches of brick or concrete to be built of a thickness, form, and width, as shall be directed at the time. Under temporary shafts excavated by contractor for his own convenience, the extra brick and concrete work to be at the contractor's cost.

Lining. 135. The thickness and description of the lining, whether concrete only, of brick and concrete, or of brick only, required for the different portions of tunnels and open trenches, depends upon the nature of the ground through which they are driven or excavated, as the case may be, and shall be determined by the Engineer as the excavation advances.

136. In strong compact rock,  $4\frac{1}{2}$ -inch concrete and brick lining will be requisite; and, as the materials occur less compact, two or three rings of brickwork or brick and concrete lining, as shall be determined by the Engineer as the tunnel proceeds, may be required.

Junctions and inlet chambers. 137. Junction chambers for sub-main and reticulating pipes, upper inlet chambers in shafts for junctions with reticulating pipe-sewers, drop-shafts, penstock and gas-check chambers, flushing-stations, weir-chambers with storm-water discharge pipes, ventilating shafts, aqueducts on arches, and on wrought-iron girders, syphons, buildings, bridges, culverts, storm-water channel junctions, intersections with existing roads, sewer, and water pipes, branch inlets, man-holes, gullies, road work, &c., to be constructed in connection with main sewers, branch sewers, and storm-water channels of concrete, brickwork, masonry, cement-facing, iron, timber, stoneware, and cast-iron pipes, &c., of the exact sizes, heights, shapes, forms, curves, and with such ornamental red, white, and other bricks, panels, mouldings, piling, &c., as shown on drawings, and as may be ordered and directed at the time. Shafts to be built of concrete or brickwork, at the option of the Engineer, to the thickness and shape shown on drawings, or as shall be directed. Curved junctions for branch, oval, or pipe sewers, as shown on drawings, and where ordered, to be constructed in concrete, to enter the main sewers at such levels above the invert, with such radius and longitudinal fall as shown, or as shall be determined at the time.

Cast-iron work. 138. Cast-iron pipes, landing platforms,  $\perp$  bars, scupper boxes, gully gratings, girders, over weir and shaft-chambers, or other castings, flushing-valves, gas-check frames, penstocks, man-hole covers, saddles, stop-board grooves, &c., to be walled and built in, as shown on Drawings; at points of intersection, branch junctions, gas check chambers, pipe ventilating shafts, where ordered, &c.

Building in wrought-iron work. 139. Step-irons, supports to wrought-iron ladders, holdfasts, ends of wrought and cast iron girders, bars, &c., to be built into side walls of shafts, and anchor bolts for fixing cast-iron frame for penstocks, gas-checks, &c., to be built into walls of shaft chambers, as shall be directed. Flap-traps to be built in where ordered. Permanent putlog holes in shapes of reveals, for temporary staging, are to be left in walls of gas-check chambers, shaft chambers, and shafts where directed; and, in all cases, unless otherwise ordered, the reveals are to be built round of the same thickness of brick or concrete as shown on walls of shafts or chambers at the places referred to. Putlog holes to be included in the schedule price for brick-work. Stop-board grooves to be formed in concrete where ordered.

#### *Concrete work.*

Bluestone concrete. 140. Bluestone concrete used in these works to be composed of one part of cement, two parts of sand, and four parts of bluestone metal. The bluestone metal to be broken to a size to pass freely with its largest dimensions, through a ring of  $1\frac{1}{2}$  inch in diameter, to be free from dirt, quarry refuse, and to be screened through a sieve of  $\frac{1}{8}$  inch meshes, and then to be washed with fresh water until approved.

Special concrete. 141. Special concrete, if required, to be composed of 2 parts of cement, 3 parts of sand, and 7 parts of bluestone metal, prepared as specified in clause 140.

Sandstone concrete. 142. Sandstone concrete, where ordered to be used in these works, to be composed of 1 part of cement, 2 parts of sand, and 5 parts of sandstone metal. The sandstone metal to be free from dirt, quarry refuse, sieved (as specified in clause 140), washed, and of a size to pass with its largest dimensions through a ring of 2 inches in diameter.

Mixing. 143. All concrete to be prepared close to where it is required on a sawn timber plank platform. All proportions to be correctly ascertained by measurement, the metal to be well washed when put on the platform and levelled at top, the sand to be placed in a level layer upon the metal, and the cement to be placed in a level layer upon the sand; after which all materials to be carefully mixed and turned over twice, and then the whole to be mixed with fresh clean water, and thoroughly turned over twice, and oftener if required, until, in the opinion of the Engineer, it shall be fit for the work before it leaves the platform;

platform; it shall then be conveyed to the works as shall be directed, and be used fresh. Referring to clause 10, the gauge boxes are to be made to the following internal dimensions, viz.:—For stone 3 feet square in plan, and for sand 2 ft. 6 in. square. The depth of each box to be made so as to give the correct proportion of material.

144. If the concrete is made by machinery, all materials to be prepared as previously described, then to be mixed dry, and afterwards with fresh clean water, as may be directed and as shall be approved of; to be used fresh. Mixing by machinery.

145. The different kinds of concrete described under clauses 140, 141, and 142, as bluestone concrete, special concrete, and sandstone concrete, respectively, shall be used in the various parts of these works as specified, and as may be ordered at the time.

146. After the excavation for foundation of each respective part of the works, and the piling, planking, timbering, staging, &c., for same have been completed, and the bottom of excavations has been cleared and approved, the concrete work to be built thereon to the exact dimensions, and of such forms and shapes as shown on the drawings referring to each respective part of said works. Order of work.

147. The contractor to provide, at his own cost, approved concrete boxes, centres, staging, shoring, planking, &c., of the exact forms, shapes, curves, &c., required; in a proper, secure, and substantial manner, due allowance being made for  $\frac{3}{8}$  inch thick cement-facing over all internal exposed surfaces of concrete work; and great care being taken that all centering and concrete boxes can be easily withdrawn. After completion of any portion of the concrete, the concrete boxes and the centering, as the case may be, shall not be removed until the Engineer or his Superintending Officer has given written permission to that effect. Boxing, timbering, centering.

148. The concrete, after it has been approved of, to be conveyed into cast-iron cylinders, shafts, excavations for piers, and other deep foundations, in skips of approved size, and to every other part of the work as may be directed, and as shall be approved of, and tipped into same and upon the surface of each layer from a height not exceeding 18 inches, to be quickly spread out in layers not exceeding 9 inches in thickness. Commencing at each part of the work at lowest level of excavation or surface of work, the concrete to be brought up in horizontal layers or parallel with specified longitudinal gradients of works; each layer, when spread, to be quickly and evenly rammed all over until approved of. Method of work.

149. In circular, oval, elliptical, and open channels, the concrete to be filled first into central pads, or, in accordance with the transverse curvature of invert or bottom of channel, into central strips, not exceeding 2 feet in width for wide open channels, then into bottom layer right up to extreme width at sides, and then into the curved sides, as shown on drawings, up to top of side walls in open channels, or to level of springing in closed channels. Below springing line.

150. After the concrete has been carried up to the level of springing, all concrete arches to be commenced at both walls or abutments simultaneously, and carried on towards centre line in radiating parallel strips, spread 9 inches thick, of the whole width of arch, or in lengths as specified in clauses 157 and 158, and as shall be directed at the time, and rammed as before described. Where the arch is thicker than 9 inches, the lower layer to be always completed throughout 12 inches in advance of the upper succeeding layer. Above springing line.

151. After completion of the closing arch, all concrete work above springing of the same, at sides of arch, in manholes, chambers, shafts, &c., to be carried up in the same manner as specified in clause 148, and of the exact dimensions, curves, and thicknesses, &c., as shown on drawings. Above arches.

152. No portion of the concrete work described in the previous clauses (unless otherwise directed in writing) to be covered up with earth or brickwork until it has been examined and approved of by the Engineer. Any leakage that may appear in each layer to be carefully attended to and be made good and repaired at the time, as shall be approved, before each succeeding layer is put on. Covering up work. Leakage.

153. All end faces of layers of concrete to be stepped back at each respective length of sewer or other work, as shall be directed, to be carefully washed clean with fresh water, and then to be grouted prior to each layer of the adjoining length being commenced and joined on to the same. Joining lengths.

154. No traffic shall pass over any fresh concrete work except where such is duly protected against injury by boarding, planks, or any other means approved of by the Engineer or Superintending Officer at the time. Injury to work.

155. In the event of any stoppage occurring to the work, from whatever cause, or in anticipation of rainfall, the contractor, before temporarily stopping work, shall finish it off at whatever level the work may be raised at the time, by thoroughly grouting the whole of the surface with cement grout. The contractor also to provide and have always on hand approved tarpaulins for the purpose of covering all fresh concrete work and brickwork, when ordered, so as to protect the same during all stoppages in the daytime and at night from sun and rain, and during hot or dry weather, to keep said tarpaulins watered to prevent the work from cracking and setting too quickly on the outside. Treatment after any stoppage.

156. In all cases where a layer at mid-day or at evening is left incomplete the said layer shall not be continued after any stoppage until the surface of the lower and the end of the upper layer have been washed clean and then grouted with cement grout.

157. The concrete and brickwork in sewers and channels to be built in open trenches, in three continuous lengths of 40 feet each (unless otherwise directed), that is to say, when the arching-in of the first 40 feet commences, the next length of 40 feet must be completed up to the springing of arch, and the third 40 feet length must be in progress, and the latter so timed that the work is raised up to springing of arch by the time the closing-in of the adjoining length commences. Order of work in open trench.

158. The concrete and brickwork in sewers and channels on completion of each length of tunnel to be carried on in each length, from the middle towards each end simultaneously, in three continuous lengths of 16 ft. 6 in. each, unless otherwise directed; that is to say, when the arching of the first 16 ft. 6 in. commences; the next 16 ft. 6 in. length must be in progress from height of invert up to the springing of arch; the third 16 ft. 6 in. length must be in progress between floor of tunnel and level of invert of sewer. Order of work in tunnel.

159. At all plinths for piers of arches and abutments, piers of arches, abutments, between wings of abutments, pilasters, foundations, of buildings, culverts, &c., unless otherwise directed, each layer to be completed right through the whole length and width of the work before the succeeding layer is put on. Where concrete has to be walled or filled in against and between brick facings or masonry, the latter in each case to be well wetted and grouted, and then to be covered with a coat of cement mortar  $\frac{1}{2}$  inch thick before Order of works. Sundry.

before the concrete is built against it, and it is to be brought up simultaneously with same in layers 6 inches thick after ramming, the brick or masonry facings, however, being always kept 6 inches (or more, as the case may be) higher than the concrete work up to the level of string-course or other defined limit, when the work has to be finished level all through.

Aqueducts.

160. The brickwork, masonry, and concrete-filling between all arches and at sides of end-arches to be carried up simultaneously over the whole length and width of every aqueduct, building, or other structure (unless otherwise directed), so that all arches or other structures shall be simultaneously and equally weighted as the brick, stone, and concrete work rises against and over same.

Aqueducts.

161. The concrete in piers of arches of aqueducts, abutments, and approaches to aqueducts to be carried up in the first instance from bottom of excavations to level of top of plinths; in the second instance to level of top of skewbacks; in the third instance to level of underside of string-course; and in the fourth instance to level of top of coping of aqueducts.

Aqueducts.

162. When all piers and abutments of aqueducts have been built to level of springing of arches or to top of skewbacks, as the case may be, the concrete, brick, and stone arches, as specified, to be built one after another over the openings upon centres, cambered as shall be directed, of such number as shall be specified, strong enough in every part to carry the weight of the arch to be built thereon, till all openings of one aqueduct are arched over, after which the whole of the arches shall be allowed two weeks' time to set and harden before the brick and stone facings, and the concrete, &c., between the arches and at sides of end-arches is commenced. In filling in, between arches and at sides of end-arches the various layers of concrete, of the thickness specified in clauses 148 and 159, as the case may be, to be brought up extending on to extrados of arches till the thickness of each layer at its end is reduced to  $4\frac{1}{2}$  inches above extrados, when it is to be finished at the time with a radiating end face before the succeeding layer is put on. The junctions of the storm-water sewers to be constructed with such curves, shapes, forms, flat arches between wrought-iron rolled girders, &c., as shown on drawings. On completion of junctions, or any lengths of storm-water channel, as may be specified, to exact level of underside of iron girders, the latter to be laid transversely over side-walls of junctions or channels, bedded in and upon special cement mortar,  $\frac{1}{2}$ -inch thick, truly parallel to each other, and spaced 4 feet from centre to centre, or as may be specified, after which the concrete filling along side-walls, between and over ends of girders, to be completed. The arches of 4-feet span or thereabout, with a rise of 5 inches in centre between the girders, to be commenced from lower end, and to advance to the upper end of the junction or channel in each case (all girders being carefully stiffened and held in position by props, as shall be directed), with not less than twelve centres or as may be directed, of the exact width of junction or channel between side walls. The arches to be built as specified in clause 150, and on completion to form a level concrete decking 3 inches above level of top of girders.

Junctions.

Iron girders.

Jack arches.

Lining round sewer on arches.

163. The concrete lining round sewer on lines of aqueducts and approaches (between underside of string-course and underside of coping, unless where otherwise specified) to be brought up between brick and stone facings (where such occur) simultaneously with same, as specified in clause 159. The concrete to be finished transversely level with underside of copings. This work to be carried on along each line of aqueduct in the manner and in lengths as specified in clauses 161 and 162.

Bond-rods.

164. In conjunction with the concrete surrounding sewer, where the latter is built upon arches and in embankments, the contractor to provide, fit, place in position, and wall in with the concrete, longitudinally in each corner at top and bottom of concrete lining  $\frac{5}{8}$ -inch diameter bond-rods in 16-foot lengths. The ends to overlap 12 inches, and tied together with binding-wire, and, transversely,  $\frac{5}{8}$ -inch diameter bond-rods  $4\frac{1}{2}$  inches above soffit of sewer of such lengths as to fit between the outer brick lining, or as shall be directed, spaced 10 feet from centre to centre. The cost of providing, fitting, placing, and walling-in said bond-rods to be included in the schedule price per cubic yard of concrete.

Cracking.

165. Special care to be taken by contractor to prevent the concrete, &c., from cracking at ends of each respective and successive length of sewer and channel in any situation in consequence of the draught in same, by providing and carefully closing up ends of sewers or channels with canvas or wooden shields or doors, and by carrying the works on in continuous lengths, without delays and stoppages, so as to prevent air-cracks or shrinkage.

Repairing cracks.

166. Should, however, cracks occur at ends of any length of sewer, storm-water channel, or other work, during its construction and time of maintenance, they shall be opened up for their whole length and depth, and of such width as may be directed at the time, and filled in with neat cement mortar and grout by the contractor, at his own expense, to the satisfaction of the Engineer, or he may order such cracked parts of the works to be taken down and rebuilt at contractor's cost.

Allowance for rendering.

167. The concrete work comprised in this contract to be completed to the exact dimensions shown on drawings, less  $\frac{5}{8}$  inch at all exposed inner and outer surfaces, and after the boxes and centerings have been removed, all exposed outer and inner surfaces shall present compact, solid, even, plain faces. All faulty and honeycomb portions, cavities, holes, or other defects, to be at once repaired by the contractor, at his own cost, with concrete or mortar, as the case may require, to the satisfaction of the Engineer. No portion of the concrete work to be covered up with earth or brickwork until it has been examined and approved.

Bedding and fixing cast and wrought iron-work.

168. After the concrete or masonry has been built to the exact height and gradient (leaving sufficient space for jointing), the whole of the cast and wrought iron work, after having been washed clean with fresh water, is to be truly laid and jointed in its exact positions, lines and gradients, on fillets of mortar; and as the concrete rises against and around the castings, bond-rods, &c., leaving a space of not less than  $\frac{1}{2}$  inch all round between the concrete and iron, this space round the invert, or underneath bottom of plates and rods, as the case may be, to be filled in with grout or mortar, as shall be directed at the time, whilst above the springing line the outer surface of the castings, &c., to be grouted, and then to be covered with a coat of special mortar  $\frac{1}{2}$  inch thick before the concrete is built on to and around said pipes, castings, frames, &c.

Anchor-bolts.

169. All anchor-bolts in connection with cast-iron and wrought-iron work, to be placed in the exact positions required; to be washed clean, wetted, bedded upon, and surrounded with special mortar in each case before the concrete is built round same.

Laying and fixing cast-iron and stoneware pipes.

170. All stoneware or cast-iron pipes, &c., where they are shown to be or ordered to be surrounded with concrete, to be clean washed with fresh water, to be laid and jointed in the exact lines and gradients on fillets of mortar, and to be grouted all round as the concrete is being built round same. 171.

171. Prior to commencing any concrete which has to be built on to and against rock faces, all shaken and loose rock to be removed; all rock surfaces to be well cleaned, washed, and wetted, and all beds, open joints, and spaces between concrete and rock faces to be carefully filled in with cement mortar, and the cost of thus preparing rock faces, washing, grouting, flushing, &c., to be included in, and covered by the schedule price per cube yard for the concrete. Building on or against rock.

#### *Brickwork.*

172. In executing the brickwork in any situation in the construction of these works, all bricks to be thoroughly soaked in clean fresh water immediately before being used, and all work to be built with whole bricks (except where otherwise directed), of approved shape and dimensions, to ensure the bond of each particular part of the work being executed, in the manner as shown on drawings, and as may be ordered at the time, with  $\frac{1}{4}$ -inch joints, each brick to be set full upon and rubbed in cement mortar, and every course to be carefully and thoroughly grouted, and well wetted before the succeeding course is put on, care being taken to keep the inner and outer faces of work clean by placing fillets of mortar on outer and inner edges before grouting. Method of work.

173. The brickwork in arches up to 12-foot span to be built as shown on longitudinal and cross sections in radiating courses, with radiated bricks where ordered, in  $4\frac{1}{2}$ -inch rings, in approved bond, the bricks of each course to break joint over the centre of those above or below. Where the brickwork consists of two or more rings, said rings to be built simultaneously, the lower ring to be always completed throughout  $4\frac{1}{2}$  inches in advance of the upper succeeding ring, each brick to be set full upon and rubbed in cement mortar, and each ring to be keyed in centre and to be covered with a coat of cement mortar  $\frac{1}{2}$ -inch thick, to ensure the thorough bonding between the different rings. When completing any length of brick closing arch of main sewer, storm-water channels, &c., the courses at end of same to be stepped back, as shall be directed, and the end face of each ring or course to be well wetted, and then grouted, prior to each ring of the succeeding length being commenced. Radiating bricks.  
Stepping ends.

174. The brickwork in arches over 12-foot span to be built in radiating through-courses, of rubbed and gauged bricks if directed, in approved bond; to be commenced at both abutments simultaneously, the whole width of same, and to be completed in the most perfect manner throughout the full width and thickness of arch, and to be keyed in centre. Arches over 12-foot spans.

175. The brickwork in abutments, abutment piers, wings, parapets, pilasters, spandrels, piers, face-walls, &c., to be built of the various heights, thicknesses, and other dimensions, together with all recesses, projections, panelling, &c., and carried up at each special part or length of work simultaneously with the concrete and masonry, in English or other approved bond, in truly level courses or in courses truly parallel with longitudinal gradient of work, and in such other lines and curves as shown on drawings, or as may be ordered at the time. Where directed, all outer and inner faces of walls to be carried up straight, square, and plumb, with perfectly fair and even faces. Simultaneous progress of various works.  
Faces.

176. Weep-holes of the sizes shown, to be left through the brick walls where directed, and every thing to be made good where necessary. Weep-holes.

177. The brick-on-edge flooring of invert of storm-water channels on steep gradients, as shown on drawings, and where ordered, in any situation in the construction of these works, to be laid in approved bond; each brick to be set full upon and rubbed in special cement mortar, after which the whole of the surfaces of the brick-on-edge flooring to be carefully and thoroughly grouted. Brick inverts in storm-water channels.

178. The  $\frac{1}{2}$ -inch thick mortar covering (pargetting) of outside faces of brickwork or concrete of ventilating shafts, manholes, sewer-chambers, and sewers, as shown on drawings, shall not be measured and paid for as cement facing, but included in the measurement of the brick or concrete work, and paid for as such. Pargetting shafts.

179. All putlog holes to be filled in, taking particular care to match the bricks and the mortar. All external faces of brickwork to be thoroughly cleaned, and all joints to be raked (if ordered  $\frac{3}{4}$  inch deep), and pointed with special cement mortar, and to be finished off with a neatly struck and cut joint. Putlog holes.  
Pointing up.

#### *Cement Facing.*

180. The whole of the internal and external concrete (and brick surfaces, if ordered), where such is shown on drawings, and in any situation in the construction of these works, to be protected by a cement facing to be put on in two thicknesses; the facing throughout, when finished, to be  $\frac{5}{8}$  inch in thickness. All surfaces of concrete or brickwork to be well wetted before the cement facing is put on. The cement facing of all surfaces of works to be finished, as shown on drawings, and, where directed, with joints struck in imitation of ashlar masonry. Thickness.

181. The different kinds of cement facing with which the exposed surfaces of these works are to be protected, are:—Cement facing, prepared of cement and sand in the proportion of 1 of cement to 2 of sand; and special cement facing, prepared of cement and sand in the proportion of 1 of cement and 1 of sand. The different qualities of cement facing, as above described, to be executed in the various parts of these works as shall be specified, and as may be ordered at the time. Proportions.  
Qualities.

#### *Masonry.*

182. All freestone and bluestone ashlar of the exact sizes, forms, and shapes, to be built in where shown on drawings, and where directed, simultaneously with the concrete and brickwork. Stones to be washed clean and to be well wetted with fresh clean water immediately before being used, to be laid upon their natural beds in approved bond, and set solidly upon and in cement mortar in the exact positions required; after which all joints between stones, between stones and brickwork, and between stones and concrete, to be carefully filled in with grout. Prior to each succeeding course being put on, the surface of the previous course to be well wetted and washed clean. All ashlar stones to be properly lifted by lewisings, or as shall be directed when being placed in position. All beds and joints to be punched, axed, and picked, so as to form  $\frac{3}{4}$  inch joints throughout. All exposed joints of masonry and between masonry and brickwork, &c., to be carefully raked out,  $\frac{3}{4}$  inch deep, and filled in solid with special mortar, neatly pointed, finished flush with outside faces of work. All masonry to be left perfectly clean at completion of works. Method of building ashlar.

Freestone ashlar.

183. Freestone ashlar, to be provided in any situation in the construction of these works, of the exact dimensions, moulded, sunk, weathered, throated, checked, grooved, radiated, curved, channeled, fine-axed, battered, hammer-dressed, worked, rubbed where directed, and finished off in the best possible manner, as shown on drawings, and in accordance with any details which the Engineer may provide during the progress of the works. All stones to be in lengths, as shown, and as shall be directed, with truly squared and axe-dressed beds, joints, and backs. All joints from exposed surfaces of stones, and from faces of concrete work, as the case may be, to be axed-in 2 inches deep. The plinths, where shown on drawings, to be weathered with 2 inches parallel drafted margin, under edge of weathering and at all external angles of same. All external faces of plinths, skewbacks, abutments, piers, wings of abutments, &c., to be pitched-faced, no part of which to project more than approved of beyond true line of wall, with a true pitched line along each exposed arris, and with 2-inch parallel drafted margin as shown. All capstones over pilasters to be of one stone. Holes for lewis-bolts to be sunk where directed, of the depth and size required. All quoins, of the exact sizes specified, to be set in and out bond to all angles.

Bluestone ashlar.

184. Bluestone ashlar to be provided in any situation in the construction of these works, of the exact dimensions, forms, shapes, moulded, weathered, throated, fine-axed, sunk for reception of cast-iron bearing plates; and faces of weir-crest stones to be radiated, and to have vertical bird's-mouth grooves sunk along centre line of joints, as shall be directed; to be built in with the concrete, brickwork, and freestone masonry, as the case may be, and as the latter rises, where shown on drawings and as may be directed, to be lowised and set as specified in clause 182. All stones to be washed clean and to be well wetted before being used. Holes for lewis and anchor bolts to be sunk, where directed, of the depth and size required.

Squared rubble masonry.

185. Squared freestone rubble masonry in any situation in the construction of these works, to be built of squared hammer-dressed throughstones, unless otherwise directed, in from 10 to 14 inch level courses, as may be directed at the time, or on lines of open channels in courses parallel with longitudinal gradient. Said masonry to be built straight, curved, battered, or sloped, every stone to be set full up on and in cement mortar. When the exposed face of wall is battered, the surface of each course to be at right angles with line of batter, the top course to be built of larger stones, level at top and squared at back. All stones to be punched, dressed, and picked to the exact thicknesses, sizes, and forms required, and set in the most approved bond, with joints throughout not exceeding  $\frac{1}{2}$  inch in thickness. All stones to be washed clean and wetted with clean fresh water before being used. Every course to be carefully grouted before the succeeding course is put on. All masonry to be finished with a neatly struck and cut joint as the work proceeds, and to be left perfectly clean on completion.

*Squared Bluestone Pitching.*

186. Squared bluestone pitchers, in any situation in the construction of these works, to be set in sand, in regular 9-inch courses, lengthwise across the channel, in the most approved bond, and in single ring or course round manhole covers, &c. All stones to be dressed and picked so as to ensure the joints all through not to exceed  $\frac{1}{2}$  inch in thickness. No stone to be less than 9 in. x 9 in. x 9 in., but to be longer, curved, and radiated if directed.

*Squared Freestone Pitching and Channeling.*

187. Squared freestone pitchers, in any situation in the construction of these works, to be set upon their natural beds in sand or in cement mortar, as may be specified, in regular 12-inch courses, lengthwise across the course of the channel, in approved bond, with  $\frac{1}{2}$ -inch wide joints throughout. No stone to be less than 12 inches deep, 12 inches wide, and 12 inches in length, but to be longer, curved, and radiated if directed. If the pitchers are set in cement, all stones to be washed clean and well wetted with clean fresh water before being used, to be set full upon and in cement mortar, and on completion of pitching, all joints to be carefully filled with cement grout. All pitching in road channels to be set in sand in regular courses parallel with kerb-stones, in approved bond, with  $\frac{1}{2}$ -inch joints, no stone to be less than 12 inches wide, 8 inches deep, unless otherwise specified, and 18 inches long, but to be longer, curved, and radiated, if directed. On completion of pitching set in sand all joints to be carefully filled in with sand.

*Freestone Kerbing.*

188. Kerb-stones in such lengths, picked and axed-dressed to such widths, depths, shapes, and forms, with squared and axed ends, insuring  $\frac{1}{4}$ -inch joints throughout, to be set upon their natural beds in sand, in any situation in the construction of these works, along such lines, levels, gradients, and curves as shown on drawings, and as may be directed at the time.

*Pipe-laying and Jointing.*

Glazed stone-ware pipes.

189. After the trenches have been excavated to the exact depths, levels, and gradients, and after the foundation layer of concrete has been filled in where ordered, as the case may be (leaving sufficient room for jointing), glazed stoneware pipes of the required diameter to be laid thereon, along such lines, curves, and inclinations, as shown on general plans and longitudinal sections, true, straight, and solid; and for all vertical branch pipe-sewers and ventilating pipe-shafts, the pipes to be set true, straight, and plumb.

Foundations.

190. In clay or similar soil the pipes to rest direct and solid upon the soil. In rock they are to be laid as shown on drawing, on a 1-inch bed of poor mortar, composed of one part of cement and six parts of sand, the cost of same to be included in items for pipe-laying. In soil liable to be scoured out or easily shifted, they shall, if directed by the Engineer, be laid on sandstone concrete, as shown on drawing.

Laying.

191. In every case the pipes shall be laid in such a manner that their barrels shall bear firmly and evenly on their bed, the sockets being entirely free from pressure in the joint-hole, and the spigots concentric with the sockets.

Jointing pipes.

192. The pipes are to be jointed as follows:—The 6-inch pipes with tarred gasket  $\frac{1}{4}$  inch deep after setting, and special cement mortar  $1\frac{1}{4}$  inch deep within socket of pipe; the 9-inch pipes with tarred gasket  $\frac{1}{2}$  inch deep after setting, and special cement mortar  $1\frac{3}{8}$  inch deep within socket of pipe; the 10-inch pipes with tarred gasket  $\frac{1}{2}$  inch deep after setting, and special cement mortar  $1\frac{3}{8}$  inch deep within socket of pipe; the 12-inch pipes with tarred gasket  $\frac{5}{8}$  inch deep after setting, and special cement mortar  $1\frac{3}{8}$  inch deep within socket of pipe; the 15-inch pipes with tarred gasket  $\frac{5}{8}$  inch deep after setting, and special cement mortar

mortar  $1\frac{3}{8}$  inch deep within socket of pipe ; the 16-inch pipes with tarred gasket  $\frac{3}{4}$  inch deep after setting, and special cement mortar  $1\frac{1}{2}$  inch deep within socket of pipe ; the 18-inch pipes with tarred gasket  $\frac{3}{4}$  inch deep after setting, and special cement mortar  $1\frac{3}{4}$  inch deep within socket of pipe ; the 21-inch pipes with tarred gasket  $\frac{5}{8}$  inch deep after setting, and special cement mortar  $1\frac{7}{8}$  inch deep within socket of pipe ; the 24-inch pipes with tarred gasket  $\frac{3}{4}$  inch deep after setting, and special cement mortar 2 inches deep within socket of pipe.

193. The tarred gasket to be placed in the faucet and set tight round spigot end of pipe, after which the remaining space in faucet to be cleaned, wetted, and filled in with stiff special cement mortar, packed in solid, splayed off outside to an angle of 45 degrees, and neatly finished off. The inner joints between pipes to be carefully filled with special cement mortar all round, neatly wiped off as a finish. Each pipe length thus finished to be carefully cleaned out before another pipe length is added. Inner joints.

194. Junction pipes of any desired size are to be laid into the line of pipe-sewers wherever required by the Engineer. The socket ends of all junction pipes, junction blocks, junction holes, ventilating pipes, and dead ends are to be protected against the ingress of foreign substances, and made easily accessible for effecting future connections, by being closed with earthenware discs having a temporary watertight joint all round, the cost of providing and fixing same to be included in items for pipe-laying. Junction pipes.

#### *Cast-iron Pipe-laying.*

195. After the pipe-trenches have been excavated to the exact depths, levels, and gradients required, cast-iron pipes of the diameters shown or ordered, to be laid along lines (curved or straight), and solid upon the bottom of the trench, or upon a foundation layer of concrete, and the vertical pipes placed as shown, leaving sufficient room for jointing. Cast-iron spigot and faucet pipes.

196. The pipes are to be jointed as follows :—The 6-inch and 7-inch diameter pipes with spun-yarn  $2\frac{3}{4}$  inch and 3 inch deep respectively after setting up, and soft lead  $1\frac{1}{2}$  inch deep after setting up ; the 8-inch, 9-inch, and 10-inch diameter pipes with spun-yarn 3 inches,  $3\frac{1}{4}$  inches, and  $3\frac{1}{4}$  inches deep respectively after setting up, and soft lead  $1\frac{1}{2}$  inch deep after setting up ; the 11-inch, 12-inch, 14-inch, 15-inch, and 18-inch diameter pipes with spun-yarn 3 inches, 3 inches,  $3\frac{1}{4}$  inches,  $3\frac{1}{4}$  inches, and  $3\frac{1}{4}$  inches deep respectively after setting up, and soft lead  $1\frac{3}{4}$  inch deep after setting up ; the 20-inch, 22-inch, 24-inch, 26-inch, 28-inch, 30-inch, 32-inch, 34-inch, and 36-inch diameter pipes with spun-yarn 3 inches,  $3\frac{1}{4}$  inches,  $3\frac{1}{4}$  inches,  $3\frac{1}{4}$  inches,  $3\frac{1}{4}$  inches,  $3\frac{1}{4}$  inches,  $3\frac{1}{4}$  inches,  $3\frac{1}{2}$  inches,  $3\frac{1}{2}$  inches, and  $3\frac{1}{2}$  inches deep respectively after setting up, and soft lead 2 inches deep after setting up. Jointing.

197. Should the faucets of pipes used in these works, in places, be of greater or lesser depths than indicated in the previous clause, then the spun-yarn packing is to be of greater or lesser depths as may be required, the depths of the lead joints to remain as specified. Expansion joints to be made in the same manner, but of such special depth of lead joint, with or without spun-yarn packing as shown on drawings and as may be ordered at the time. All curves on lines of pipe-sewers to be accurately formed with the spigot and faucet joints of the pipes without any abrupt horizontal and vertical dip, rise, or bend. The spun-yarn to be tightly platted or laid round each spigot end, so as to fill the socket of each pipe after setting up to the exact depth specified, leaving in each instance the remaining depth of faucet for the specified lead joint, the latter to be made at each joint in the trench with one running, and when cold to be set up with proper irons to one smooth, even, plain surface all round the pipe, and  $\frac{1}{8}$  inch within socket of same. Expansion joints.

198. The setting up of all lead-joints to be made with a proper set of setting irons, commencing from outer surface of spigot end with  $\frac{1}{8}$  inch thick setting irons, and continuing towards outer edge of lead-joint, with setting irons advancing gradually by  $\frac{1}{8}$  inch in thickness at the time. Special setting irons to be used for setting up expansion joints. After the pipes have been laid and the joints of every description made, examined, and approved, they are at once to be covered up, but in no case are they to remain longer than twelve hours uncovered after they have been approved of. Curved pipe lines.

199. Faulty and objectionable lead joints to be immediately and carefully chiseled out (they are not allowed to be burnt out) and fresh lead joints to be made and set up until approved of. Attempts to repair defective joints are under no consideration to be permitted. Setting up lead joints.

#### *Road-making.*

200. The different roads shown on drawings, are to be formed 30 feet wide between edges of slopes, whether on embankments or in cuttings. The longitudinal gradients of approaches to be at an inclination of 1 in 20, or as shall be directed. All roadways to be formed with a crown, which at the centre line is to be 6 inches higher than the edges. Faulty joints.

201. After the roadway has been formed and approved, it is to be carefully boxed out along centre line, if ordered, for the reception of the road material, 8 inches deep for ballast, and 4 inches deep for metal—12 inches in all, by a width of 24 feet. Width, slopes, gradient, formation.

202. After the boxing-out has been completed, its bottom surface to be covered by a layer of 4-inch gauge sandstone ballast, spread 8 inches thick throughout, and then covered with bluestone metal spread 4 inches thick throughout. Boxing-out.

203. After the metalling has been completed and approved, the whole of its surface to be covered with about one-eighth of its own bulk of bluestone chippings of a uniform thickness, after which the whole road surface to be watered and rolled until approved. Ballasting and metalling.

204. The stone used for metalling to be basalt or other similar hard stone of approved quality ; to be broken to angular fragments of a size to pass freely with their largest dimensions through a ring  $2\frac{1}{2}$  inches diameter, and to be free from dirt, quarry refuse, &c. Blinding.

The prices per cubic yard for bluestone metal and sandstone ballast for road surface to include the cost of providing and spreading blinding. Quality of metal, size.

#### *Tarred Metal Deck.*

205. After the tarring of upper surface of metal flooring, and after the sand-filling over arches and abutments of aqueducts has been completed, levelled, and approved, or in any other situation in the construction of these works, the whole of these surfaces as shown on drawings, to the thicknesses figured or ordered at the time, to be covered with the tarred metal decking, as follows :—

206. The stone to be basalt, broken to a 2-inch gauge, free from dirt ; the screenings to be crushed from the same stone, and to pass through a  $\frac{1}{16}$ -inch sieve. All stones and screenings to be perfectly clean Stone for tar.

and dry, to be heated before admixture with tar. The tar to be coal-tar, free from all adulterations, and boiled a sufficient time to get rid of the light oils before being used.

Tarring and  
stacking.

The stones and screenings to be mixed with the boiled tar separately; to be then stacked where directed, so as to allow the surplus tar to drain away for at least three weeks before being laid in position.

Laying and  
rolling.

207. The 2-inch stone to be spread over the whole bridge, upon the concrete filling of roadway, and upon the 7-inch thick sand layer of footpaths, between kerb-logs, to such thicknesses and surfaces, and with such curvature to roadway, when rolled, as shown in drawing, and to be then covered with about one-eighth of its own bulk of screenings. Both layers to be well rolled and cross-rolled with a 30-cwt. roller, having not less than a 3 feet width of face, until they form solid compact surfaces to the required levels and curvature.

Punning.

208. The sides along kerb-logs and all places where the roller cannot work, to be well punned by hand with a flat-faced 42-lb. iron rammer. When approved by the Engineer, the whole of the surfaces to be brushed over with a coat of hot coal-tar, and a layer of heated fine bluestone screenings, with dust left in, spread over it.

#### *Coke Concrete Deck.*

209. Coke concrete to be provided, placed in position where directed in the manner specified for other concrete, and to be mixed as described in clause 143, but in the following proportions:—16 cubic feet of approved coke broken to a strict 1-inch gauge, 8 cubic feet of sand, and 1 cask of cement.

#### *Fencing.*

Land to be  
fenced where  
required.

210. Fencing is to be erected in such line and situation, and of such description as shall be directed, and as marked out by the Superintending Officer, and of the form and to the dimensions marked on the drawings.

Ordnance  
fencing.

211. Ordnance fences to be provided, framed, fitted, and erected where ordered, of sawn hardwood timber, unless where otherwise specified, as viz.: Posts 6 in. x 4 in. x 6 ft. 6 in., top rail 4 in. x 4 in., intermediate and lower rails 4 in. x 3 in. Posts spaced 6 ft. 6 in. from centre to centre, sunk in rock not less than 18 in., and into other ground not less than 2 ft. 6 in. deep. On road embankments, where ordered, posts to be 7 ft. 9 in. long, mortised into sills 9 in. diameter x 5 ft. long, secured by 1-inch diameter hardwood tree-nail, stayed to posts by 4 in. x 4 in. struts, secured to posts and sills by  $\frac{3}{8}$ -inch screw-bolts, and  $\frac{1}{16}$ -inch diameter spikes,  $7\frac{1}{2}$  inches long. Angle and end posts, 10 inches diameter at smallest end, x 8 feet long, to be sunk 3 feet deep in the ground, mortised 6 inches deep for reception of ends of rails. Tops of round posts to be protected by caps of 6-lb. sheet-lead, secured to posts by lead-headed nails 2 inches long, and wrought-iron 2-in. x  $\frac{1}{4}$ -in. rings, secured each by four 3-inch wood screws. Sawn posts to be notched at top for reception of top rail and halved out for reception of intermediate and lower rails, spaced as shown. Top rail to be laid aris uppermost into notches, secured to posts with 2-in. x  $\frac{3}{4}$ -in. hoop-straps, and four 2-inch long wood screws to each strap. Intermediate and lower rails to be fitted flush with inner faces of sawn posts, and secured to each with two 4-inch wood screws. All sawn timber above ground to be planed, all scarf-joints of rails to be made as directed, over posts only, and all sills, struts, and ends of posts under ground to be charred thoroughly. The ground round posts to be well rammed, and the clearing spaces round ends of posts stepped in rock holes, to be carefully filled in with cement grout.

Description of  
split timber  
fences.

212. The split timber fencing may be of one or more of the three following descriptions:—

- 1st. Fence consisting of split hardwood posts, two split rails (wired if shown), and round posts where required.
- 2nd. Fence, consisting of split hardwood posts, three split rails, and round posts where required.
- 3rd. Fence, consisting of split hardwood posts, two split rails, covered with split hardwood palings, with round posts where required.

Posts.

213. Posts to be 6 ft. 6 in. long, 8 inches broad by  $2\frac{1}{2}$  inches thick, except those for the paling-fence, which shall be 7 feet long, with mortises 6 in. x 3 in., cut square to the gauge shown on the drawings. All posts to be charred for a length of 2 ft. 6 in. from the bottom, sunk 2 feet into the ground, set uniform and upright, and spaced 8 ft. 3 in. apart from centre to centre, and the earth well rammed in round them until the posts stand solid and firm.

Rails.

214. Rails to be 9 feet long, the top rail not less than 7 in. x 2 in., and the bottom rail not less than 8 in. x 2 in. in the two-rail fencing, and in the three-rail fencing the centre rail to be not less than 8 in. x 2 in., and the bottom rail 7 in. x 2 in. Tenons to be 6 inches long, carefully adzed to fit closely into the mortises, shouldered square with the saw, and fitted so as to butt close up to the posts.

Palings.

215. Palings are to be sound, straight, cleanly split, and free from sap, and of approved timber, 5 feet long, not less than 4 inches wide, and  $\frac{1}{2}$  inch thick. They are to be sawn off square, placed upright, close together, and to a straight line on top, and securely fixed by  $1\frac{1}{2}$ -inch strong wire nails, two nails to every paling in each rail. They are to be further secured along the rails by galvanised hoop-iron of 18-gauge, 1 inch wide, well nailed by  $1\frac{1}{4}$ -inch clout nails at intervals not exceeding 12 inches apart.

Round posts.

216. At all intersections with existing fences, and at all angles, a round post is to be provided and fixed, 9 inches in diameter, charred for a length of 3 feet from the bottom, and sunk 2 ft. 6 in. into the ground, and the earth well rammed in until the post stands solid and firm. These posts are to be of such length as to leave the top 6 inches above the upper rail. At existing fences the junctions are to be made good and connected with these posts, which are to be mortised for the rails to suit the fence in the same manner as shown on drawing.

Posts strutted  
where necessary.

217. Where necessary, posts, either round or split, are to have a hardwood strut 6 in. x 3 in., checked at upper end into the post, and secured by a 6-in. x  $\frac{1}{2}$ -in. round spike. A hardwood stake, 3 ft. long x 8 in. x 3 in., to be driven close into the foot of the strut, as shown on drawing.

Crossing ditches  
or sudden  
depressions.

218. The crossing of ditches, watercourses, or hollows in the ground, are to be made secure, either by supporting the fence on logs, extra long posts, or as may be directed.

219. The fencing is to be erected to a true line on top, and is not to follow the minor irregularities of the ground.

220. The wire used in fences to be that known as No. 8 "best best annealed drawn," or other approved fencing wire; to be passed through the posts, which are to be bored for the purpose with a quarter ( $\frac{1}{4}$ ) inch auger, and strained tight by means of F. Morton & Co's., or other approved straining bracket, fixed to the straining posts by wood screws or spikes, so as to suit the gauge, as shown on the drawing. Fencing wire and straining brackets.

The works and materials comprised in clauses Nos. 217, 218, and 220 to be included in the schedule rates for fencing.

#### *Wrought-iron Work.*

221. All wrought-iron spindles, bolts,  $\perp$ ,  $\Gamma$ , and  $\sqcup$  irons, flat and round bar, plates, straps, axles, pins, anchor-bolts, rolled girders, nuts, washers, rods, rivets, holding-down bars, gratings, frames, keys, chains, &c., to be of the exact dimensions and forms shown on drawings. The greatest care to be taken in any welds to ensure perfect soundness, and the contractor to be at the expense of any test which the Engineer shall think fit to submit the welds to. Wrought-iron work.  
All plates, bars, channel-irons, rods, &c., to be perfectly true and of even uniform thickness; all angle-irons and bars to be sound, uniform, and regular on edges; all joints and edges to be truly planed to the dimensions on drawings; all wrought-iron parts to be rolled or forged out of one piece, unless otherwise specified and directed. Welds. Ends of spindles, shackles, &c., to be forged with eye-holes, and holes for male and female joints of the exact forms. All bolts, handles, hand-rails, spindles, keys, chains, pins, axles, bars, crosses, &c., to be forged with protecting necks, and welded with ends of large diameters or otherwise for screw-ends, and made of the exact shapes, forms, dimensions, lengths, widths, and diameters shown on drawings, with angular and square threads, as the case may be, to all bolts, spindles, &c., with the correct pitch, angle, and depth. All portions fastened with screws, bolts, or rivets to fit close together. The chains attached to blades of penstocks, and the whole of the wrought-iron gratings, channel-irons, &c., connected therewith, wrought-iron girders to working platforms, hand-rails to platforms and stairs, to be galvanised before being fixed in the works.

222. All joints in plate, angle,  $\Gamma$  irons, &c., to be made only in such positions as shown on drawings and where directed; and all covering plates, wrappers,  $\Gamma$ , and angle irons to be truly cut at ends to insure a perfect fit. Joints.

223. All screw-bolts and screws to flanged pipes, penstocks, valves, all other castings and wrought-iron work of every description, to be of the exact diameters and lengths shown on drawings, with hexagon heads and nuts, and to be angular threaded with the correct pitch and angle of the Whitworth screw. Screw-bolts and screws.

224. Joints of shafts, spindles for penstocks, axle shafts for strainers and traveller, engines, &c., to be made by said shafts being truly turned and cut at ends, and cast-iron flanged and turned sockets, with turned spigot and faucet, the internal diameter of socket to be turned exactly, and slightly of less diameter than ends of shafts. Sockets and ends of shafts to be grooved, as shown for steel key. Sockets to be heated and then fitted on to ends of shafts with keys, after which the flanges to be bolted together, forming coupling, as shown on drawings. Joints of shafts, &c.

225. All joints and working parts of wrought-iron on penstocks, valves, strainers, standards, engines, travelling cranes, travellers, gratings, troughs, louvre shutters, brackets, &c., to be turned, scraped, or ground and glazed bright, as the case may require, and as shall be directed. Joints and working parts.

226. All handles and levers for working penstocks, valves, strainers, travellers, travelling cranes, &c., to be ground and glazed bright. Handles and levers.

227. The rivets throughout to be made from  $\frac{1}{2}$ -inch,  $\frac{3}{8}$ -inch,  $\frac{1}{2}$ -inch,  $\frac{7}{8}$ -inch, 1-inch, and  $1\frac{1}{8}$ -inch iron respectively, with heads and necks, as shown on drawings. The Engineer may require any holes to be drilled and the bolts turned for same, or he may order bolts to be substituted for rivets, or other changes of the kind, in such places as he may consider necessary, without extra charge. Rivets and bolts.

228. All rivet, bolt, and screw holes to correspond as to diameter and position with the drawings, and to be carefully drilled parallel, and at right angles with face of work. All the holes in booms of main girders, bearing plates, lattice bars, wrought-iron aqueduct pipes, rolled  $\perp$ , channel,  $\Gamma$ , and flat bar irons to be drilled—the respective pieces being clamped in their proper positions and secured under drill and bored right through; holes in cylinder bracing, cross-girders, and wind bracing girders may be punched. No drifting or rhymering to be done without the consent of the officer in charge, and then rhymering only when the plates can in no other way be made to coincide. Holes which are directed to be punched or drilled at the building site to be about  $\frac{1}{8}$  inch narrower than the diameter of the rivet required, so as to insure a good fit after its being enlarged with the rhymer. Where several holes meet each other in the parts to be united, a horizontal dislocation of not more than 5 per cent. of the diameter of the hole is allowable, the hole then to be made perfectly equal with the rhymer, and not by filing on one side, and rivet-bolts of proportionately large size to be used in holes thus enlarged. Holes for rivets, bolts, &c.

229. All rivets to be inserted at a bright heat, after being carefully freed from scales, into the duly cleared holes, to be quite firm after the head is completed. If not firm, rivets to be at once removed and replaced by others, and of larger size when directed. In putting together parts, care to be taken that none of them are forced into one-sided tension; any portions distorted in riveting the connections to be at once loosened and the faults remedied. All rivets to be finished with cup heads, and when countersunk the sinking to be drilled and the heads to be finished perfectly flush. All rivets and heads of bolts to be countersunk where plates, when fixed, will bear on other work, and where they form the inner surfaces of aqueduct pipes. All riveting to be done in the neatest and most workmanlike manner. Riveting.

230. Wrought-iron gratings to be of the exact dimensions, straight or curved, as the case may be, the bars spaced and riveted as shown, all bars to have rounded-off top surfaces. All hooks, rings, and chains attached to flushing valves, &c., to be galvanised before being fixed in the works. Wrought-iron gratings.

231. Wrought-iron ladders in lengths shown on drawing, and as may be ordered, consisting of  $2\frac{1}{2}$ -in. x  $\frac{3}{4}$ -in. uprights, spaced  $13\frac{3}{4}$  inches apart, and  $\frac{7}{8}$ -inch round bar rungs spaced 12 inches from centre to centre. Joints of uprights to occur only at supports, where directed. Supports, spaced as shown, to consist of two 6-in. x 3-in. x  $\frac{3}{4}$ -in. channel irons fixed to uprights with  $\frac{3}{4}$ -inch screw-bolts, stiffened off at ends, at top and bottom, with  $\frac{1}{4}$ -inch plates varying from 12 inches to  $13\frac{1}{2}$  inches in length, riveted on to top and bottom flanges of channel irons, as shown. Wrought-iron ladders.

#### *Cast-iron Work.*

232. The whole of the castings to be perfectly sound, free from all cold shuts, honeycomb, holes, or other defects; to be cast in dry sand moulds, unless where otherwise directed. Casting.

- Castings.** 233. All castings to be true in sectional form, straight longitudinally where shown to be so, or of such shapes, projections, curves, angles, and forms as shown on drawings; and each portion of such castings to be of equal strength and of the specified thickness throughout its respective length.
234. The external and internal surfaces of all castings to be perfectly clean and smooth and in strict accordance with sections.
- Casting cylinders and pipes.** 235. All cylinders and pipes to be cast vertically, with the socket or flanged end downwards; to be straight longitudinally; all straight pipes with faucet, or flanged, and with spigot ends, to have the latter cast 9 inches longer than shown on drawings; all cylinders to be cast with such head of metal as shall be directed. After the castings have been cleaned and coated, the head of metal over the cylinders, and the 9 inches at spigot ends of pipes to be cut off, so as to leave same perfectly square on section and true and equal in circumference, so as to fit the socket, leaving an equal space all round of the exact thickness shown on drawings for lead joints.
- Faucet ends.** 236. The faucet of each pipe or casting to be perfectly square and true, of the exact dimensions shown on drawings, and to be cast with a groove of the size and depth as required by the Engineer. The faucet of large circular and oval pipe for expansion joints to be cast as shown with an inner narrower faucet and projecting rim, and both inner sides of narrower faucet and of projecting rim to be truly turned and polished.
- Faucet for expansion joint.** 237. The feathers and flanges, where such are shown, to be of the exact widths, forms, and thicknesses, and all surfaces of contact to be planed and turned to true and even faces.
- Feathers and flanges.** 238. All spigot ends for expansion joints, where shown on drawings, to be cast with a recessed end for reception of wrought-iron ferrule on inner face, and a corresponding projecting face on the outside; said recessed inner and projecting outside faces to be truly turned and polished to the exact cross section for reception of lead joint, gun-metal packing ring, and wrought-iron cover-plate, as the case may be.
- Spigot ends for expansion joints.** 239. The thimbles for expansion joints for large, circular, and oval pipes, to be cast with faucets as described in clause 236, and with web-plates, ribs, and bed-plates cored out, with bosses truly bored for heads of anchor-bolts; the whole to be of the exact shapes, forms, and dimensions, as shown on drawings.
- Thimbles for expansion joints.** 240. The flanges of gas-check frames to be provided with a projecting face, planed and turned to true and even faces, of the exact dimensions shown on drawings.
- Gas-check frames.** 241. All holes in hinge-brackets at top of gas-check frames to be truly bored to the diameter required for the reception of hinge-bolts.
- Boring holes.** 242. All bolt-holes to be of the exact sizes, spaced as shown, and to be truly bored and turned.
- Bolt holes.** 243. All flange-joints, unless where otherwise directed, to be made tight with red lead.
- Flange joints.** 244. Frames of penstocks to be of the different parts, and of the exact shapes, forms, and dimensions, with all screw and bolt holes, and the exact circular valve openings, with flanged end at back, projecting rim round opening in front and at sides of same, with cap-pieces on top, upright slide frames, flanged, bolted together, cored out with bosses and web-plates between, to receive front guide-plate, with inner projecting faces screwed into bosses of upright frames. Guide-pieces, with flange and web, faced on surface of contact, with boss in centre, the latter truly bored and turned for reception of brasses and spindle to pass through, fitted with bolt-holes, and screwed on to guide-plates.
- Penstock frames.** 245. All landing and other plates and grates to be complete with ribs, flanges, hinged and other lids, close or ventilating covers, girders of the exact shapes, forms, dimensions, projections, recesses, &c., as shown on drawing.
- Landing grates and plates.** 246. Valve blades to be of the exact diameters, forms, shapes, and dimensions, with circular projecting faces back and front, and vertical projecting faces corresponding with and bearing on projecting faces of guide-plates and framing, and vertical racks or brackets, with eye-holes truly bored for fixing foot of valve spindle, as the case may be. All seatings to be truly faced and bored out to receive gun-metal faces, and all stuffing boxes, glands, foot-step bearings, and journal-boxes, to be bored and turned and polished where directed.
- Valve blades for penstocks.** 247. All girders, brackets, standards, wheels for chains, and balance weights, tubes, boxes, glands, plummer-blocks, and boxes for lifting or turning spindles, as the case may be, foot-brackets for upper spindles, flanged pipes for spindles, street-boxes, &c., of the different parts, and of the exact lengths, forms, and dimensions, to be truly faced, turned, and polished at all joints, bored and turned for reception of screws, nuts, and brasses, with all bolts and screw-holes of the sizes shown, bolted at all joints, and all faces of flange-joints and working parts and other faces, where directed, to be truly planed, turned, faced, and scraped, to the necessary surfaces.
- Sundry ironwork to be turned and bored.** 248. All penstocks, scour-valves, &c., to be carefully and truly fitted and fixed together, with all lifting and turning gear, gun-metal facings, spindles, wrought-iron work, street-boxes, screws, bolts, nuts, &c., complete, in strict accordance with drawings and dimensions figured thereon, and all valves to close watertight.
- Penstocks, scour-valves to be fitted.** 249. The frame and flap-valve of flushing valve, with bracket, pulley, &c., to be complete, with wrought-iron galvanised chain, to be cast of the exact diameter, shapes, forms, and dimensions; the flushing valves to have a projecting rim all round, the inner face truly faced and turned to a "V shape" of the exact dimensions, so that when the flap is placed in position the edge of the V rim to lie exactly against the centre line of the square tuck or lead-packing of opposite groove in frame, planed out to a dovetail for the purpose.
- Flushing valve.** 250. Couplings, flanged, turned, bored, faced, with turned and bored spigot and faucet, and bolt-holes of the exact diameters, to be of the exact forms and dimensions for making joints of valve-spindles, &c.
- Couplings.** 251. Cast-iron frame with 22-inch diameter opening, with non-ventilating lid fitting easily into frame, complete with sawn and tarred ironbark wood-bricks fitted into panels, the whole to be in strict accordance with drawings and dimensions shown thereon.
- Cast-iron frame.** 252. Scupper-pipes, with cistern-heads, and grating-cover for inlets of scupper-pipes, and plain cover-plates over inlets of scupper-pipes, as shown, to be cast to the exact shapes, forms, with the exact openings, and to the dimensions figured on drawings.
- Scupper-pipes, grating-covers, and cover-plates.** 253. All grooves for stop-boards to be cast with a connecting-ledge at top, to be cut off when casting is completed. All grooves to be cast true, of the exact dimensions, shapes, and forms; and all working parts of frames and slide-valves, grooves, and stop-plates, to be truly planed and faced so as to fit, but not too tight. All stop-plates to be complete with wrought-iron shackles, 12-foot galvanised chain, hook, and rings.
- Stop-board grooves.**

*Gun-metal Work.*

254. All portions tinted yellow on drawings, as in nuts, bolts, shackles, bearings, and working parts, nuts and naves of wheels, seatings of valves, penstocks, standards, hangers, and brackets, and all other brasses in working and lifting gear, &c., to be made of gun-metal. The gas-check flaps to be of Muntz or delta metal. Gun-metal tinted yellow.  
Gas-check flaps.

255. The whole of the castings to be solid and perfectly sound, and free from all honeycomb, holes, or other defects. Castings.

256. All spindles to be cast on end, having a riser on top of each not less than 3 feet in height, after which they are to be turned and finished to the exact lengths and diameters; to be straight, and work true in stuffing boxes, nuts, glands, &c. Spindles.

257. All screw ends and nuts, unless where otherwise specified and directed, to be angular, threaded with the correct pitch and angle; and all naves of wheels, nuts for lifting gear in standards and for off-let valves, bearing nuts of end brackets for shafts, &c., where shown, to be turned with the square thread and correct pitch, and angle of the Whitworth screw. Nuts and screws.

258. All nuts, naves, pins, lubricators, shackles, eyeholes, sockets, hinges, hinge-bolts, guide and other brasses in plummer blocks, brackets, standards, valves, penstocks, &c., to be truly bored, turned, faced, and finished to the exact lengths and diameters, shapes, and forms, and to be straight and work true on all bearings and working faces. General directions for finished work.

259. All projecting rims, straps, eyehole brackets, &c., to be provided and fitted on to gas-check flaps, to be cast of the sizes, shapes, and forms as shown on drawings, to be faced on surface of contact, and to be soldered on to the flaps with zinc, after having been placed truly in position, and then riveted as shown. All gas-check flaps to be of the exact thickness shown on drawings. When the rims and straps for each flap are not cast in one casting, then they are to be cast in parts as shall be directed; and prior to fixing such parts in position, they are to be truly fitted and jointed together. All such joints to be scarfed and braced, as, viz., the edges filed or scraped clean and bright, covered with spelter and powdered borax, and exposed in a clear fire to a heat sufficient to melt the solder, which, for all scarf-joints, to be an alloy composed of four parts of copper to three of zinc. All scarf-joints to be placed where directed. All hinge axles to be truly turned. All links of shackles to be made with one joint, scarfed, brazed, and riveted together. Gas-checks.  
Soldering.

260. At expansion joints of large cast-iron pipes, where shown, a gun-metal packing ring of the size specified, to be provided, placed, and fitted round spigot end of pipe, carefully set up flush with end face of inner recess of faucet. Packing ring.

261. All portions of castings, as exposed surfaces of nuts, hinge-bolts, hinges, shackles, rims, straps, brackets, hooks, links, &c., are to be cleaned as they leave the mould, and all irregularities to be removed. All other portions of gun-metal work to be truly faced on all surfaces. All gun-metal facings and fittings to be truly turned and faced on all surfaces, to fit exactly, to be forced into positions, screwed where shown, and to sit perfectly firm and true.

*Wrought-iron Work, Gun-metal Work, and Cast-iron Work.*

262. The whole of the wrought-iron, cast-iron, and gun-metal work to be of first-rate quality and workmanship, in strict accordance with the specification and the dimensions and patterns shown on the drawings, and any details which the Engineer may provide during the progress of the contract. Quality and workmanship.

263. Wrought and cast ironwork and gun-metal work not to be more than 3 per cent. below the scheduled weight, and the contractor shall only be entitled to payment of the weights as per schedule, at the various prices set forth therein, and payment will not be made for any excess on such weights. Weights.

264. All ironwork and gun-metal work supplied by Government to the contractor to be delivered free of charge at the various sites of the works where they are required. For each article so delivered the contractor shall give a written receipt, after which he shall be held solely responsible for same; and shall, if any such article be lost, stolen, damaged, or destroyed, refund the cost to the Government. Contractor to give a receipt for ironwork supplied.

265. All ironwork and gun-metal work, &c., provided by the Government, which, at the completion of the contract, by direction of the Engineer, has not been built or permanently fixed in the works, shall be conveyed by the contractor to the site of the Field Office, or to the iron store at Camperdown, as may be directed. Surplus iron-work.

*Painting.*

266. All wrought-iron work (except where otherwise specified and directed) before leaving the foundry to be scraped and cleaned, and well coated with boiled linseed oil; and, prior to being fixed in position (excluding internal surfaces of circular and oval wrought-iron tubing, and excepting all working parts) after it has been cleaned and scraped free from scales, &c., and inspected, to receive two coats of anti-corrosive paint over all surfaces, and after being fixed in position, to be finished with two coats of best oil-colour, in approved tints. Wrought-iron work.

267. All bolt-heads, washers, nuts, straps, and all other exposed ironwork of timber bridges above level of kerbs, ordnance fencing, &c., to be finished with two coats of black varnish instead of oil-colour.

268. The whole of the cast-iron work to be properly cleaned immediately after completion; and, after being inspected, except where otherwise specified, to receive over all surfaces two coats of anti-corrosive paint (except working parts and joints), and to be finished afterwards with two coats of best oil-colour, in approved tints. Cast-iron work.

269. All carpenter's work of timber bridges above level of kerbs, and all ordnance fencing above ground, handrails, travelling cranes, &c., to be properly prepared, knotted and primed, and painted with four coats of best oil-colour, finished with approved tints. All tenons, mortises, notches, halvings, joints, scarfs and butting surfaces, to receive two coats of approved paint before being fixed in position. Carpenter's work.

270. No paint to be applied during or immediately after wet weather, or while surface of timber or metal work is wet; and an interval of forty-eight hours must elapse between each application.

*Tarring.*

271. All cast-iron cylinders, pipes, short lengths, bends, junctions, and any other castings, &c., which will be placed or laid under water, or which are to be covered up in earth, concrete, &c., and all non-ventilating man-hole covers, street-boxes, flushing-flaps and frames, scupper pipes, precipitating tanks, grooves,

grooves, landing plates and frames, grates, cover-plates, gully grates, &c., as soon they have been cast and inspected, to be properly cleaned and then heated, and whilst hot to be dipped or coated twice in hot gas-tar.

Wrought-iron work.

272. All flat, segmental, and buckled plates, rolled girders, bulb T irons, &c., before being placed in position, unless otherwise ordered, to receive one coat of tar, and after erection is completed, to receive a second coat; the tar to be coal tar, mixed with kerosene in the proportion of three of tar to one of kerosene, and applied hot.

Timber work.

273. Kerbs, flooring planks, timber in girders, longitudinal stringers, cross-girders, corbels, capsills, sills, piles, pier-bracing, abutment platforms, ends of handrail posts below level of tops of kerbs, to receive three coats of tar and composition; the first coat to be all tar laid on hot, the second and third coats to be composed of seven parts coal tar, four parts of Stockholm tar, and one part of pitch thoroughly melted together and applied hot, the last coat on top of deck to be well sprinkled with a layer of clean sharp sand and lime. All joints and butting surfaces to be well payed with the hot composition before fixing, and in finished work the composition to be poured into interstices and joints. Any timber inaccessible for tarring when fixed, to receive three coats before being placed in position.

274. No tar to be applied during or immediately after wet weather, or while surface of iron or timber is wet; and an interval of forty-eight hours to elapse between each application.

#### *Tar Varnish.*

Interior surfaces of wrought-iron work.

275. The whole of the interior surfaces (working parts and joints excepted) of the wrought-iron circular and oval tubes, cast-iron thimbles, expansion joint castings, short lengths of cast-iron circular and oval pipes, &c., after having been placed in position in the works, to be thoroughly cleaned of all scales, rust, and previous coating of linseed oil or paint, &c., and then to be coated twice with a tar-varnish composed of 30 gal. of coal tar, fresh, with all its naphtha retained, 6 lb. tallow, 1½ lb. resin, 3 lb. lamp-black, and 30 lb. freshly-slacked lime finely sifted; all materials to be approved of, and then to be intimately mixed as shall be directed, and applied hot, like paint.

#### *Day Labour.*

Prices given in schedule.

276. When "day labour" is required by the Superintending Officer to execute any works other than those for which a special price is given in the schedule of quantities and prices, the contractor shall provide the same at the several rates for "day labour" inserted in said schedule.

To include.

The price for day labour is to include supervision as well as all tools, lighting, and implements of every kind necessary for carrying on the work, and shall be returned in the usual monthly progress certificate.

Accounts to be sent in half-weekly.

277. The accounts for this "day labour" shall, however, be rendered by contractor to the Superintending Officer in half-weekly intervals, that is to say, during the forenoon of every Monday and Thursday, failing this he shall lose all claim to payments for the "day labour" performed by him during the preceding three days.

Length of day.

278. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

#### *Measurements and Payments.*

Contractor to be present.

279. The contractor shall be present at all measurements, and, if required, assist in making the same. If he fail to attend after twenty-four hours' notice in writing has been delivered to him of the Superintending Officer's intention to take measurements, and clearly setting forth the locality of such intended operation, the measurements made by the Superintending Officer shall be binding on the contractor.

When and how measurements are to be made.

280. On satisfactory completion of any portion of the works, and at all other suitable times, the dimensions of such work shall be measured by the Superintending Officer, as specified, and recorded in a book kept for that purpose; and these quantities shall serve as the basis for arriving at the contract sum on completion of contract.

Progress payments.

281. For the purpose of making progress payments, the dimensions of still unfinished portions of the work will be measured in a summary way monthly, or as near as may be, but without prejudice to the ultimate acceptance or rejection of such unfinished portion of work.

Contractor to sign measurement book.

282. The contractor shall sign the measurement book each month, before the monthly progress payments are made, accepting the detailed quantities, prices, and amounts. Should he, however, disagree with the detailed quantities, prices, and amounts, he is at once to state in the measurement book in what particulars he disagrees, and the grounds of his disagreement; and unless this is done it is to be distinctly understood that the detailed quantities, prices, and amounts, as recorded in the measurement book, shall be binding.

Final measurements.

283. The final measurements, based upon the measurements made during the progress of the works, will be prepared within thirty days, or as nearly as may be after the completion of the work; and the contractor will be required to accept such measurement before the fixed deposit is returned.

#### *Junction with other Contracts.*

284. If two different contractors execute simultaneously two adjoining sections of the works, they shall be held jointly and severally responsible for effecting a proper junction of the sections.

#### *Suspension of Works.*

285. The contractor shall suspend the whole or any portion of the works, on receiving a written notice to that effect from the Engineer. He shall have no claim for loss or damage on this account, and such suspension shall in no wise vitiate the contract, but a commensurate extension of time for completing the works will be granted to the contractor, as set forth in clause 24 of the General Conditions.

#### *Duties.*

286. In the event of any materials being imported by contractor for use on this contract, no refund will be made of any duties which may be legally chargeable on such materials; and the contractor shall bear and pay all duty stamps, licenses, building or surveyor's fees or other charges or fees whatsoever legally demanded by any municipal or other authorities.

*Testing*

*Testing the Whole of the Works.*

287. It is to be distinctly understood that, on completion of the works, the Engineer shall have the power of ordering, and having the sewers, or portions of same, &c., closed in such order as he shall direct, and the whole of the sewers and aqueduct tubes, &c., filled with water for such a time as he may deem necessary for the purpose of testing the works; and any injuries, faults of whatsoever description, caused by or detected in consequence of such testing, to the work, shall be at once repaired, replaced by new work, and made good, the whole expense being borne solely by the contractor; and, after the completion of these repairs, replacing with new works, and making good any damages, injuries, faults, &c., the whole of the works shall again be tested, as before described, until they shall be satisfactory to the Engineer.

This is the schedule to specification marked "C" referred to in our annexed agreement with Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

JOHN CARTER.  
FRANK MOOREHOUSE GUNMOW  
(By his Attorney, JOHN CARTER).  
D. G. SNODGRASS.

Witness,—HAROLD F. NORRIE.

This is the schedule to specification marked "C" referred to in my annexed bond to Her Majesty the Queen, dated 16th day of May, A.D. 1895.

Witness,—HAROLD F. NORRIE.

JAMES GILLAN.

This is the schedule to specification marked "C" referred to in my annexed bond to Her Majesty the Queen, dated 16th day of May, A.D. 1895.

Witness,—HAROLD F. NORRIE.

GEO. FORREST.

*"D."*

## GENERAL CONDITIONS.

*Interpretation of Terms.*

1. WHENEVER the terms hereafter explained in the present clause occur in these or any special conditions, or in the contract or specification, they shall be held to mean, and shall mean, as follows :—

"Government" shall mean the Government of New South Wales promoting this undertaking.

"Minister" shall mean the Secretary for Public Works of the Colony of New South Wales for the time being.

"Engineer" shall mean the Engineer-in-Chief having the principal charge of the works, or the person acting as such for the time being.

"Superintending Officer" shall mean any person or persons who may from time to time be entrusted with the superintendence of the works on behalf of the Government.

"Contractor" shall mean the person or persons who contracted to execute the works.

"Special conditions" shall mean any "special conditions" hereto attached and forming part of the contract; and such special conditions shall be read with the general conditions as part and parcel of the contract.

"Schedule of prices" shall mean the rates at which the contractor has offered or agreed to execute the contract, where the same is based on a schedule of prices; and be the basis on which the value of any extra works or of any deductions shall be calculated, and progress payments made, whether the contract be one of a schedule of prices or a bulk sum.

"Plans" shall mean and include all drawings referring to the works and explanatory of, or supplementary to, the specification.

"Works" shall mean the works set out in the specification and plans, or, in the event of there being no plans, in the specification only.

"Net claim" shall mean the sum claimed by the contractor after deducting therefrom the sum acknowledged by the Department to be due.

"Net award" shall mean the sum awarded on arbitration, after deducting therefrom the sum acknowledged by the Department to be due.

*Supply of Labour, Materials, and Plant.*

2. The contractor shall, except in so far as the specification may expressly state to the contrary, provide at his own cost and expense all labour, materials, and plant, and everything which the Engineer may consider necessary for the proper and complete performance of this contract. No materials or plant placed on the site of the works shall be removed therefrom, or otherwise disposed of, without the consent of the Engineer.

*Plans, Specifications, &c.*

3. The plans and specifications represent generally the form, dimensions, and description of the several works. Where any discrepancy exists between the dimensions as indicated by the scale and those marked in figures, the figures are to be considered as correct, and are to be taken in all cases in preference to the measurements by scale. Or if there be any discrepancy between the figures or dimensions, or the form of construction, or the material as indicated in the plans, and the dimensions and materials given in the specification, the directions of the specification shall be adopted; and in all cases of defective description, or any ambiguity, the explanation given by the Engineer shall be binding upon the contractor. Also, anything contained in the plans, and not in the specification, or anything contained in the specification and not shown in the plans, shall be equally binding as if it were contained in both. If neither specification nor plans contain any mention of minor parts, which, in the opinion of the Engineer, are reasonably and obviously necessary for the satisfactory completion of the works, such parts are to be provided by the contractor without any extra charge, as if they were specially mentioned, and shall be deemed to be, and hereby are, included in this contract.

All

All works described in, or implied by, the specification or shown in any of the plans, or set forth in any lists or tables thereon, or attached thereto, as well as those expressly provided for, are to be made and executed in every detail conformably to the several plans already prepared or which may be prepared hereafter for the purpose of this contract, in strict accordance with the provisions of the specification and conditions, and to the entire satisfaction of the Engineer.

*Copies of Plans, &c.*

4. A copy of all plans and specifications required by the contractor for carrying on the works will be provided by the Government, but must be returned before a final certificate for the work can be given. Any additional copies which may be required and are supplied by the Department shall be paid for by the contractor at a rate to be fixed by the Engineer.

*Setting out Works.*

5. The works will be set out—that is to say, all necessary centre lines and levels will be given to the contractor—except in the case of buildings, when, in the absence of setting out, a block plan will be supplied, from which he must work; but the contractor must satisfy himself of the accuracy of the setting out, as no work incorrectly set out or improperly executed will be paid for.

*Protecting and maintaining Signals and Marks.*

6. All bench marks, pegs, and signals on the surface, and all alignments, and level marks underground put in by the Engineer or Superintending Officer for the purpose of checking the contractor's work, will be confided to the care of the contractor. He shall, at his own expense, take all proper and reasonable precaution and care to preserve and maintain them in their true position; in the event, however, of their being disturbed or obliterated by accident or from any other cause whatever, they may, if necessary, be replaced by the Engineer or Superintending Officer at the contractor's expense, and the cost thereof deducted from any moneys then due or thereafter becoming due to the contractor.

*Possession of Ground.*

7. In giving the contractor possession of the site it shall not be deemed that he is to have the exclusive possession, but only a limited possession—that is to say, such possession as will enable him to perform the works comprised in this contract. The Minister may at any time take possession of any portion of the works or ground or intended site of the works for the purpose of carrying on any other works or for any purpose whatsoever. The contractor must procure for himself all other land which he may deem requisite for any temporary purposes, or for his own convenience.

*Access to Works.*

8. The Engineer, or any other person authorised by him, shall have free and uninterrupted access at all times to the works, and during working hours to any workshop or premises, not on the site of the works, where materials may be in preparation or stored for the purpose of this contract. The contractor shall give the Engineer all particulars as to the mode and place of manufacture of any of the materials proposed to be used in connection with this contract, and shall facilitate in every way the inspection of the same.

*Contractor's Risk.*

9. The contractor shall take upon himself the whole risk of executing the works to the satisfaction of the Engineer, and in accordance with the plans, sections, and specifications.

*Contractor to be represented.*

10. The contractor at all times during the progress of the works, when he is not personally superintending them, must have a responsible agent or overseer in charge to receive instructions from the Superintending Officer or Engineer, and to represent the contractor for all purposes of this contract.

Any notice or any written instructions to be given or delivered to the contractor under this contract shall be deemed to have been so given or delivered when given or delivered to the contractor or his representative at the work, or left at the contractor's usual or last-known place of abode or business.

*Order of Procedure.*

11. The Engineer shall have full power to decide in what order in point of time the various parts of the work or works comprised under this contract shall be carried out.

*Power of Entry.*

12. The Engineer shall have the power, at his discretion, without vacating this contract, to enter upon, by himself or his agents, and make use of any part or parts of the work comprised under this contract, and his doing so shall in no wise be held as a waiver of the responsibility of the contractor in respect of this contract, except in so far as any injury may accrue to such work so entered upon, by reason of any proved carelessness, to the satisfaction of the Engineer, of any employee of the Government, in which event the contractor shall be free from liability on account thereof, but not otherwise.

*Instructions to be obeyed.*

13. Should the contractor refuse or neglect to carry out the instructions of the Engineer or the Superintending Officer, the Engineer shall have the power of suspending the usual monthly certificate until such instructions have been complied with.

*Power to Dismiss Men.*

14. The Engineer may require the dismissal, within twenty-four hours by the contractor, of any agent, overseer, foreman, workman, or other person employed on the works, and in the event of the contractor refusing or neglecting to comply with such requisitions, all further payments on account of the work may be stopped until such dismissal is effected.

*Bad*

*Bad Materials or Improper Works to be removed.*

15. The contractor shall be bound to remove, within twenty-four hours, if written notice from the Engineer or Superintending Officer to that effect be given, any materials or work, whether fixed or not, which may appear to the Engineer to be of an inferior or improper description; and, in case of refusal, the Engineer shall have the power to get such materials or work removed at the contractor's expense, and to withhold all payments until such instructions have been complied with.

*Extra Works—Omissions of Works.*

16. If at any time whilst the works are in hand it shall be deemed expedient by the Engineer to order material or work of a different description to that specified, or to increase or diminish the dimensions or extent of any works to be done under this contract, or to alter their situation or vary the form or dimensions of any of the said works, or of any part thereof, or to make any deviation or to substitute one class of work for another, he shall have full power to do so, and to order and direct any such increase, diminution, alteration, deviation, or substitution, and the works involved in any such increase, alteration, deviation, or substitution, shall be executed by the contractor if of the class of works provided for in the schedule of prices, at such schedule prices; and no such increase, diminution, alteration, deviation, or substitution of works shall in any way annul or set aside this contract, or extend the time for the completion thereof, unless the Minister shall see fit to grant such extension; but such additions or alterations shall be measured and paid for, or deducted from the contractor's account, as the case may require, according to the schedule of prices. Provided that if any portion of the works so ordered to be done shall not be, in the opinion of the Engineer, of the same value or class of works provided for in the schedule of prices, the same shall be executed by the contractor at such prices as may be agreed upon with the Engineer; but if the contractor and Engineer cannot agree as to the price to be paid, the Engineer may order and direct the same to be done by such person or persons as he may think fit. Before any extra work, or work of an altered value or class, is undertaken by the contractor, it shall be imperative for him to procure an order in writing from the Engineer for carrying out such extra or variation of work, and the contractor shall not be entitled to any payment for such extras or variations unless he produce the written order for the same, as aforesaid, and he shall not be entitled to plead that the Engineer omitted to give such written order, as it is to be distinctly understood that the onus of obtaining such order shall be on the contractor. The contractor shall not be entitled to any other rate than the schedule rate on any plea that the work was in a different position or of a different class from, or in a more difficult position than that shown on plan or specification, or carried out under circumstances not contemplated in the specification, unless an agreement entitling him to payment by other than the schedule rates shall have been previously made and signed by the Engineer and the contractor.

*Valuation of Omissions.*

17. The Engineer shall have the power to direct the omission of the carrying out of any part or parts of the said works, but not amounting to the omission of the whole; and the value of such work so omitted in such case, calculated at the schedule rates, or in the event of there being no schedule rates, calculated on the basis of the proportionate value which such work bears to the lump sum, as ascertained by the Engineer, whose decision on that point shall be final, shall be deducted from the contract sum, subject, however, to arbitration clauses Nos. 36 to 41.

*Net Measurements.*

18. The whole of the work shall be executed and paid for according to the contract dimensions, and no allowance will be made for any excess of dimensions above those found on the working plans now exhibited, or which may be afterwards supplied, notwithstanding any general or local custom to the contrary, unless such excess has been expressly ordered. In the case of dressed masonry all cubic measurements will be taken at the extremes, and in the case of rock-faced masonry all measurements will be taken to the draft. With regard to timber, all framed work will be paid to extremes, but in no case will scarfs in hewn or round logs be paid for.

*Contractor liable for injury to adjoining Lands, Properties, &c.*

19. The contractor shall not commit any act of trespass, and shall effectually protect all adjoining properties and owners thereof against any loss, damage, or injury that may occur through the carrying on of the works, whether to buildings, goods, property of any kind, or to persons; and in case any such trespass be committed, or any such loss, damage, or injury occur, the contractor shall make full compensation, and shall make good all or any such loss, damage, or injury; and if any such compensation for trespass, or any such loss, damage, or injury be recovered against the Government in the first instance, it may be deducted from any money due or coming due to the contractor under this contract, or may be recoverable from the contractor or his sureties as liquidated damages in that respect incurred.

*Damages, &c., to be paid for by the Contractor.*

20. All damage, injury, or loss that may happen to the works from any cause whatever during their progress must be made good by the contractor at his own expense; and the whole of the works must be delivered up, complete in every respect, according to this contract, and the care and maintenance of all works under this contract shall remain with the contractor until the Engineer shall, by notice in writing under his hand, inform the contractor that he has taken charge thereof; and until such notice shall have been given, the contractor shall be responsible for all accidents, from whatever cause arising, and shall make good all damages thereto.

*Contractor not to Sublet Works or Assign Moneys.*

21. The contractor shall not assign or underlet this contract, or any part thereof, or assign or mortgage, charge or encumber all or any of the moneys payable or to become payable under this contract, or any other benefit whatsoever arising, or which may arise, under this contract, to any person without the consent in writing of the Minister being first obtained. The contractor for each and every breach of this condition shall be liable to pay to the Government the sum of £50 as and for liquidated damages; and the sum or sums payable as such damages may be deducted from any sum or sums due to the

contractor under this or any other contract with the Government. And any permission to assign or underlet works to be done under this contract shall not discharge the contractor from any liability in respect of this contract, and shall extend only to the permission actually given, but not so as to prevent any proceedings for any subsequent breach of this condition; and all rights under these conditions shall remain in full force, and shall be available as against any such subsequent breach.

*Truck System not allowed.*

22. The workmen and labourers of every class employed on the works shall be paid their wages in full, in money, current coin of the Colony, at least once in every month, and no ticket or other system of payment by provisions, liquors, or goods will on any pretence be allowed; nor shall the contractor, or any person or persons employed by him, or in any way connected with him, establish any shop for the supply of provisions, liquors, or goods; nor shall the contractor oblige his workmen to take provisions, liquors, or goods of any kind from any person in particular. The workmen and labourers of every class shall be paid on the works if it be possible, or in some building in the vicinity; and in no case shall they be paid at a public-house or other place where liquors or refreshments are sold. The contractor, for each and every breach of this condition, shall pay to the Government the sum of £50 as and for liquidated damages; and the sum or sums payable as such damages may be deducted from any sum or sums due to the contractor under this or any other contract with the Government.

*Power of the Government to pay Workmen and Tradesmen.*

23. Before the payment of any money to the contractor, the Engineer may require from him a statutory declaration that the tradesmen supplying materials for or incidental to the works, and the workmen and labourers of every class employed on the works, have been paid their claims of every kind in full, in current coin of the Colony, and to the latest date at which such wages or claims are due; and the Engineer may withhold the payment of any money that may be due or become due to the contractor until such declaration has been made and delivered to him.

If the contractor shall fail or omit to pay the claims of any such tradesmen, workmen, or labourers, in the current coin of the Colony, it shall be lawful for the Minister or the Engineer, as often as the same shall happen, upon complaint of such failure or omission made by any such tradesman, workman, or labourer, and upon proof to the satisfaction of the Minister or Engineer of such failure or omission to pay the amount of such claim to such tradesman, workman, or labourer, and to deduct the same amount from any money then due or owing, or thereafter to become due or owing, to the contractor under this contract.

*Delay by Minister.*

24. If the contractor shall not be able to obtain possession of any portion of the ground required for the execution of the works to be done in connection with this contract, or if from the non-delivery, or any delay in the delivery to the contractor, of any materials which under this contract the Minister is to supply, or from any cause whatever arising out of the acts or defaults of the Minister, or any officers or servants in his employment, or from any accident happening to the said works during their progress not arising from the neglect or default of the contractor or his servants or workmen, the contractor shall be delayed or impeded in the execution of his contract, the contractor may from time to time within seven days of the happening or occurring of such act, default, or accident, apply in writing to the Engineer for an extension of time on account of such act, default, or accident, setting forth the cause of such application, and the Engineer shall, if the Minister think the cause sufficient, but not otherwise, allow by writing under his hand such an extension of time as the Minister shall think adequate; and the penalties, sets-off, and deductions to which under this contract the contractor is liable shall not attach until the expiration of such extension of time, but shall attach, and the contractor shall become liable to the same from the date of the expiration of such extended time or times. And unless the contractor shall make such application within the time and in the manner aforesaid, and unless and until the Minister shall allow such extension or extensions of time as aforesaid, the contractor shall not by reason of any delay arising from the cause or causes aforesaid, or any of them, be relieved in any way or to any extent of his liability to finish and complete the works within the time in this contract specified; and in default of his so doing, to pay and be subject to the liquidated damages, deductions, and sets-off as in these conditions provided; nor shall the Minister be deprived in any way or to any extent of his right to deduct or recover any sum or sums as liquidated damages, and not as or in the nature of a penalty or to make deductions or sets-off which under this contract he is entitled to make, deduct, set-off, or receive from the contractor for or by reason or on account of any delay in the completion of the work or any portion of the same, nor shall the rights, powers, and authorities by these conditions given to or vested in him be in any way affected.

*Patent Rights to be included.*

25. The contractor is to include in his tender the amount of all patent rights and royalties which may be claimed by any patentee or patentees for the manufacture and use of any portion of this work, and must undertake to liquidate the same when required to do so.

*Free Passes, &c.*

26. No free passes on any of the Government Railways will be granted either to the contractor or his agents, nor will any materials or articles of any description be conveyed free of charge.

*Conditions not to be Waived.*

27. None of the conditions of this contract shall be varied, waived, and discharged, or released, either at law or in equity, unless by the express consent of the Minister, testified in writing under his hand.

*Progress Payments without Prejudice.*

28. No progress payment given to the contractor shall prevent the Engineer from at any future time before the final settlement rejecting all unsound materials and improper workmanship discovered subsequently to the giving of any previous payment; and notwithstanding any approval given or made by the Superintending Officer that portions or the whole of the works have been satisfactorily performed, the Engineer may require the contractor to remove or amend at any future time previously to the final payment

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on account of the work, any work that may be found not in accordance with this contract; and the contractor must remove and amend at his own cost all such work when so required; and if he refuse or neglect to do so, the Engineer shall have the power to carry out such work, and to deduct the whole cost thereof from any moneys that may be due, or that may become due, to the contractor.

If, in the opinion of the Engineer, further inquiry is necessary or desirable before any progress payment is made, he shall have the power to withhold the certificate on which such payment would have been made, for any period which he may consider necessary for the purpose of such inquiry.

#### *Security.*

29. Within fourteen days after the notice of the acceptance of his tender shall have been given to the contractor, or posted to the address of his last-known place of business or residence, he shall deposit with the Minister, or at the option of the Minister, in some bank or banks in Sydney, upon fixed deposit in the name of the Minister, a sum calculated at the rate of £5 for every £100 or part thereof on the amount of his tender up to the sum of £100,000, and at the rate of £1 for every £100 or part thereof in addition, for any amount over that sum, to be held by the Minister as security for the due and proper performance and completion of this contract until the Engineer has certified that the whole of the work in the said contract has been completed to his satisfaction, or until this contract has been cancelled by the Minister under the power given to him in that respect under clause 32 of these conditions, in which last-mentioned event happening the money so deposited shall become forfeited to the Crown, and shall be held by the Colonial Treasurer, for and on behalf of Her Majesty the Queen, as liquidated damages. If, however, this contract shall not have been cancelled under the said clause, and if the works comprised in this contract are not completed within the time mentioned in clause 34 of these conditions, the liquidated damages which under the last-mentioned clause are made payable to the Minister may be deducted and taken from the money so deposited.

If the contractor fail to deposit the sum as hereinbefore provided within fourteen days from the acceptance of the tender, or if he fail to execute the contract for the due performance of the works mentioned in the said tender, the Minister shall have the option of and full power and authority to declare such acceptance to be annulled, in which case the amount of the preliminary deposit will be absolutely forfeited to the Crown, as provided by the Regulations of the Tender Board.

No tenderer will be authorised to proceed with the work tendered for until he has made the deposit as aforesaid, and has executed the required contract for the due performance of the said works, it being hereby declared that for all or any work done or materials found and provided by the contractor before the due execution of the said contract, or the said moneys being deposited as aforesaid, he shall not have any right of action, claim, or demand against the Minister.

The contractor will be entitled to receive any interest that may be payable upon the fixed deposit of the money, if the money be placed in a bank at fixed deposit, as such interest becomes payable; but it is expressly declared that the Minister is not to be held liable or answerable in any way for any loss on the money so deposited, or for any loss of interest from the fixed deposit not being renewed.

#### *Payments.*

30. Progress payments may be made once in every month, unless the same shall become not payable by reason of anything contained in these conditions, on the certificate of the Engineer, as the work proceeds, in the proportion of 80 per cent. of the value of the work returned, until the sum retained reaches the amount of the deposit provided for in the preceding clause, when no further deductions will be made. The amount of the retention money will be held by the Minister, in addition to the cash security, unless otherwise provided for in the specification, until the Engineer has certified that the whole of the works have been satisfactorily completed, and the period specified for the maintenance of the said works has expired, and all accounts finally adjusted, when the retention money, in addition to the cash security, will be paid to the contractor; and it is expressly declared that until a certificate has been given by the Engineer to the Minister that the work done by the contractor has been executed and completed to his satisfaction, the contractor shall have no right or claim in respect of any work done or materials provided, nor to the payments from time to time to be made under this contract, or to the final payment upon the whole of the works being finished.

#### *Delay or Bad Work, Bankruptcy, &c.*

31. In case the Engineer shall be at any time dissatisfied with the mode of proceeding, or at the rate of progress of the works or any part thereof, or in case the contractor shall at any time neglect or omit to carry out the instructions of the Engineer, or to dismiss any person employed when required, or shall neglect or omit to remove any materials or work which he is required to remove under condition 15, or in case the contractor shall assign or underlet this contract, or any part thereof, or assign or mortgage, charge or encumber, or attempt to assign, mortgage, charge or encumber, all or any of the moneys payable or to become payable under this contract, or any other benefit whatsoever arising or which may arise under this contract, without the consent in writing of the Minister being first obtained, or in case the contractor shall make default in insuring and keeping insured, in cases where insurance is specified, and depositing the policies and receipts for premiums in accordance with these conditions, or in case the contractor shall become bankrupt, or shall make an assignment of his estate for the benefit of creditors, or shall make an arrangement or composition with his creditors, then and in every such case the Minister shall be at liberty, without violating this contract, and without prejudice to any right that may have accrued to liquidated damages under any of these conditions, to take the works wholly or partially out of the hands of the contractor and to employ or contract with any other person or persons to execute the same, and for that purpose to take possession of and use all horses, materials, plant, tools, implements and things on or about the said works, without making any allowances for the same, and all damages and expenses thereby incurred shall be ascertained and certified by the Engineer, and together with any sum payable as liquidated damages under these conditions shall be deducted from any money that may be then due or may thereafter become due to the contractor or may have been deposited by him; and if the money then due, or thereafter becoming due to the contractor, or deposited by him, be not sufficient for that purpose, the balance remaining unpaid shall be a debt due by the contractor to the Minister, and may be recovered accordingly.

#### *Cancellation*

*Cancellation of Contract.*

32. In any or either of the events mentioned in the last preceding clause of these conditions, the Minister shall have the option and full power and authority in lieu of proceeding under such clause, and without prejudice to any right that may have accrued to liquidated damages under any of these conditions, to cancel this contract whether there are any works remaining to be done or not; and in such case the moneys which shall have been previously paid to the contractor on account of the works executed, shall be taken by him as full payment for all works done under this contract; and upon notice in writing under the hand of the Minister that he, under the authority of this condition, cancels this contract, being given to the contractor, this contract shall be cancelled, and thereupon all sums of money that may be due to the contractor, or unpaid, together with all implements in his possession, and all materials provided by him, upon the ground upon which the work is being carried on, or adjacent thereto, shall be forfeited, and all sums of money held as security or named as liquidated damages for the non-fulfilment of this contract, within the time specified, shall also be forfeited and become payable to the Government, and the said implements and materials shall become and be the absolute property of the Government, and with the moneys so forfeited and payable as aforesaid shall be considered as ascertained damages for breach of contract.

*Insurance.*

33. The contractor shall from time to time, when required to do so by the terms of the specification, insure the works against loss or damage by fire, in an office to be approved in the name of the Minister for the amount of the full value of the work completed, as determined by the Engineer, and shall lodge with the Engineer the policies and receipts for the premiums for such insurance, and shall continue such policies until possession is given up to the Government; in default of which the Minister shall be at liberty to insure and deduct the amount of the premiums paid from any moneys payable to the contractor, and may refuse payment of any certificate until such policies and receipts are handed in as aforesaid; but this insurance is to be no limit or bar to the liability and obligation of the contractor to deliver up the works to the Minister completed in all respects according to the contract. In case of loss or damage by fire the moneys payable under any such insurance shall be received and retained by the Minister until the works are finally completed, and shall then be credited to the contractor in the final settlement of accounts in the event of the contract not having been previously cancelled under these conditions.

*Time of Completion, &c.*

34. The contractor shall complete the whole of the works comprised in this contract within seventy-eight weeks from the date of the acceptance of his tender, and in the event of their non-completion at the specified times, should the Engineer not have proceeded under clauses Nos. 31 and 32 of these conditions, or either of them, the contractor shall pay, by way of liquidated damages, and not as or in the nature of a penalty, the sum of \_\_\_\_\_ pounds sterling for every week, or for every part of a week, that shall elapse after such specified time, until their completion, and which sum or sums may be deducted from any money payable to the contractor under this or any other contract. The contractor shall have no right to a certificate for payment after the date specified in these conditions for the completion of this contract until the whole of the works shall have been properly completed to the satisfaction of the Engineer, unless the time for the completion of this contract shall have been extended by the Minister, in which case such extended time shall become the time for the completion of this contract, and it is to be expressly understood that the fact of the time having been so extended shall not in any way be taken as a waiver of this contract, or as annulling or setting aside this contract in any respect, nor be taken as releasing the contractor from any of the responsibilities or obligations of this contract, which, in all other respects, shall remain the same as if the time had not been extended.

The like liability also shall hold good as to the obligation of the contractor in the event of any advance being made to him from the retention money, or on material on the ground and not *in situ*.

*Maintenance.*

35. The contractor will be bound to maintain the works for a period of three months after their final completion and use by the Government; and if any part should within that period show signs of weakness, or of giving way, or if any defective workmanship or materials be detected, the contractor, when called upon to do so, shall make good the same at his own expense, to the satisfaction of the Engineer, before any moneys held by the Government on account of this contract will be paid. It is also to be distinctly understood that the Government shall have the full, free, and unrestricted use of the said works, without any interference whatever on the part of the contractor during the currency of this period of maintenance; and such use of the said works on the part of the Government shall not be held as relieving the contractor of any liabilities or obligations whatever in respect of his contract.

*Arbitration.*

36. The following matters shall be decided by the Engineer, whose decision shall be absolute and final:—(1) All questions or disputes which shall arise respecting the true construction or meaning of the plans or specification, or the quality of the workmanship, or quantity or quality of materials necessary for the whole or any part of the contract. (2) All questions and disputes when the net claim shall not amount to the sum of £500.

37. All questions and disputes not hereinbefore provided for shall, if the net claim be £500 or upwards, upon the completion of the works under the said contract, and before payment of the retention money and the money deposited as security for the due carrying out of the contract, be fixed and determined by arbitration as hereinafter provided.

38. If either party consider that he has claims in respect of any matter in which arbitration may be claimed, he shall, within one month of the date of the final certificate, furnish to the other party full particulars in writing of such claims, breaches, doubts, disputes, and differences in respect of which he desires arbitration, giving distinct and separate items, and the amount, if any, claimed under each item; and the other party may thereupon furnish particulars of all claims he has in respect of such matters, irrespective of the aggregate amount of such claims; and the party furnishing the same shall be bound by such particulars; and no claim not included in such statement shall be taken into consideration at such arbitration, or become subject of arbitration or action; and the claim or respective claims so made as aforesaid shall be determined by arbitration, in the manner as hereinafter provided.

39. If both parties concur in the appointment of a single arbitrator, then the reference shall be to such single arbitrator; but if the parties for twenty-one days after the particulars first mentioned in the last preceding clause shall have been furnished, cannot concur in the appointment of a single arbitrator, the reference shall be to two arbitrators, one to be appointed by each party, or their umpire to be appointed in writing by such arbitrators before they commence the business of the reference; and the arbitration shall, subject to the express provisions herein contained, be made and held pursuant and subject to the Arbitration Act of 1892, or any statutory modification or re-enactment thereof for the time being in force.

40. The costs of and incidental to the arbitration shall be paid or borne by or between the parties in manner hereinafter mentioned, that is to say:—

1. If the sum awarded does not exceed the amount acknowledged by the Department to be due, the contractor shall pay all the costs of and incidental to the arbitration.
2. If the sum awarded shall amount to the sum claimed by the contractor, the Government shall pay all the costs of and incidental to the arbitration.
3. If the sum awarded exceeds the amount acknowledged by the Department to be due, but is less than the sum claimed by the contractor, the costs of both parties shall be added together and the total cost so ascertained shall be paid by the parties in the proportions following, namely:—The Government shall pay such sum as bears the same proportion to the total cost as the net award bears to the net claim, and the balance shall be paid by the contractor.

The award shall direct to, and by whom, and in what proportions the costs shall be paid, in accordance with the provisions hereinbefore contained; but the award need not specify the amount of such costs. Such amount shall, in the event of disagreement, be taxed or settled by the arbitrators or umpire, as between party and party, after the award is made. No costs shall be allowed as between solicitor and client. If either party shall be dissatisfied with the costs allowed by the arbitrators or umpire, the same may be taxed by the Prothonotary or other proper officer of the Supreme Court.

41. It is to be distinctly understood that all claims by either party to have any of the matters which may be submitted to arbitration so dealt with, must be made upon the whole of the work being completed, and before payment to the contractor of the retention money, or of the money deposited as security for the due performance of the contract, and that the acceptance by the contractor of payment of the retention money in cases where a bond to secure the completion of the works has been given, and in other cases of the retention money, or of any balance thereof, and of the money deposited as security for the due performance of the contract, shall be conclusive proof that the contractor has no such claim or claims.

Roads and Bridges and Sewerage Branch,  
Department of Public Works.

ROBT. HICKSON,  
Commissioner and Engineer-in-Chief,  
Roads, Bridges, and Sewerage.

These are the general conditions marked "D" referred to in our annexed agreement with Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

JOHN CARTER.  
FRANK MOOREHOUSE GUMMOW  
(By his Attorney, JOHN CARTER).  
D. G. SNODGRASS.

Witness,—HAROLD F. NORRIE.

These are the general conditions marked "D" referred to in my annexed bond to Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

Witness,—HAROLD F. NORRIE.

JAMES GILLAN.

These are the general conditions marked "D" referred to in my annexed bond to Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

Witness,—HAROLD F. NORRIE.

GEO. FORREST.

"E."

SPECIAL CONDITIONS.

*Rates of Wages to be Paid.*

Not less than the several rates of wages as set out in the schedule herein shall be paid by the contractor (or—in the event of the Minister approving of the sub-letting of any portion or portions of the works—by the sub-contractor) for the various services to be performed under this contract, and, in case of dispute as to the classification of workmen, the decision of the Engineer shall be final; the rates, however, do not include those to be paid to apprentices or boys.

With respect to overtime, the recognised rules of the particular trade then prevailing in the district where the work is situated shall be observed.

If it shall at any time be proved to the satisfaction of the Minister that the contractor or any approved sub-contractor is paying or has paid a lesser rate of wage for services rendered during the progress of the works to any workman employed thereon than is set out in the following schedule, the Minister shall have the option and full power and authority to cancel the contract, as if such breach was and is one of the events mentioned in clause 32 of the general conditions. Any permission to sub-let shall not discharge the contractor from any liability in respect of the rate of wages to be paid under this contract.

In all classes of labour, forty-eight hours shall be considered as a week's work. This rule, however, shall not apply to those workmen, the necessities of whose employment demand that longer hours shall be worked, as in the case of firemen, who usually have to get up steam in readiness for the day's work. The necessity for longer hours of labour in special cases shall be determined by the Engineer, whose decision shall be final.

The

The following is the schedule referred to :—

Trade.	Rate.
	s. d.
Carpenters .....	8 0 per day.
Masons .....	10 0 "
Bricklayers .....	9 0 "
Plasterers .....	9 0 "
Blacksmiths .....	8 6 "
Boilermakers and riveters .....	9 0 "
Fitters .....	9 0 "
Painters .....	7 6 "
Plumbers .....	8 6 "
Shipwrights .....	9 6 "
Copper and brass workers .....	9 0 "
Moulders .....	7 0 "
Engine drivers .....	7 6 "
Workmen not included in the foregoing list .....	6 0 "

These are the special conditions marked "E" referred to in our annexed agreement with Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

JOHN CARTER.  
FRANK MOOREHOUSE GUMMOW  
(By his Attorney, JOHN CARTER).  
D. G. SNODGRASS.

Witness,—HAROLD F. NORRIE.

These are the special conditions marked "E" referred to in my annexed bond to Her Majesty the Queen, dated 16th May, A.D. 1895.

Witness,—HAROLD F. NORRIE.

JAMES GILLAN.

These are the special conditions marked "E" referred to in my annexed bond to Her Majesty the Queen, dated 16th day of May, A.D. 1895.

Witness,—HAROLD F. NORRIE.

GEO. FORREST.

" F. "

Department of Public Works, Roads, Bridges, and Sewerage Branch.

TENDER FORM.

IN pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the Northern Main Sewer, Leichhardt and Annandale section (Contract No. 77), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected and lodged by us for the sum of £15,500, and to complete the same within eighteen months from the date of the acceptance of this tender; and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works, a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and we enclose herewith our cheque for the sum of £160 as a preliminary deposit: and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said tender is opened withdraw same, or if, in the event of this tender being accepted, we fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board Regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 13th day of March, 1895.

CARTER, GUMMOW, & CO.,  
Box No. 10, North Sydney.

Witness,—A. R. BURKITT.

TENDER BOARD REGULATIONS.

No tender shall be received after eleven a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the Members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive ... ..	£5 0 0
For amounts exceeding £500 and not exceeding £1,000... ..	£10 0 0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

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This is the tender marked "F" referred to in the annexed agreement with Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

JOHN CARTER.  
FRANK MOOREHOUSE GUMMOW  
(By his Attorney, JOHN CARTER)  
D. G. SNODGRASS.

Witness,—HAROLD F. NORRIE.

This is the tender marked "F" referred to in my annexed bond to Her Majesty the Queen, dated 16th day of May, A.D. 1895.

Witness,—HAROLD F. NORRIE.

JAMES GILLAN.

This is the tender marked "F" referred to in my annexed bond to Her Majesty the Queen, dated 16th day of May, A.D. 1895.

Witness,—HAROLD F. NORRIE.

GEO. FORREST.

The plans herein referred to are those exhibited by the Department (with the exception of aqueduct plans), together with plans on our patent system lodged with Public Works Department.

---

"G."

#### SUPPLEMENTARY SPECIFICATION.

The structure above the level of the skewbacks of main arches to be constructed as shown on drawing which accompanies the contractor's tender of cement mortar (except the cement facing), composed of one part of cement to three parts of sand, and wrought-iron rods on the "Monier system."

The foundations of piers are to be in conformity with the drawings attached to the contract, except as regards to the extra size necessitated by the larger pier shown on the contractor's plan, and are to be to the satisfaction of the Engineer.

Should the piers be required to be put down to a greater depth than shown on the drawings, or a greater number of them require piling than shown, the work is to be executed as ordered without extra payment being made.

The piers are to be built with sandstone concrete of the quality specified, and faced with cement mortar, composed of one part of cement and two parts of sand.

The cement facing of the structure, above the level of the springing of main arches is to be composed of one part of cement and one part of sand.

The works generally are to be carried out in accordance with the specification, schedule to specification, and the plans therein referred to, save and except such structural parts as are to be carried out under the "Monier system," or necessarily enlarged to meet the requirements of the contractor's plan, and within the time set out in the general conditions.

The contractors shall continue to maintain the said works at their own cost after the period of maintenance set forth in the general conditions, for a further period of three years, computed from such date to the satisfaction of the Engineer, whose decision shall be final and conclusive upon all points concerning workmanship and materials, and the permanency and durability of the said works, and the contractors shall enter into a bond to Her Majesty the Queen in the penal sum of £12,000, and find two sufficient sureties to enter into separate bonds in the penal sum of £6,000 each, to secure the removal of so much of the said works as shall have been constructed on the "Monier system," if the Engineer shall be dissatisfied with the same at any time during the said periods of maintenance, and to re-erect and  
construct

construct the said works at their own cost and expense in accordance with all things with the specification, schedule to specification, and plans therein referred to, within thirty-nine weeks from the date of being called upon so to do.

This is the supplementary specification marked "G" referred to in our annexed agreement with Her Majesty the Queen, dated the \_\_\_\_\_ day of \_\_\_\_\_ A.D. 1895.

JOHN CARTER,  
FRANK MOOREHOUSE GUMMOW  
(By his Attorney, JOHN CARTER).  
D. G. SNODGRASS.

This is the supplementary specification marked "G" referred to in my annexed bond to Her Majesty the Queen, dated the 16th day of May, A.D., 1895.

Witness,—HAROLD F. NORRIE.

JAMES GILLAN.

This is the supplementary specification marked "G" referred to in my annexed bond to Her Majesty the Queen, dated the 16th day of May, A.D., 1895.

Witness,—HAROLD F. NORRIE.

GEO. FORREST.

"H."

Gentlemen,

Public Works Department, Sydney, 11 April, 1895.

I have the honor, by direction of the Secretary for Public Works, to inform you that your tender, dated the 13th March last, is accepted for the construction of the northern main sewer, Leichhardt and Annandale Section, No. 77, at the sum of £15,500, in the terms set out in the supplementary specification, a copy of which is sent herewith, and subject to the following special conditions, viz. :—

That if it shall be represented to the Secretary for Public Works at any time during the progress of this contract that an undue number of men are being employed thereon who have not been domiciled in this Colony for six months previously to such employment, and such allegation be proved to his satisfaction, the Minister shall have the power to call upon you to discharge any or all such men, and on such direction being conveyed to you under the hand of the Under Secretary for Public Works, you shall discharge such men forthwith, and in the event of your non-compliance with any such direction, the Minister shall have the power to declare this contract to be cancelled as if this stipulation had been expressly set out in the cancellation clause of the general conditions relating to this contract.

The work is to be carried out in strict accordance with the several contract exhibits relating to this contract modified by the supplementary specification above referred to, and the plan submitted with your tender, and to be completed within seventy-eight weeks from this date.

A fixed deposit receipt, in favour of the Secretary for Public Works, for the sum of £775 will be required as security for the due performance of contract within the stipulated time, and a personal bond in the sum of £12,000, and two bondsmen in the sum of £6,000 each in connection with the maintenance as set out in the supplementary specification. Will you be good enough to notify to me your assent to these terms, and at the same time submit the names of two responsible persons who are willing to act as your sureties.

I have to refer you to the Engineer-in-Chief for Metropolitan Sewerage Construction for further information, and to request that you will, when required to do so, call upon the officer in charge of bonds and contracts at this office with your sureties for the purpose of executing the necessary documents for the due observance of your contract.

I am, &c.,

J. BARRLING,

Under Secretary.

Messrs. Carter, Gummow & Co., contractors, Box No. 10, North Sydney.

This is the copy acceptance marked "H" referred to in our annexed agreement with Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

JOHN CARTER,  
FRANK MOOREHOUSE GUMMOW  
(By his Attorney, JOHN CARTER).  
D. G. SNODGRASS.

Witness,—HAROLD F. NORRIE.

This is the copy acceptance of tender marked "H" referred to in my annexed bond to Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

Witness,—HAROLD F. NORRIE.

JAMES GILLAN.

This is the copy acceptance marked "H" referred to in my annexed bond to Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

Witness,—HAROLD F. NORRIE.

GEO. FORREST.

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"I."

Sir, North Sydney, 15 April, 1895.  
 We have the honor to acknowledge the receipt of your letter, *re* Contract No. 77, Sydney Sewerage, and to inform you that we accept the terms thereof.  
 We propose as our sureties Mr. James Gillan, householder, Dulwich Hill, and Mr. George Forrest, householder, Marrickville.  
 The Under Secretary, Public Works. We are, &c.,  
 CARTER, GUMMOW, & CO.

This is the letter of assent marked "I" referred to in our annexed agreement with Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

JOHN CARTER,  
 FRANK MOORHOUSE GUMMOW  
 (By his Attorney, JOHN CARTER).  
 D. G. SNODGRASS.

Witness,—HAROLD F. NORRIE.

This is the letter of assent marked "I" referred to in my annexed bond to Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

Witness,—HAROLD F. NORRIE.

JAMES GILLAN.

This is the letter of assent marked "I" referred to in my annexed bond to Her Majesty the Queen, dated the 16th day of May, A.D. 1895.

Witness,—HAROLD F. NORRIE.

GEO. FORREST.

### No. 12.

#### Fixed Deposit Receipt.

(Due 29th April, 1896.)

BANK OF NEW ZEALAND.

Incorporated by Act of the General Assembly.

No. A22187.

*Deposit Receipt.*

Sydney, N.S.W., 29 April, 1895.

RECEIVED from 22187, the Under Secretary for Public Works, the sum of seven hundred and seventy-five pounds as a fixed deposit, repayable at the end of twelve months, bearing interest for that period only at the rate of three and one-half per cent. per annum from the date hereof.

For the Bank of New Zealand—

GEO. A. WILSON, Manager,  
 S. H. BATCHELOR (for Accountant).

£775.

[Not transferable.]

When payment of this receipt is required, this receipt must be returned duly endorsed.

### No. 13.

#### The Clerk-in-charge of Bonds and Contracts to The Under Secretary for Public Works.

*Contract No. 77.*

THE tender of Messrs. Carter, Gummow, and Snodgrass, trading as "Carter, Gummow, & Co.," was on 11th April last accepted for the above work. On the 29th of the same month they placed £775 (five per cent. on the estimated contract amount) to the credit of the Under Secretary with the Bank of New Zealand, Sydney, as security for the due performance of their contract; and on 16th May following executed the contract documents, it being stipulated that the contractors were to remove so much of the works at their own cost as should have been constructed on the "Monier" system, if the Engineer should be dissatisfied with the same at any time during either of the periods of maintenance set out in the general conditions and supplementary specifications respectively, and to rebuild according to the original plans and specifications, and to provide for the uninterrupted flow of sewage during such rebuilding. For more abundant caution the contractors were also asked to enter into a joint and several bond in the sum of £6,000, and to provide two sureties in the sum of £3,000, each to secure the due carrying out of these stipulations. The contractors executed such a bond on 16th May last, and on the same date Messrs. James Gillan, of Dulwich Hill, householder, and George Forrest, of Marrickville, householder, entered into similar bonds in the sums already named. The sureties furnished the usual statutory declarations that they were respectively worth £6,000 over and above all their just debts and liabilities of every kind.

Drafts of agreement and bonds (three) are sent herewith.

HAROLD F. NORRIE,

26th September, 1895.

Clerk-in-charge of Bonds and Contracts.

## No. 14.

## Voucher for £723 9s. 2d.

CONTRACT No. 77 (Sydney Sewerage).—Progress Return, No. 2, showing quantity and value of work executed or fixed, and material advanced on, on the 8th day of October, 1895.

Estimated cost of work, £15,500. Progress payments, £666 10s. 2d.; present advance, £723 9s. 2d.; total, £1,389 19s. 4d.

Schedule Rate No.	Description.	Unit.	Quantity.	Rate.	Amount.	Total.
					£ s. d.	£ s. d.
1	Excavation in trenches, in soil, &c. ....	cubic yard	702	2/-	70 4 0	
3	" " " rock, 4 in. powder .....	"	276	6/-	82 16 0	
6	" tunnels in rock, " .....	"	345	57/6	991 17 6	
7	" shafts in soil, &c. ....	"	20	6/-	6 0 0	
11	" " " rock, 4 in. powder .....	"	65	20/-	65 0 0	
19	Sandstone concrete .....	"	330	28/-	462 0 0	
38	Removal of surplus material, first $\frac{1}{2}$ mile .....	"	1,100	-/9	41 5 0	
39	" " " further $\frac{1}{4}$ mile .....	"	1,100	-/4	18 6 8	
	Total.....					1,737 9 2
Recapitulation.					Amount.	Total.
Value of work executed to date .....					£ s. d. 1,737 9 2	£ s. d. 1,737 9 2
<i>Deductions to be made:—</i>						
Retention money .....					347 9 10	
Amount of progress payments already made, see annexed sheet, marked .....					666 10 2	
						1,014 0 0
Amount of 2nd progress payment now recommended .....						723 9 2

I hereby certify that the above return is a fair and correct statement of the contract to which it refers, and that the above measurements were made by me with Mr. Gummow, contractor, and Messrs. Wagg and Clymer.

J. GRIFFITHS,  
Supervising Engineer, Metn. Sewerage Construction.

J. BEVERIDGE,  
Officer-in-charge of the Work.

I certify that the amount charged in this Voucher as to computations, castings, and rates, is correct, that the service has been faithfully performed, and that the expenditure is duly authorised in terms of the Audit Act.

C. D.,  
Head of the Department.

## Contract No. 79, Sydney Sewerage.

### No. 1.

The Engineer-in-Chief for Sewerage to The Under Secretary for Public Works.

Main Outfall Sewer, North Shore.—Contract No. 79, Sydney Sewerage Works.

HEREWITH is submitted for the approval of the Commissioner and Engineer-in-Chief, plans and specifications, in triplicate, for the above work.

Amount available, balance of £107,000 for North Shore Drainage in Loans Act, 53 Vic. No. 23.  
Estimated cost, £43,494 10s. 6d.

Plans and specifications to be exhibited at the Sewerage Office, Lincoln Inn Chambers, Elizabeth-street.

Tenders to close at 11 a.m., Wednesday, 10th June, 1891.

The Commissioner and Engineer-in-Chief.

Chief Assistant Engineer for Sewerage.

HEREWITH is forwarded for the approval of the Secretary for Public Works, and for insertion in the *Government Gazette* and local papers, an advertisement inviting tenders for the above.

M. OHLFSEN BAGGÉ,

The Under Secretary.—B.C.

(*pro* Commissioner and Engineer-in-Chief for Sewerage),  
11/5/91.

Submitted.—J.B., 11/5/91. Approved.—O.S., 11/5/91. Insert.—J.B., 12/5/91. Sent up by messenger (special) to G.P.O., 12/5/91, 11.15 a.m.—S.W. Advertisement seen by Chief Clerk. Notice to *Gazette*, 12/5/91. Tenders for, 10/6/91. Roads.—D.C.M'L. (*pro* U.S.), B.C., 12/5/91. Mr. Baggé to see.—F.C.P., 12/5/91. Seen.—M.O.B., 12/5/91.

### No. 2.

#### Schedule of Tenders received by Tender Board.

Wednesday, 10 June, 1891.

LIST OF TENDERS received for construction of the North Shore Main Outfall Sewer, from near Long Bay to Mount-street.

Number of tenders received ... ..	Seven.
Estimated amount ... ..	£43,494 10s. 6d.
Amount of lowest tender ... ..	£36,900.
Name of lowest tenderer ... ..	Messrs. Bond and Hudson.
Vote ... ..	Balance of £107,000, North Shore Drainage. 53 Vic. No. 23.

	Amount.	Deposit.	Nature.
1. Bond and Hudson ... ..	£36,900 0 0	£369	Cheque.
2. Carter & Co. ... ..	39,890 0 0	400	"
3. Gummow & Gillan ... ..	40,840 0 0	410	"
4. D. Sheehy ... ..	45,980 18 8	500	"
5. J. McSweeney ... ..	48,146 12 4	480	"
6. Lemm and Spencer ... ..	56,563 10 0	500	"
7. Jno. Taylor & Co. ... ..	58,011 0 0	500	"

D. C. M'LACHLAN,  
10/6/91.

I recommend acceptance of Bond and Hudson's tender at schedule rates.—R.H., 10/6/91. Under Secretary. J. BARLING, Vice-President of Tender Board.

## No. 1.—BOND AND HUDSON'S TENDER.

TENDER for Contract No. 79, Sydney Sewerage.

To the Honorable the Minister for Public Works, Bridge-street, Sydney, N.S.W.

We, the undersigned, do hereby tender and offer to construct, completely finish, and maintain the various works for Contract No. 79, Sydney Sewerage, in accordance with the conditions of contract, specifications, and drawings, prepared for that purpose in your Department, for or at the rates particularly entered in the accompanying schedule of prices, and enclose herewith deposit, as required by clause 20 of the general conditions.

Should this tender be accepted, we undertake to lodge with the Under Secretary for Public Works, within seven days from the date of notification of acceptance of this tender, a bank deposit receipt in the name of the Secretary for Public Works for the sum of two thousand pounds sterling, as security for the due performance of the contract.

In the event of our failing to do so, or to sign the required contract within the time specified in clause 20 of the general conditions, we hereby distinctly agree to forfeit to the Queen the sum deposited with this tender.

Sydney, 10th June, 1891.

BOND AND HUDSON,  
88, Sussex-street.

CONTRACT No. 79.—Schedule of quantities and prices for constructing and completing 1 mile 25·3 chains, more or less, of the main outfall sewer, North Shore, branch and pipe sewers, shafts, junctions, &c., subject to omissions, extras, extensions, additions, enlargements, deviations, or alterations, as provided by the conditions of contract.

The quantities in this schedule are not guaranteed as correct, but are merely given for the guidance of intending contractors, this being a schedule of Prices Contract.

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate.	Amount.
					£ s. d.
	Excavation in tunnels, in hard rock, for sewer, branches, pipe-sewers, junctions, curves, &c., as specified in clauses 38, 42, 45, 48 to 63, including sub-ducts, timbering, unwatering, and removing the excavated materials beyond actual site of works, as viz. :—				
1	Excavation in hard rock, where gadding only is permitted .....	cubic yard	800	80/-	3,200 0 0
2	Excavation in hard rock, where charges of powder 2 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	835	72'6	3,026 17 6
3	Excavation in hard rock, where charges of powder 4 inches in length by 1½ inch in diameter, and such depth of bore-holes as shall be directed only are permitted .....	"	3,000	65/-	9,450 0 0
	Excavation in shafts, shaft-chambers, and sumps, as specified in clauses 39, 52, 53, 71, and 72, including timbering, unwatering, and removing the excavated materials beyond actual site of works, as viz. :—				
4	Excavation in road surfaces, sand, soil, clay, pipeclay, shale, and soft rock only .....	"	75	30/-	112 10 0
5	Excavation in hard rock, where gadding only is permitted .....	"	361	50/-	902 10 0
6	Excavation in hard rock, where charges of powder 2 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	500	49/-	1,000 0 0
7	Excavation in hard rock, where charges of powder 4 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	2,500	35/-	4,375 0 0
8	Filling in round brick and concrete work of ventilating and intercepting shafts and chambers, man-holes, and into all shafts, as specified in clauses 40, 41, 42, 43, 71, and 72, including withdrawing of timber, depositing in layers, replacing road and other surfaces, ramming, &c. ....	"	120	4/-	24 0 0
9	Timber ordered in writing to be left in tunnels, shafts, as specified in clauses 36 and 37, including all iron used in fixing same .....	cubic feet	500	2/3	56 5 0
10	Sub-duct in hard rock, with tile covers, as specified in clauses 76 and 77	lineal yard	250	3/-	37 10 0
	Sub-duct, as specified in clauses 76 and 78, in more or less hard material, including dry or cement jointing for stoneware pipes, &c. :—				
11	Of 6 inches internal diameter .....	"	100	4/-	20 0 0
12	Of 9 " " " " .....	"	100	6/-	30 0 0
	Sub-duct in water-charged loose ground, as specified in clause 76, including hardwood boxes with packing in same, and dry or cement jointing for pipes of :—				
13	6 inches internal diameter .....	"	100	18/-	90 0 0
14	9 " " " " .....	"	100	25/-	125 0 0
15	10 " " " " .....	"	100	30/-	150 0 0

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate.	Amount.
					£ s. d.
16	Hand-packed stone-filling, 4-inch gauge, as specified in clauses 17, 69, 76 to 78, over sub-ducts, and when ordered, round sewers and pipe-sewers in tunnels, including depositing, packing, and ramming .....	cubic yard	300	5/6	82 10 0
17	Sandstone concrete, any shape, form, or thickness, in shafts, tunnels, sumps, round stoneware pipes, and, where ordered, in any situation in the construction of these works, as specified in clauses 26, 27, 93 to 109, including washing dry surfaces, wetting, and grouting, complete .....	"	1,020	32/6	1,632 0 0
18	Bluestone concrete, any shape, form, thickness, arched, circular, or otherwise, in sewer, curved junctions, arches, man-holes, &c., as specified in clauses 24, 27, 93 to 109, including washing dry surfaces, wetting, and grouting, complete .....	"	1,300	69/-	4,100 10 0
	Brickwork in cement in sewer, junctions, shaft-chambers, circular, curved, arched, or otherwise, any shape or form or thickness, as specified in clauses 110 to 113, including wetting, flushing, grouting, collar-joints, pointing, where ordered, &c. :-				
19	Of one ring or portion of a ring .....	cubic yard	520	85/-	2,210 0 0
20	Of two or more rings, straight, arched, &c.....	"	180	75/-	630 0 0
21	Cement facing in two thicknesses, $\frac{1}{2}$ inch thick when finished, as specified in clause 114, to all internal (and external, where ordered) surfaces of sewer, junctions, shaft-chambers, culverts, man-holes, and where ordered in any situation in the construction of these works .....	square yard	8,900	3/-	1,335 0 0
22	Bluestone concrete, any shape, form, or thickness, arched, circular, or otherwise, in shafts, over shaft-chambers, as specified in clauses 93 to 109, including washing dry surfaces, wetting, and grouting, complete .....	cubic yard	150	52/6	393 15 0
23	Brickwork in cement, circular, arched, curved, or otherwise, any shape, form, or thickness, as specified in clauses 110 to 113, in shafts, over shaft-chambers, including wetting, flushing, grouting, pointing, where ordered, collar-joints, &c., complete.....	"	670	63/-	2,610 0 0
24	Cement facing in two thicknesses, $\frac{3}{4}$ inch thick when finished, to all internal and external surfaces of shafts, where ordered, as specified in clause 114 .....	square yard	290	3/-	43 10 0
25	Pymont sandstone, ashlar, set in cement, on top of ventilating shafts, and where ordered, as specified in clauses 16 and 115, complete .....	cubic feet	185	5/6	50 17 6
26	Squared bluestone pictures, 9 inches deep, set in sand, round cast-iron ventilating grates of shafts, where ordered, as specified in clause 116, complete .....	square yard	20	55/-	55 0 0
	Providing, laying, and jointing glazed stoneware, plain pipes, in trenches, and where ordered, including fixing discs, as specified, and including bed joints, in mortar, where required :-				
27	18 inches diameter .....	lineal feet	2	10/-	1 0 0
28	9 " " .....	"	60	6/6	19 10 0
	<b>SURPLUS MATERIALS.</b>				
	Removal of surplus materials from the various excavations throughout this contract, as tunnels and open trenches, including sub-ducts, shafts, sumps, &c., as specified in clauses 40, 42, 43, and 45, as viz. :-				
29	For the first half mile of lead .....	cubic yard	7,960	1/6	597 0 0
30	For every further quarter of a mile of lead.....	"	15,920	-/3	199 0 0
	<b>GOVERNMENT PROPERTY.</b>				
31	Placing, building in, fixing, and jointing only, any metal work, as cast-iron oval and circular pipes, junctions, branches, flanged, and with spigot and faucet ends, gas-checks, ventilating grates, lamp-hole boxes, man-hole covers, staples, step-irons, earthenware covers, &c., supplied by the Government, including carriage, as specified in clauses 91, 121, 131 to 133 complete .....	ton	40	60/-	120 0 0
32	Closing of branch sewers and intercepting pipes with earthenware or cast-iron covers, set in cement, labour only, as specified in clause 131 complete .....	each	30	10/-	15 0 0
33	Trapped junction blocks, taking delivery of, and building in.....	"	10	10/-	5 0 0

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate.	Amount.
<b>GENERAL.</b>					£ s. d.
34	Permanent puddle where ordered, in any situation, in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 29, including spreading in 9-inch layers, and ramming, complete .....	cubic yard	20	12/6	12 10 0
35	Special bluestone concrete, as specified in clause 25, where ordered in any situation, in the construction of the works .....	"	10	80/-	40 0 0
36	Bluestone metal (clause 18), 1½-inch gauge, stacked .....	"	10	14/-	7 0 0
37	Sandstone metal (clause 26), 2¼-inch gauge, stacked .....	"	10	5/-	2 10 0
38	Bluestone metal (clause 32), 2¼-inch gauge, stacked .....	"	10	14/-	7 0 0
39	Sharp, clean washed sand (clause 19), stacked .....	"	10	7/-	3 10 0
40	Sawn hardwood, in scantlings or planks (clause 30).....	cubic feet	50	2/3	5 12 6
41	Oregon timber, in scantlings or planks .....	"	50	3/-	7 10 0
42	Wrought-iron in bolts, galvanised step-irons, screws, nails, spikos, straps, &c. (clause 31).....	cwt.	3	50/-	7 10 0
43	Portland cement .....	cask	10	18/-	9 0 0
44	Artisan or mechanic, supplied by contractor.....	day	15	12/-	9 0 0
45	Quarryman or other skilled labourer, supplied by contractor.....	"	15	10/-	7 10 0
46	Ordinary labourer, supplied by contractor.....	"	30	9/-	13 10 0
47	Cart, with one horse and driver, supplied by contractor.....	"	10	15/-	7 10 0
48	One additional horse, supplied by contractor .....	"	10	5/-	2 10 0
<b>MAINTENANCE.</b>					
49	Three months' maintenance after formal delivery of works .....	lump sum	.....	...	34 2 6
	Total .....	.....	.....	...	36,900 0 0
	Add .....	.....	.....	...	354 10 0
	Correct amount .....	.....	.....	...	37,254 10 0

## NOTES.

1. All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in strict accordance with the specification.

2. The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

3. Items Nos. 31, 32, and 33 to include the cost of conveying the Government property from the contractor's store or field office to the various sites of works along line of main and branch sewers, at man-holes, gas-check, and shaft chamber, &c.

4. Prices for items Nos. 36, 37, 38, 39, 40, 41, 42, and 43 are to be for materials in strict accordance with specification, delivered on the works ready for use, and only the actual net quantities ordered and approved of shall be paid for. In case contractor's prices are considered too high by the Engineer at the time such materials may be required, or if the contractor fail to deliver such materials at the time required and ordered, then the Engineer shall have the power to supply the same from any other source, and the contractor shall have no claim for loss or compensation on account of the exercise of such power by the Engineer.

5. Prices for items Nos. 44, 45, 46, 47, and 48 are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day work.

6. The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads crossing over main and pipe sewers, reinstating all road and other surfaces, &c., or any other thing necessary in executing and completing each respective item, in strict accordance with plans and specifications.

No. 2.—CARTER & CO.'S TENDER.

(Bound up with Bond.)

No. 3.

## No. 8.—GUMMOW AND GILLAN'S TENDER.

## TENDER for Contract No. 79, Sydney Sewerage.

To the Honorable the Minister for Public Works, Bridge-street, Sydney, N.S.W.

We, the undersigned, do hereby tender and offer to construct, completely finish, and maintain the various works for Contract No. 79, Sydney Sewerage, in accordance with the conditions of contract, specifications, and drawings, prepared for that purpose in your Department, for or at the rates particularly entered in the accompanying schedule of prices, and enclose herewith deposit, as required by clause 20 of the general conditions.

Should this tender be accepted, we undertake to lodge with the Under Secretary for Public Works, within seven days from the date of notification of acceptance of this tender, a bank deposit receipt in the name of the Secretary for Public Works for the sum of two thousand pounds sterling, as security for the due performance of the contract.

In the event of our failing to do so, or to sign the required contract within the time specified in clause 20 of the general conditions, we hereby distinctly agree to forfeit to the Queen the sum deposited with this tender.

F. M. GUMMOW,  
Boyce-street, Glebe Point.  
JAMES GILLAN,  
Fairfowl-street, Dulwich Hill.  
GEORGE MADDISON,  
Palace-street, Petersham.  
PETER EWING,  
Wilson-street, Newtown.

10th June, 1891.

CONTRACT No. 79.—Schedule of quantities and prices for constructing and completing 1 mile 25·3 chains, more or less, of the main outfall sewer, North Shore, branch and pipe sewers, shafts, junctions, &c., subject to omissions, extras, extensions, additions, enlargements, deviations, or alterations, as provided by the conditions of contract.

The quantities in this schedule are not guaranteed as correct, but are merely given for the guidance of intending contractors:—this being a schedule of Prices Contract.

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate.	Amount.
	Excavation in tunnels, in hard rock, for sewer, branches, pipe-sewers, junctions, curves, &c., as specified in clauses 38, 42, 45, 48 to 68, including sub-ducts, timbering, unwatering, and removing the excavated materials beyond actual site of works, as viz. :—				£ s. d.
1	Excavation in hard rock, where gadding only is permitted.....	cubic yard	800	75/-	3,000 0 0
2	Excavation in hard rock, where charges of powder 2 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	835	70/-	2,322 10 0
3	Excavation in hard rock, where charges of powder 4 inches in length by 1½ inch in diameter, and such depth of bore-holes as shall be directed only are permitted .....	"	3,000	66/-	9,900 0 0
	Excavation in shafts, shaft-chambers, and sumps, as specified in clauses 39, 52, 53, 71, and 72, including timbering, unwatering, and removing the excavated materials beyond actual site of works, as viz. :—				
4	Excavation in road surfaces, sand, soil, clay, pipeclay, shale, and soft rock only .....	"	75	70/-	262 10 0
5	Excavation in hard rock, where gadding only is permitted .....	"	361	70/-	1,263 10 0
6	Excavation in hard rock, where charges of powder 2 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	500	62/6	1,562 10 0
7	Excavation in hard rock, where charges of powder 4 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	2,500	60/-	7,500 0 0
8	Filling in round brick and concrete work of ventilating and intercepting shafts and chambers, man-holes, and into all shafts, as specified in clauses 40, 41, 42, 43, 71, and 72, including withdrawing of timber, depositing in layers, replacing road and other surfaces, ramming, &c. ....	"	120	2/-	12 0 0
9	Timber ordered in writing to be left in tunnels, shafts, as specified in clauses 36 and 37, including all iron used in fixing same .....	cubic feet	500	-/1	2 1 8
10	Sub-duct in hard rock, with tile covers, as specified in clauses 76 and 77, including dry or cement jointing for stoneware pipes, &c. :—	lineal yard	250	4/-	50 0 0
11	Of 6 inches internal diameter .....	"	100	4/-	20 0 0
12	Of 9 " " " .....	"	100	4/-	20 0 0
	Sub-duct in water-charged loose ground, as specified in clause 76, including hardwood boxes with packing in same, and dry or cement jointing for pipes of :—				
13	6 inches internal diameter .....	"	100	-/1	0 8 4
14	9 " " " .....	"	100	-/1	0 8 4
15	10 " " " .....	"	100	-/1	0 8 4

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate.	Amount.
					£ s. d.
16	Hand-packed stone-filling, 4-inch gauge, as specified in clauses 17, 69, 76 to 78, over sub-ducts, and when ordered, round sewers and pipe-sewers in tunnels, including depositing, packing, and ramming .....	cubic yard	300	4/-	60 0 0
17	Sandstone concrete, any shape, form, or thickness, in shafts, tunnels, sumps, round stoneware pipes, and, where ordered, in any situation in the construction of these works, as specified in clauses 26, 27, 93 to 109, including washing dry surfaces, wetting, and grouting, complete .....	"	1,020	40/-	2,040 0 0
18	Bluestone concrete, any shape, form, thickness, arched, circular, or otherwise, in sewer, curved junctions, arches, man-holes, &c., as specified in clauses 24, 27, 93 to 109, including washing dry surfaces, wetting, and grouting, complete .....	"	1,390	55/-	3,822 10 0
	Brickwork in cement in sewer, junctions, shaft-chambers, circular, curved, arched, or otherwise, any shape or form or thickness, as specified in clauses 110 to 113, including wetting, flushing, grouting, collar-joints, pointing, where ordered, &c. :—				
19	Of one ring or portion of a ring .....	cubic yard	520	70/-	1,820 0 0
20	Of two or more rings, straight, arched, &c. ....	"	180	50/-	450 0 0
21	Cement facing in two thicknesses, $\frac{3}{4}$ inch thick when finished, as specified in clause 114, to all internal (and external, where ordered) surfaces of sewer, junctions, shaft-chambers, culverts, man-holes, and where ordered in any situation in the construction of these works .....	square yard	8,900	2/6	1,112 10 0
22	Bluestone concrete, any shape, form, or thickness, arched, circular, or otherwise, in shafts, over shaft-chambers, as specified in clauses 93 to 109, including washing dry surfaces, wetting, and grouting, complete .....	cubic yard	150	80/-	600 0 0
23	Brickwork in cement, circular, arched, curved, or otherwise, any shape, form, or thickness, as specified in clauses 110 to 113, in shafts, over shaft-chambers, including wetting, flushing, grouting, pointing, where ordered, collar-joints, &c., complete .....	"	870	80/-	3,480 0 0
24	Cement facing in two thicknesses, $\frac{3}{4}$ inch thick when finished, to all internal and external surfaces of shafts, where ordered, as specified in clause 114 .....	square yard	200	2/6	36 5 0
25	Plymouth sandstone, ashlar, set in cement, on top of ventilating shafts, and where ordered, as specified in clauses 10 and 115, complete ...	cubic feet	185	6/-	55 10 0
26	Squared bluestone pictures, 9 inches deep, set in sand, round cast-iron ventilating grates of shafts, where ordered, as specified in clause 116, complete .....	square yard	20	50/-	50 0 0
	Providing, laying, and jointing glazed stoneware, plain pipes, in trenches, and where ordered, including fixing discs, as specified, and including bed joints, in mortar, where required :—				
27	18 inches diameter .....	lineal feet	2	10/-	1 0 0
28	9 " " .....	"	60	4/-	12 0 0
	<b>SURPLUS MATERIALS.</b>				
	Removal of surplus materials from the various excavations throughout this contract, as tunnels and open trenches, including sub-ducts, shafts, sumps, &c., as specified in clauses 40, 42, 43, and 45, as viz. :—				
29	For the first half mile of lead .....	cubic yard	7,960	1/-	339 0 0
30	For every further quarter of a mile of lead .....	"	15,920	-/0½	33 3 4
	<b>GOVERNMENT PROPERTY.</b>				
31	Placing, building in, fixing, and jointing only, any metal work, as cast-iron oval and circular pipes, junctions, branches, flanged, and with spigot and faucet ends, gas-checks, ventilating grates, lamp-hole boxes, man-hole covers, staples, step-irons, earthenware covers, &c., supplied by the Government, including carriage, as specified in clauses 91, 121, 131 to 133 complete .....	ton	40	£3	120 0 0
32	Closing of branch sewers and intercepting pipes with earthenware or cast-iron covers, set in cement, labour only, as specified in clause 131 complete .....	each	30	£1	30 0 0
33	Trapped junction blocks, taking delivery of, and building in .....	"	10	£1	10 0 0

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate.	Amount.
GENERAL.					
34	Permanent puddle where ordered, in any situation, in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 29, including spreading in 9-inch layers, and ramming, complete .....	cubic yard	20	2/-	£ s. d. 2 0 0
35	Special bluestone concrete, as specified in clause 25, where ordered in any situation, in the construction of the works .....	"	10	70/-	35 0 0
36	Bluestone metal (clause 18), 1½-inch gauge, stacked .....	"	10	20/-	10 0 0
37	Sandstone metal (clause 26), 2½-inch gauge, stacked .....	"	10	6/-	3 0 0
38	Bluestone metal (clause 32), 2¼-inch gauge, stacked .....	"	10	20/-	10 0 0
39	Sharp, clean washed sand (clause 19), stacked .....	"	10	6/-	3 0 0
40	Sawn hardwood, in scantlings or planks (clause 30).....	cubic feet	50	2/6	6 5 0
41	Oregon timber, in scantlings or planks .....	"	50	3/-	7 10 0
42	Wrought-iron in bolts, galvanised step-irons, screws, nails, spikes, straps, &c. (clause 31).....	cwt.	3	84/-	12 12 0
43	Portland cement .....	cask	10	20/-	10 0 0
44	Artisan or mechanic, supplied by contractor.....	day	15	16/-	12 0 0
45	Quarryman or other skilled labourer, supplied by contractor.....	"	15	12/-	9 0 0
46	Ordinary labourer, supplied by contractor.....	"	30	10/-	15 0 0
47	Cart, with one horse and driver, supplied by contractor.....	"	10	15/-	7 10 0
48	One additional horse, supplied by contractor .....	"	10	7/6	3 15 0
MAINTENANCE.					
49	Three months' maintenance after formal delivery of works .....	lump sum	.....	...	46 3 0
	Total .....	.....	.....	...	40,840 0 0

## NOTES.

1. All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in strict accordance with the specification.

2. The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

3. Items Nos. 31, 32, and 33 to include the cost of conveying the Government property from the contractor's store or field office to the various sites of works along line of main and branch sewers, at man-holes, gas-check, and shaft chamber, &c.

4. Prices for items Nos. 36, 37, 38, 39, 40, 41, 42, and 43 are to be for materials in strict accordance with specification, delivered on the works ready for use, and only the actual net quantities ordered and approved of shall be paid for. In case contractor's prices are considered too high by the Engineer at the time such materials may be required, or if the contractor fail to deliver such materials at the time required and ordered, then the Engineer shall have the power to supply the same from any other source, and the contractor shall have no claim for loss or compensation on account of the exercise of such power by the Engineer.

5. Prices for items Nos. 44, 45, 46, 47, and 48 are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day work.

6. The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads crossing over main and pipe sewers, reinstating all road and other surfaces, &c., or any other thing necessary in executing and completing each respective item, in strict accordance with plans and specifications.

## No. 4.—D. SHEEHY'S TENDER.

TENDER for Contract No. 79, Sydney Sewerage.

To the Honorable the Minister for Public Works, Bridge-street, Sydney, N.S.W.

I, the undersigned, do hereby tender and offer to construct, completely finish, and maintain the various works for Contract No. 79, Sydney Sewerage, in accordance with the conditions of contract, specifications, and drawings, prepared for that purpose in your Department, for or at the rates particularly entered in the accompanying schedule of prices, and enclose herewith deposit, as required by clause 20 of the general conditions.

Should this tender be accepted, I undertake to lodge with the Under Secretary for Public Works, within seven days from the date of notification of acceptance of this tender, a bank deposit receipt in the name of the Secretary for Public Works for the sum of two thousand pounds sterling, as security for the due performance of the contract.

In the event of my failing to do so, or to sign the required contract within the time specified in clause 20 of the general conditions, I hereby distinctly agree to forfeit to the Queen the sum deposited with this tender.

DANIEL SHEEHY,  
Goodhope-street, Paddington.

CONTRACT No. 79.—Schedule of quantities and prices for constructing and completing 1 mile 25·3 chains, more or less, of the main outfall sewer, North Shore, branch and pipe sewers, shafts, junctions, &c., subject to omissions, extras, extensions, additions, enlargements, deviations, or alterations, as provided by the conditions of contract.

The quantities in this schedule are not guaranteed as correct, but are merely given for the guidance of intending contractors, this being a schedule of Prices Contract.

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate.	Amount.
					£ s. d.
	Excavation in tunnels, in hard rock, for sewer, branches, pipe-sewers, junctions, curves, &c., as specified in clauses 38, 42, 45, 48 to 63, including sub-ducts, timbering, unwatering, and removing the excavated materials beyond actual site of works, as viz. :—				
1	Excavation in hard rock, where gadding only is permitted.....	cubic yard	800	6/5/-	5,000 0 0
2	Excavation in hard rock, where charges of powder 2 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	835	£4	3,340 0 0
3	Excavation in hard rock, where charges of powder 4 inches in length by 1½ inch in diameter, and such depth of bore-holes as shall be directed only are permitted .....	"	3,000	77/6	11,625 0 0
	Excavation in shafts, shaft-chambers, and sumps, as specified in clauses 39, 52, 53, 71, and 72, including timbering, unwatering, and removing the excavated materials beyond actual site of works, as viz. :—				
4	Excavation in road surfaces, sand, soil, clay, pipeclay, shale, and soft rock only .....	"	75	£3	225 0 0
5	Excavation in hard rock, where gadding only is permitted .....	"	361	£6	2,166 0 0
6	Excavation in hard rock, where charges of powder 2 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	500	76/-	1,920 0 0
7	Excavation in hard rock, where charges of powder 4 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	2,500	72/3	9,031 10 0
8	Filling in round brick and concrete work of ventilating and intercepting shafts and chambers, man-holes, and into all shafts, as specified in clauses 40, 41, 42, 43, 71, and 72, including withdrawing of timber, depositing in layers, replacing road and other surfaces, ramming, &c. ....	"	120	1/6	9 0 0
9	Timber ordered in writing to be left in tunnels, shafts, as specified in clauses 36 and 37, including all iron used in fixing same .....	cubic feet	500	7/0½	1 0 10
10	Sub-duct in hard rock, with tile covers, as specified in clauses 76 and 77	lineal yard	250	2/-	25 0 0
	Sub-duct, as specified in clauses 76 and 78, in more or less hard material, including dry or cement jointing for stoneware pipes, &c. :—				
11	Of 6 inches internal diameter .....	"	100	2/-	10 0 0
12	Of 9 " " " .....	"	100	2/-	10 0 0
	Sub-duct in water-charged loose ground, as specified in clause 76, including hardwood boxes with packing in same, and dry or cement jointing for pipes of :—				
13	6 inches internal diameter .....	"	100	2/-	10 0 0
14	9 " " " .....	"	100	2/-	10 0 0
15	10 " " " .....	"	100	2/-	10 0 0

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate.	Amount.
					£ s. d.
16	Hand-packed stone-filling, 4-inch gauge, as specified in clauses 17, 69, 76 to 78, over sub-ducts, and when ordered, round sewers and pipe-sewers in tunnels, including depositing, packing, and ramming .....	cubic yard	300	2/-	30 0 0
17	Sandstone concrete, any shape, form, or thickness, in shafts, tunnels, sumps, round stoneware pipes, and, where ordered, in any situation in the construction of these works, as specified in clauses 26, 27, 93 to 100, including washing dry surfaces, wetting, and grouting, complete .....	"	1,020	40/-	2,040 0 0
18	Bluestone concrete, any shape, form, thickness, arched, circular, or otherwise, in sewer, curved junctions, arches, man-holes, &c., as specified in clauses 24, 27, 93 to 100, including washing dry surfaces, wetting, and grouting, complete .....	"	1,390	55/-	3,822 10 0
	Brickwork in cement in sewer, junctions, shaft-chambers, circular, curved, arched, or otherwise, any shape or form or thickness, as specified in clauses 110 to 113, including wetting, flushing, grouting, collar-joints, pointing, where ordered, &c. :-				
19	Of one ring or portion of a ring .....	cubic yard	520	65/-	1,690 0 0
20	Of two or more rings, straight, arched, &c. ....	"	180	57/-	513 0 0
21	Cement facing in two thicknesses, $\frac{1}{2}$ inch thick when finished, as specified in clause 114, to all internal (and external, where ordered) surfaces of sewer, junctions, shaft-chambers, culverts, man-holes, and where ordered in any situation in the construction of these works .....	square yard	8,900	2/-	890 0 0
22	Bluestone concrete, any shape, form, or thickness, arched, circular, or otherwise, in shafts, over shaft-chambers, as specified in clauses 93 to 100, including washing dry surfaces, wetting, and grouting, complete .....	cubic yard	150	55/-	412 10 0
23	Brickwork in cement, circular, arched, curved, or otherwise, any shape, form, or thickness, as specified in clauses 110 to 113, in shafts, over shaft-chambers, including wetting, flushing, grouting, pointing, where ordered, collar-joints, &c., complete .....	"	870	57/-	2,479 10 0
24	Cement facing in two thicknesses, $\frac{1}{2}$ inch thick when finished, to all internal and external surfaces of shafts, where ordered, as specified in clause 114 .....	square yard	200	2/-	29 0 0
25	Pymont sandstone, ashlar, set in cement, on top of ventilating shafts, and where ordered, as specified in clauses 16 and 115, complete ...	cubic feet	186	1/6	18 17 6
26	Squared bluestone pictures, 9 inches deep, set in sand, round cast-iron ventilating grates of shafts, where ordered, as specified in clause 116, complete .....	square yard	20	40/-	40 0 0
	Providing, laying, and jointing glazed stoneware, plain pipes, in trenches, and where ordered, including fixing discs, as specified, and including bed joints, in mortar, where required :-				
27	18 inches diameter .....	lineal feet	2	2/-	0 4 0
28	9 " " .....	"	60	-/6	3 0 0
	<b>SURPLUS MATERIALS.</b>				
	Removal of surplus materials from the various excavations throughout this contract, as tunnels and open trenches, including sub-ducts, shafts, sumps, &c., as specified in clauses 40, 42, 43, and 45, as viz. :-				
29	For the first half mile of lead .....	cubic yard	7,960	1/-	398 0 0
30	For every further quarter of a mile of lead .....	"	15,920	-/1	66 6 4
	<b>GOVERNMENT PROPERTY.</b>				
31	Placing, building in, fixing, and jointing only, any metal work, as cast-iron oval and circular pipes, junctions, branches, flanged, and with spigot and faucet ends, gas-checks, ventilating grates, lamp-hole boxes, man-hole covers, staples, step-irons, earthenware covers, &c., supplied by the Government, including carriage, as specified in clauses 91, 121, 131 to 133 complete .....	ton	40	1/-	2 0 0
32	Closing of branch sewers and intercepting pipes with earthenware or cast-iron covers, set in cement, labour only, as specified in clause 131 complete .....	each	30	20/-	30 0 0
33	Trapped junction blocks, taking delivery of, and building in .....	"	10	3/-	1 10 0

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate.	Amount.
<b>GENERAL.</b>					<b>£ s. d.</b>
34	Permanent puddle where ordered, in any situation, in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 29, including spreading in 9-inch layers, and ramming, complete .....	cubic yard	20	-/6	0 10 0
35	Special bluestone concrete, as specified in clause 25, where ordered in any situation, in the construction of the works .....	"	10	60/-	80 0 0
36	Bluestone metal (clause 18), 1½-inch gauge, stacked .....	"	10	15/-	7 10 0
37	Sandstone metal (clause 26), 2½-inch gauge, stacked .....	"	10	3/-	1 10 0
38	Bluestone metal (clause 32), 2¼-inch gauge, stacked .....	"	10	14/-	7 0 0
39	Sharp, clean washed sand (clause 19), stacked .....	"	10	4/-	2 0 0
40	Sawn hardwood, in scantlings or planks (clause 30).....	cubic feet	50	3/-	7 10 0
41	Oregon timber, in scantlings or planks .....	"	50	3/-	7 10 0
42	Wrought-iron in bolts, galvanised step-irons, screws, nails, spikes, straps, &c. (clause 31).....	cwt.	8	25/-	3 15 0
43	Portland cement .....	cask	10	20/-	10 0 0
44	Artisan or mechanic, supplied by contractor.....	day	15	12/-	9 0 0
45	Quarryman or other skilled labourer, supplied by contractor.....	"	15	10/-	7 10 0
46	Ordinary labourer, supplied by contractor.....	"	30	7/-	10 10 0
47	Cart, with one horse and driver, supplied by contractor.....	"	10	12/6	6 5 0
48	One additional horse, supplied by contractor .....	"	10	6/-	3 0 0
<b>MAINTENANCE.</b>					
49	Three months' maintenance after formal delivery of works .....	lump sum	.....	...	1 0 0
	Total .....	.....	.....	...	45,980 18 8
	Deduct .....	.....	.....	...	34 4 8
					45,946 14 0

## NOTES.

1. All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in strict accordance with the specification.

2. The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

3. Items Nos. 31, 32, and 33 to include the cost of conveying the Government property from the contractor's store or field office to the various sites of works along line of main and branch sewers, at man-holes, gas-check, and shaft chamber, &c.

4. Prices for items Nos. 36, 37, 38, 39, 40, 41, 42, and 43 are to be for materials in strict accordance with specification, delivered on the works ready for use, and only the actual net quantities ordered and approved of shall be paid for. In case contractor's prices are considered too high by the Engineer at the time such materials may be required, or if the contractor fail to deliver such materials at the time required and ordered, then the Engineer shall have the power to supply the same from any other source, and the contractor shall have no claim for loss or compensation on account of the exercise of such power by the Engineer.

5. Prices for items Nos. 44, 45, 46, 47, and 48 are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day work.

6. The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads crossing over main and pipe sewers, reinstating all road and other surfaces, &c., or any other thing necessary in executing and completing each respective item, in strict accordance with plans and specifications.

## No. 5.—J. McSWEENEY'S TENDER.

## TENDER for Contract No. 79, Sydney Sewerage.

To the Honorable the Minister for Public Works, Bridge-street, Sydney, N.S.W.

I, the undersigned, do hereby tender and offer to construct, completely finish, and maintain the various works for Contract No. 79, Sydney Sewerage, in accordance with the conditions of contract, specifications, and drawings, prepared for that purpose in your Department, for or at the rates particularly entered in the accompanying schedule of prices, and enclose herewith deposit, as required by clause 20 of the general conditions.

Should this tender be accepted, I undertake to lodge with the Under Secretary for Public Works, within seven days from the date of notification of acceptance of this tender, a bank deposit receipt in the name of the Secretary for Public Works for the sum of two thousand pounds sterling, as security for the due performance of the contract.

In the event of my failing to do so, or to sign the required contract within the time specified in clause 20 of the general conditions, I hereby distinctly agree to forfeit to the Queen the sum deposited with this tender.

JUSTIN McSWEENEY,  
Box 914, G.P.O.

CONTRACT No. 79.—Schedule of quantities and prices for constructing and completing 1 mile 25·3 chains, more or less, of the main outfall sewer, North Shore, branch and pipe sewers, shafts, junctions, &c., subject to omissions, extras, extensions, additions, enlargements, deviations, or alterations, as provided by the conditions of contract.

The quantities in this schedule are not guaranteed as correct, but are merely given for the guidance of intending contractors, this being a schedule of Prices Contract.

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate.	Amount.
					£ s. d.
	Excavation in tunnels, in hard rock, for sewer, branches, pipe-sewers, junctions, curves, &c., as specified in clauses 38, 42, 45, 48 to 63, including sub-ducts, timbering, unwatering, and removing the excavated materials beyond actual site of works, as viz. :—				
1	Excavation in hard rock, where gadding only is permitted.....	cubic yard	800	80/-	3,200 0 0
2	Excavation in hard rock, where charges of powder 2 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	835	70/-	2,922 10 0
3	Excavation in hard rock, where charges of powder 4 inches in length by 1½ inch in diameter, and such depth of bore-holes as shall be directed only are permitted .....	"	3,000	70/-	10,500 0 0
	Excavation in shafts, shaft-chambers, and sumps, as specified in clauses 39, 52, 53, 71, and 72, including timbering, unwatering, and removing the excavated materials beyond actual site of works, as viz. :—				
4	Excavation in road surfaces, sand, soil, clay, pipeclay, shale, and soft rock only .....	"	75	40/-	150 0 0
5	Excavation in hard rock, where gadding only is permitted .....	"	361	90/-	1,624 10 0
6	Excavation in hard rock, where charges of powder 2 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	500	80/-	2,000 0 0
7	Excavation in hard rock, where charges of powder 4 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	2,500	80/-	10,000 0 0
8	Filling in round brick and concrete work of ventilating and intercepting shafts and chambers, man-holes, and into all shafts, as specified in clauses 40, 41, 42, 43, 71, and 72, including withdrawing of timber, depositing in layers, replacing road and other surfaces, ramming, &c. ....	"	120	5/-	30 0 0
9	Timber ordered in writing to be left in tunnels, shafts, as specified in clauses 36 and 37, including all iron used in fixing same .....	cubic feet	500	2/-	50 0 0
10	Sub-duct in hard rock, with tile covers, as specified in clauses 76 and 77	lineal yard	250	3/-	37 10 0
	Sub-duct, as specified in clauses 76 and 78, in more or less hard material, including dry or cement jointing for stoneware pipes, &c. :—				
11	Of 6 inches internal diameter .....	"	100	6/-	30 0 0
12	Of 9 " " " .....	"	100	7/-	35 0 0
	Sub-duct in water-charged loose ground, as specified in clause 76, including hardwood boxes with packing in same, and dry or cement jointing for pipes of :—				
13	6 inches internal diameter .....	"	100	8/-	40 0 0
14	9 " " " .....	"	100	9/-	45 0 0
15	10 " " " .....	"	100	9/-	45 0 0

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate.	Amount.
					£ s. d.
16	Hand-packed stone-filling, 4-inch gauge, as specified in clauses 17, 69, 76 to 78, over sub-ducts, and when ordered, round sewers and pipe-sewers in tunnels, including depositing, packing, and ramming .....	cubic yard	300	6/-	30 0 0
17	Sandstone concrete, any shape, form, or thickness, in shafts, tunnels, sumps, round stoneware pipes, and, where ordered, in any situation in the construction of these works, as specified in clauses 26, 27, 93 to 109, including washing dry surfaces, wetting, and grouting, complete .....	"	1,020	40/-	2,040 0 0
18	Bluestone concrete, any shape, form, thickness, arched, circular, or otherwise, in sewer, curved junctions, arches, man-holes, &c., as specified in clauses 24, 27, 93 to 109, including washing dry surfaces, wetting, and grouting, complete .....	"	1,390	60/-	4,170 0 0
	Brickwork in cement in sewer, junctions, shaft-chambers, circular, curved, arched, or otherwise, any shape or form or thickness, as specified in clauses 110 to 113, including wetting, flushing, grouting, collar-joints, pointing, where ordered, &c. :-				
19	Of one ring or portion of a ring .....	cubic yard	520	4/10/-	2,340 0 0
20	Of two or more rings, straight, arched, &c. ....	"	180	£4	720 0 0
21	Cement facing in two thicknesses, $\frac{1}{2}$ inch thick when finished, as specified in clause 114, to all internal (and external, where ordered) surfaces of sewer, junctions, shaft-chambers, culverts, man-holes, and where ordered in any situation in the construction of these works .....	square yard	8,000	2/6	1,112 10 0
22	Bluestone concrete, any shape, form, or thickness, arched, circular, or otherwise, in shafts, over shaft-chambers, as specified in clauses 93 to 109, including washing dry surfaces, wetting, and grouting, complete .....	cubic yard	150	65/-	487 10 0
23	Brickwork in cement, circular, arched, curved, or otherwise, any shape, form, or thickness, as specified in clauses 110 to 113, in shafts, over shaft-chambers, including wetting, flushing, grouting, pointing, where ordered, collar-joints, &c., complete .....	"	870	£4	3,480 0 0
24	Cement facing in two thicknesses, $\frac{1}{2}$ inch thick when finished, to all internal and external surfaces of shafts, where ordered, as specified in clause 114 .....	square yard	290	3/-	43 10 0
25	Pymont sandstone, ashlar, set in cement, on top of ventilating shafts, and where ordered, as specified in clauses 16 and 115, complete ...	cubic feet	185	6/-	55 10 0
26	Squared bluestone pictures, 9 inches deep, set in sand, round cast-iron ventilating grates of shafts, where ordered, as specified in clause 116, complete .....	square yard	20	50/-	50 0 0
	Providing, laying, and jointing glazed stoneware, plain pipes, in trenches, and where ordered, including fixing discs, as specified, and including bed joints, in mortar, where required :-				
27	18 inches diameter .....	lineal feet	2	12/-	1 4 0
28	9 " " .....	"	60	3/-	9 0 0
	<b>SURPLUS MATERIALS.</b>				
	Removal of surplus materials from the various excavations throughout this contract, as tunnels and open trenches, including sub-ducts, shafts, sumps, &c., as specified in clauses 40, 42, 43, and 45, as viz. :-				
29	For the first half mile of lead .....	cubic yard	7,960	1/-	398 0 0
30	For every further quarter of a mile of lead .....	"	15,920	-/2	132 13 4
	<b>GOVERNMENT PROPERTY.</b>				
31	Placing, building in, fixing, and jointing only, any metal work, as cast-iron oval and circular pipes, junctions, branches, flanged, and with spigot and faucet ends, gas-checks, ventilating grates, lamp-hole boxes, man-hole covers, staples, step-irons, earthenware covers, &c., supplied by the Government, including carriage, as specified in clauses 91, 121, 131 to 133 complete .....	ton	40	£3	120 0 0
32	Closing of branch sewers and intercepting pipes with earthenware or cast-iron covers, set in cement, labour only, as specified in clause 131 complete .....	each	30	£2	60 0 0
33	Trapped junction blocks, taking delivery of, and building in .....	"	10	10/-	5 0 0

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate.	Amount.
<b>GENERAL.</b>					£ s. d.
34	Permanent puddle where ordered, in any situation, in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 29, including spreading in 9-inch layers, and ramming, complete .....	cubic yard	20	20/-	20 0 0
35	Special bluestone concrete, as specified in clause 25, where ordered in any situation, in the construction of the works .....	"	10	£4	40 0 0
36	Bluestone metal (clause 18), 1½-inch gauge, stacked .....	"	10	17/-	8 10 0
37	Sandstone metal (clause 26), 2½-inch gauge, stacked .....	"	10	5/-	2 10 0
38	Bluestone metal (clause 32), 2¼-inch gauge, stacked .....	"	10	15/-	7 10 0
39	Sharp, clean washed sand (clause 19), stacked .....	"	10	6/-	8 0 0
40	Sawn hardwood, in scantlings or planks (clause 30).....	cubic feet	50	5/-	12 10 0
41	Oregon timber, in scantlings or planks .....	"	50	5/-	12 10 0
42	Wrought-iron in bolts, galvanised step-irons, screws, nails, spikes, straps, &c. (clause 31).....	cwt.	3	50/-	7 10 0
43	Portland cement .....	cask	10	20/-	10 0 0
44	Artisan or mechanic, supplied by contractor.....	day	15	12/-	9 0 0
45	Quarryman or other skilled labourer, supplied by contractor.....	"	15	10/-	7 10 0
46	Ordinary labourer, supplied by contractor.....	"	30	8/6	12 15 0
47	Cart, with one horse and driver, supplied by contractor.....	"	10	13/-	6 10 0
48	One additional horse, supplied by contractor .....	"	10	5/-	2 10 0
<b>MAINTENANCE.</b>					
49	Three months' maintenance after formal delivery of works .....	lump sum	.....	...	20 0 0
Total .....					48,146 12 4

## NOTES.

1. All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in strict accordance with the specification.

2. The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

3. Items Nos. 31, 32, and 33 to include the cost of conveying the Government property from the contractor's store or field office to the various sites of works along line of main and branch sewers, at man-holes, gas-check, and shaft chamber, &c.

4. Prices for items Nos. 36, 37, 38, 39, 40, 41, 42, and 43 are to be for materials in strict accordance with specification, delivered on the works ready for use, and only the actual net quantities ordered and approved of shall be paid for. In case contractor's prices are considered too high by the Engineer at the time such materials may be required, or if the contractor fail to deliver such materials at the time required and ordered, then the Engineer shall have the power to supply the same from any other source, and the contractor shall have no claim for loss or compensation on account of the exercise of such power by the Engineer.

5. Prices for items Nos. 44, 45, 46, 47, and 48 are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day work.

6. The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads crossing over main and pipe sewers, reinstating all road and other surfaces, &c., or any other thing necessary in executing and completing each respective item, in strict accordance with plans and specifications.

## No. 6.—LEMM AND SPENCER'S TENDER.

TENDER for Contract No. 79, Sydney Sewerage.

To the Honorable the Minister for Public Works, Bridge-street, Sydney, N.S.W.

We, the undersigned, do hereby tender and offer to construct, completely finish, and maintain the various works for Contract No. 79, Sydney Sewerage, in accordance with the conditions of contract, specifications, and drawings, prepared for that purpose in your Department, for or at the rates particularly entered in the accompanying schedule of prices, and enclose herewith deposit, as required by clause 20 of the general conditions.

Should this tender be accepted, we undertake to lodge with the Under Secretary for Public Works, within seven days from the date of notification of acceptance of this tender, a bank deposit receipt in the name of the Secretary for Public Works for the sum of two thousand pounds sterling, as security for the due performance of the contract.

In the event of our failing to do so, or to sign the required contract within the time specified in clause 20 of the general conditions, we hereby distinctly agree to forfeit to the Queen the sum deposited with this tender.

F. LEMM,  
Balmain.  
THOS. E. SPENCER,  
Boyce-street, Glcbe Point.

CONTRACT No. 79.—Schedule of quantities and prices for constructing and completing 1 mile 25·3 chains, more or less, of the main outfall sewer, North Shore, branch and pipe sewers, shafts, junctions, &c., subject to omissions, extras, extensions, additions, enlargements, deviations, or alterations, as provided by the conditions of contract.

The quantities in this schedule are not guaranteed as correct, but are merely given for the guidance of intending contractors, this being a schedule of Prices Contract.

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate.	Amount.
					£ s. d.
1	Excavation in tunnels, in hard rock, for sewer, branches, pipe-sewers, junctions, curves, &c., as specified in clauses 38, 42, 45, 48 to 63, including sub-ducts, timbering, unwatering, and removing the excavated materials beyond actual site of works, as viz. :—				
1	Excavation in hard rock, where gadding only is permitted.....	cubic yard	800	£6	4,800 0 0
2	Excavation in hard rock, where charges of powder 2 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	835	£5	4,175 0 0
3	Excavation in hard rock, where charges of powder 4 inches in length by 1½ inch in diameter, and such depth of bore-holes as shall be directed only are permitted .....	"	3,000	95/-	14,250 0 0
	Excavation in shafts, shaft-chambers, and sumps, as specified in clauses 39, 52, 53, 71, and 72, including timbering, unwatering, and removing the excavated materials beyond actual site of works, as viz. :—				
4	Excavation in road surfaces, sand, soil, clay, pipeclay, shale, and soft rock only .....	"	75	40/-	150 0 0
5	Excavation in hard rock, where gadding only is permitted .....	"	361	£5	1,805 0 0
6	Excavation in hard rock, where charges of powder 2 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	500	90/-	2,250 0 0
7	Excavation in hard rock, where charges of powder 4 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	2,500	85/-	10,625 0 0
8	Filling in round brick and concrete work of ventilating and intercepting shafts and chambers, man-holes, and into all shafts, as specified in clauses 40, 41, 42, 43, 71, and 72, including withdrawing of timber, depositing in layers, replacing road and other surfaces, ramming, &c. ....	"	120	3/-	18 0 0
9	Timber ordered in writing to be left in tunnels, shafts, as specified in clauses 36 and 37, including all iron used in fixing same .....	cubic feet	500	1/-	25 0 0
10	Sub-duct in hard rock, with tile covers, as specified in clauses 76 and 77	lineal yard	250	7/6	88 15 0
	Sub-duct, as specified in clauses 76 and 78, in more or less hard material, including dry or cement jointing for stoneware pipes, &c. :—				
11	Of 6 inches internal diameter .....	"	100	5/-	25 0 0
12	Of 9 " " " .....	"	100	7/6	37 10 0
	Sub-duct in water-charged loose ground, as specified in clause 76, including hardwood boxes with packing in same, and dry or cement jointing for pipes of :—				
13	6 inches internal diameter .....	"	100	6/-	30 0 0
14	9 " " " .....	"	100	7/6	37 10 0
15	10 " " " .....	"	100	9/-	45 0 0

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate.	Amount.
					£ s. d.
16	Hand-packed stone-filling, 4-inch gauge, as specified in clauses 17, 69, 76 to 78, over sub-ducts, and when ordered, round sewers and pipe-sewers in tunnels, including depositing, packing, and ramming .....	cubic yard	300	6/-	36 0 0
17	Sandstone concrete, any shape, form, or thickness, in shafts, tunnels, sumps, round stoneware pipes, and, where ordered, in any situation in the construction of these works, as specified in clauses 26, 27, 93 to 109, including washing dry surfaces, wetting, and grouting, complete .....	"	1,020	50/-	2,550 0 0
18	Bluestone concrete, any shape, form, thickness, arched, circular, or otherwise, in sewer, curved junctions, arches, man-holes, &c., as specified in clauses 24, 27, 93 to 109, including washing dry surfaces, wetting, and grouting, complete .....	"	1,300	70/-	4,865 0 0
	Brickwork in cement in sewer, junctions, shaft-chambers, circular, curved, arched, or otherwise, any shape or form or thickness, as specified in clauses 110 to 113, including wetting, flushing, grouting, collar-joints, pointing, where ordered, &c. :-				
19	Of one ring or portion of a ring .....	cubic yard	520	90/-	2,340 0 0
20	Of two or more rings, straight, arched, &c. ....	"	180	80/-	720 0 0
21	Cement facing in two thicknesses, $\frac{3}{4}$ inch thick when finished, as specified in clause 114, to all internal (and external, where ordered) surfaces of sewer, junctions, shaft-chambers, culverts, man-holes, and where ordered in any situation in the construction of these works .....	square yard	8,000	4/-	1,780 0 0
22	Bluestone concrete, any shape, form, or thickness, arched, circular, or otherwise, in shafts, over shaft-chambers, as specified in clauses 93 to 109, including washing dry surfaces, wetting, and grouting, complete .....	cubic yard	150	70/-	425 10 0
23	Brickwork in cement, circular, arched, curved, or otherwise, any shape, form, or thickness, as specified in clauses 110 to 113, in shafts, over shaft-chambers, including wetting, flushing, grouting, pointing, where ordered, collar-joints, &c., complete .....	"	870	80/-	3,480 0 0
24	Cement facing in two thicknesses, $\frac{5}{8}$ inch thick when finished, to all internal and external surfaces of shafts, where ordered, as specified in clause 114 .....	square yard	200	4/-	58 0 0
25	Pymont sandstone, ashlar, set in cement, on top of ventilating shafts, and where ordered, as specified in clauses 10 and 115, complete ...	cubic feet	185	5/-	46 5 0
26	Squared bluestone pictures, 9 inches deep, set in sand, round cast-iron ventilating grates of shafts, where ordered, as specified in clause 116, complete .....	square yard	20	60/-	60 0 0
	Providing, laying, and jointing glazed stoneware, plain pipes, in trenches, and where ordered, including fixing discs, as specified, and including bed joints, in mortar, where required :-				
27	18 inches diameter .....	lineal feet	2	20/-	2 0 0
28	9 " " .....	"	60	6/-	18 0 0
	SURPLUS MATERIALS.				
	Removal of surplus materials from the various excavations throughout this contract, as tunnels and open trenches, including sub ducts, shafts, sumps, &c., as specified in clauses 40, 42, 43, and 45, as viz. :-				
29	For the first half mile of lead .....	cubic yard	7,060	2/-	796 0 0
30	For every further quarter of a mile of lead .....	"	15,920	1/9	597 0 0
	GOVERNMENT PROPERTY.				
31	Placing, building in, fixing, and jointing only, any metal work, as cast-iron oval and circular pipes, junctions, branches, flanged, and with spigot and faucet ends, gas-checks, ventilating grates, lamp-hole boxes, man-hole covers, staples, step-irons, earthenware covers, &c., supplied by the Government, including carriage, as specified in clauses 91, 121, 131 to 133 complete .....	ton	40	£5	200 0 0
32	Closing of branch sewers and intercepting pipes with earthenware or cast-iron covers, set in cement, labour only, as specified in clause 131 complete .....	each	30	10/-	15 0 0
33	Trapped junction blocks, taking delivery of, and building in .....	"	10	10/-	5 0 0

No. of Item	Description of Works.	Unit.	Probable Quantity.	Rate.	Amount.
GENERAL.					£ s. d.
31	Permanent puddle where ordered, in any situation, in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 23, including spreading in 9 inch layers, and ramming, complete .....	cubic yard	20	10/-	10 0 0
35	Special bluestone concrete, as specified in clause 25, where ordered in any situation, in the construction of the works .....	"	10	80/-	40 0 0
36	Bluestone metal (clause 18), 1½-inch gauge, stacked .....	"	10	20/-	10 0 0
37	Sandstone metal (clause 20), 2½-inch gauge, stacked .....	"	10	10/-	5 0 0
38	Bluestone metal (clause 32), 2½-inch gauge, stacked .....	"	10	15/-	7 10 0
39	Sharp, clean washed sand (clause 19), stacked .....	"	10	10/-	5 0 0
40	Sawn hardwood, in scantlings or planks (clause 30).....	cubic feet	50	4/-	10 0 0
41	Oregon timber, in scantlings or planks .....	"	50	4/-	10 0 0
42	Wrought-iron in bolts, galvanised step-irons, screws, nails, spikes, strips, &c. (clause 31) .....	cwt.	3	70/-	10 10 0
43	Portland cement .....	cask	10	20/-	10 0 0
44	Artisan or mechanic, supplied by contractor.....	day	15	14/-	10 10 0
45	Quarryman or other skilled labourer, supplied by contractor.....	"	15	12/-	9 0 0
46	Ordinary labourer, supplied by contractor.....	"	30	10/-	15 0 0
47	Cart, with one horse and driver, supplied by contractor.....	"	10	15/-	7 10 0
48	One additional horse, supplied by contractor .....	"	10	8/-	4 0 0
MAINTENANCE.					
49	Three months' maintenance after formal delivery of works .....	lump sum	.....	...	50 0 0
Total .....					56,563 10 0

## NOTES.

1. All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in strict accordance with the specification.

2. The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

3. Items Nos. 31, 32, and 33 to include the cost of conveying the Government property from the contractor's store or field office to the various sites of works along line of main and branch sewers, at man-holes, gas-check, and shaft chamber, &c.

4. Prices for items Nos. 36, 37, 38, 39, 40, 41, 42, and 43 are to be for materials in strict accordance with specification, delivered on the works ready for use, and only the actual net quantities ordered and approved of shall be paid for. In case contractor's prices are considered too high by the Engineer at the time such materials may be required, or if the contractor fail to deliver such materials at the time required and ordered, then the Engineer shall have the power to supply the same from any other source, and the contractor shall have no claim for loss or compensation on account of the exercise of such power by the Engineer.

5. Prices for items Nos. 44, 45, 46, 47, and 48 are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day work.

6. The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads crossing over main and pipe sewers, reinstating all road and other surfaces, &c., or any other thing necessary in executing and completing each respective item, in strict accordance with plans and specifications.

## No. 7.—JOHN TAYLOR &amp; CO.'S TENDER.

TENDER for Contract No. 79, Sydney Sewerage.

To the Honorable the Minister for Public Works, Bridge-street, Sydney, N.S.W.

We, the undersigned, do hereby tender and offer to construct, completely finish, and maintain the various works for Contract No. 79, Sydney Sewerage, in accordance with the conditions of contract, specifications, and drawings, prepared for that purpose in your Department, for or at the rates particularly entered in the accompanying schedule of prices, and enclose herewith deposit, as required by clause 20 of the general conditions.

Should this tender be accepted, we undertake to lodge with the Under Secretary for Public Works, within seven days from the date of notification of acceptance of this tender, a bank deposit receipt in the name of the Secretary for Public Works for the sum of two thousand pounds sterling, as security for the due performance of the contract.

In the event of our failing to do so, or to sign the required contract within the time specified in clause 20 of the general conditions, we hereby distinctly agree to forfeit to the Queen the sum deposited with this tender.

June 10th, 1891.

JOHN TAYLOR,  
JOHN BRITON.

CONTRACT No. 79.—Schedule of quantities and prices for constructing and completing 1 mile 25·3 chains, more or less, of the main outfall sewer, North Shore, branch and pipe sewers, shafts, junctions, &c., subject to omissions, extras, extensions, additions, enlargements, deviations, or alterations, as provided by the conditions of contract.

The quantities in this schedule are not guaranteed as correct, but are merely given for the guidance of intending contractors, this being a schedule of Prices Contract.

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate.	Amount.
					£ s. d.
	Excavation in tunnels, in hard rock, for sewer, branches, pipe-sewers, junctions, curves, &c., as specified in clauses 38, 42, 45, 48 to 68, including sub-ducts, timbering, unwatering, and removing the excavated materials beyond actual site of works, as viz. :—				
1	Excavation in hard rock, where gadding only is permitted .....	cubic yard	800	100/-	4,000 0 0
2	Excavation in hard rock, where charges of powder 2 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	835	95/-	3,066 5 0
3	Excavation in hard rock, where charges of powder 4 inches in length by 1½ inch in diameter, and such depth of bore-holes as shall be directed only are permitted .....	"	3,000	90/-	13,500 0 0
	Excavation in shafts, shaft-chambers, and sumps, as specified in clauses 39, 52, 53, 71, and 72, including timbering, unwatering, and removing the excavated materials beyond actual site of works, as viz. :—				
4	Excavation in road surfaces, sand, soil, clay, pipeclay, shale, and soft rock only .....	"	75	70/-	262 10 0
5	Excavation in hard rock, where gadding only is permitted .....	"	361	90/-	1,624 10 0
6	Excavation in hard rock, where charges of powder 2 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	500	85/-	2,125 0 0
7	Excavation in hard rock, where charges of powder 4 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	2,500	80/-	10,000 0 0
8	Filling in round brick and concrete work of ventilating and intercepting shafts and chambers, man-holes, and into all shafts, as specified in clauses 40, 41, 42, 43, 71, and 72, including withdrawing of timber, depositing in layers, replacing road and other surfaces, ramming, &c. ....	"	120	4/-	24 0 0
9	Timber ordered in writing to be left in tunnels, shafts, as specified in clauses 36 and 37, including all iron used in fixing same .....	cubic feet	500	2/-	50 0 0
10	Sub-duct in hard rock, with tile covers, as specified in clauses 76 and 77	lineal yard	250	20/-	250 0 0
	Sub-duct, as specified in clauses 76 and 78, in more or less hard material, including dry or cement jointing for stoneware pipes, &c. :—				
11	Of 6 inches internal diameter .....	"	100	20/-	100 0 0
12	Of 9 " " " " .....	"	100	20/-	100 0 0
	Sub-duct in water-charged loose ground, as specified in clause 76, including hardwood boxes with packing in same, and dry or cement jointing for pipes of :—				
13	6 inches internal diameter .....	"	100	12/-	60 0 0
14	9 " " " " .....	"	100	15/-	75 0 0
15	10 " " " " .....	"	100	15/-	75 0 0

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate.	Amount.
					£ s. d.
16	Hand-packed stone-filling, 4-inch gauge, as specified in clauses 17, 69, 76 to 78, over sub-ducts, and when ordered, round sewers and pipe-sewers in tunnels, including depositing, packing, and ramming .....	cubic yard	300	4/-	00 0 0
17	Sandstone concrete, any shape, form, or thickness, in shafts, tunnels, sumps, round stoneware pipes, and, where ordered, in any situation in the construction of these works, as specified in clauses 26, 27, 93 to 109, including washing dry surfaces, wetting, and grouting, complete .....	"	1,020	50/-	2,550 0 0
18	Bluestone concrete, any shape, form, thickness, arched, circular, or otherwise, in sewer, curved junctions, arches, man-holes, &c., as specified in clauses 24, 27, 93 to 109, including washing dry surfaces, wetting, and grouting, complete .....	"	1,300	100/-	6,950 0 0
	Brickwork in cement in sewer, junctions, shaft-chambers, circular, curved, arched, or otherwise, any shape or form or thickness, as specified in clauses 110 to 113, including wetting, flushing, grouting, collar-joints, pointing, where ordered, &c. :—				
19	Of one ring or portion of a ring .....	cubic yard	520	140/-	3,640 0 0
20	Of two or more rings, straight, arched, &c. ....	"	180	120/-	1,080 0 0
21	Cement facing in two thicknesses, $\frac{3}{8}$ inch thick when finished, as specified in clause 114, to all internal (and external, where ordered) surfaces of sewer, junctions, shaft-chambers, culverts, man-holes, and where ordered in any situation in the construction of these works .....	square yard	8,000	3/-	1,335 0 0
22	Bluestone concrete, any shape, form, or thickness, arched, circular, or otherwise, in shafts, over shaft-chambers, as specified in clauses 93 to 109, including washing dry surfaces, wetting, and grouting, complete .....	cubic yard	150	100/-	750 0 0
23	Brickwork in cement, circular, arched, curved, or otherwise, any shape, form, or thickness, as specified in clauses 110 to 113, in shafts, over shaft-chambers, including wetting, flushing, grouting, pointing, where ordered, collar-joints, &c., complete .....	"	870	100/-	4,350 0 0
24	Cement facing in two thicknesses, $\frac{3}{8}$ inch thick when finished, to all internal and external surfaces of shafts, where ordered, as specified in clause 114. ....	square yard	200	3/-	43 10 0
25	Pymont sandstone, ashlar, set in cement, on top of ventilating shafts, and where ordered, as specified in clauses 16 and 115, complete ...	cubic feet	185	4/-	37 0 0
26	Squared bluestone pictures, 9 inches deep, set in sand, round cast-iron ventilating grates of shafts, where ordered, as specified in clause 116, complete .....	square yard	20	40/-	40 0 0
	Providing, laying, and jointing glazed stoneware, plain pipes, in trenches, and where ordered, including fixing discs, as specified, and including bed joints, in mortar, where required :—				
27	18 inches diameter .....	lineal feet	2	15/-	1 10 0
28	9 " " .....	"	60	2/6	7 10 0
	<b>SURPLUS MATERIALS.</b>				
	Removal of surplus materials from the various excavations throughout this contract, as tunnels and open trenches, including sub-ducts, shafts, sumps, &c., as specified in clauses 40, 42, 43, and 45, as viz. :—				
29	For the first half mile of lead .....	cubic yard	7,360	1/-	398 0 0
30	For every further quarter of a mile of lead.....	"	15,920	-/3	199 0 0
	<b>GOVERNMENT PROPERTY.</b>				
31	Placing, building in, fixing, and jointing only, any metal work, as cast-iron oval and circular pipes, junctions, branches, flanged, and with spigot and faucet ends, gas-checks, ventilating grates, lamp-hole boxes, man-hole covers, staples, step-irons, earthenware covers, &c., supplied by the Government, including carriage, as specified in clauses 91, 121, 131 to 133 complete .....	ton	40	80/-	160 0 0
32	Closing of branch sewers and intercepting pipes with earthenware or cast-iron covers, set in cement, labour only, as specified in clause 131 complete .....	each	30	10/-	15 0 0
33	Trapped junction blocks, taking delivery of, and building in .....	"	10	20/-	10 0 0

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate.	Amount.
<b>GENERAL.</b>					£ s. d.
34	Permanent puddle where ordered, in any situation, in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 29, including spreading in 9-inch layers, and ramming, complete .....	cubic yard	20	5/-	5 0 0
35	Special bluestone concrete, as specified in clause 25, where ordered in any situation, in the construction of the works .....	"	10	120/-	60 0 0
36	Bluestone metal (clause 18), 1½-inch gauge, stacked .....	"	10	20/-	10 0 0
37	Sandstone metal (clause 26), 2½-inch gauge, stacked .....	"	10	5/-	2 10 0
38	Bluestone metal (clause 32), 2¼-inch gauge, stacked .....	"	10	20/-	10 0 0
39	Sharp, clean washed sand (clause 19), stacked .....	"	10	7/-	3 10 0
40	Sawn hardwood, in scantlings or planks (clause 30).....	cubic feet	50	3/-	7 10 0
41	Oregon timber, in scantlings or planks .....	"	50	3/-	7 10 0
42	Wrought-iron in bolts, galvanised step-irons, screws, nails, spikes, straps, &c. (clause 31).....	ewt.	3	30/-	4 10 0
43	Portland cement .....	cask	10	18/-	9 0 0
44	Artisan or mechanic, supplied by contractor.....	day	15	13/-	9 15 0
45	Quarryman or other skilled labourer, supplied by contractor.....	"	15	12/-	9 0 0
46	Ordinary labourer, supplied by contractor.....	"	30	9/-	13 10 0
47	Cart, with one horse and driver, supplied by contractor.....	"	10	14/-	7 0 0
48	One additional horse, supplied by contractor .....	"	10	7/-	3 10 0
<b>MAINTENANCE.</b>					
49	Three months' maintenance after formal delivery of works .....	lump sum	.....	...	10 0 0
Total .....					58,011 0 0

## NOTES.

1. All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in strict accordance with the specification.

2. The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

3. Items Nos. 31, 32, and 33 to include the cost of conveying the Government property from the contractor's store or field office to the various sites of works along line of main and branch sewers, at man-holes, gas-check, and shaft chamber, &c.

4. Prices for items Nos. 36, 37, 38, 39, 40, 41, 42, and 43 are to be for materials in strict accordance with specification, delivered on the works ready for use, and only the actual net quantities ordered and approved of shall be paid for. In case contractor's prices are considered too high by the Engineer at the time such materials may be required, or if the contractor fail to deliver such materials at the time required and ordered, then the Engineer shall have the power to supply the same from any other source, and the contractor shall have no claim for loss or compensation on account of the exercise of such power by the Engineer.

5. Prices for items Nos. 44, 45, 46, 47, and 48 are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day work.

6. The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads crossing over main and pipe sewers, reinstating all road and other surfaces, &c., or any other thing necessary in executing and completing each respective item, in strict accordance with plans and specifications.

## No. 3.

Messrs. Carter & Co. and Messrs. Gummow and Gillan to The President of Tender Board.

Sir,

Sydney, 10 June, 1891.

We have the honor to enter our protests against the acceptance of the tender of Messrs. Bond and Hudson for Contract No. 79, North Shore sewerage, on the following grounds:—

1. That the tender of Messrs. Bond and Hudson for Contract No. 56, Potts' Point sewerage, was accepted by your Board and not taken up by them.
2. Upon fresh tenders being called the tender of Mr. G. E. Hudson was the lowest, but was not accepted by the Board, in accordance with their rules and regulations.

Upon these grounds we, as tenderers for the North Shore sewerage, beg to protest against the tender of Messrs. Bond and Hudson being now accepted.

We have, &c.,

GUMMOW AND GILLAN,  
CARTER & CO.

Let me have papers *re* Bond and Hudson's tender for Contract 56.—R.H., 10/6/91. Herewith.—J.C.P., 10/6/91. Mr. Hickson for report.—J.B., 10/6/91.

In January, 1890, C. S. Bond (afterwards Bond and Hudson) tendered for Sewerage Contract No. 56, at a ridiculously low figure, and, as anticipated, had to throw up the contract and forfeit deposit. They were the lowest again when fresh tenders were invited, but did not get the work, they being ineligible under the Tender Board Regulations, clause 14. The same firm now (some sixteen months later) are the lowest tenderers for Sewerage Contract 79, and it is contended by the writers of the within letter that their tender should not be accepted. I cannot recommend that this course be taken. It is true, under clause 14, they can be excluded from competing for other works at the pleasure of the President. But in all fairness there must be some limit (when no fraudulent action has taken place) to this prohibition; and it seems to me, after sixteen months, all bar to their tendering should be removed. In recommendation on face of tender.—R.H., 10/6/91. Under Sec.

Resubmit when we deal with the tenders.—J.B., 30/12/91.

## No. 4.

E. M. Clark, Esq., M.P., to The Secretary for Public Works.

Sir,

Parliament House, Sydney, 30 July, 1891.

I understand that tenders were accepted some time ago for the outfall sewerage to Long Bay, St. Leonards. The successful contractors were, I understand, Messrs. Bond and Hudson; and, as the work is a very urgent one, I think they should be compelled to go on with the work.

Trusting you will hurry the matter on.

I have, &c.,

EDWARD M. CLARK.

Resubmit with the tender, which I do not think has been accepted.—J.B., 3/8/91. Tenders for Contract No. 79 (91/1524) and all previous papers submitted, 13/7/91.—R.H., 3/8/91. All papers herewith.—D.C.M'L., 4/8/91. To stand over.—J.B., 7/7/91. Roads, B.C. Seen.—R.H., 8/9/91

## No. 5.

E. M. Clark, Esq., M.P., to The Secretary for Public Works.

Sir,

Parliament House, Sydney, 18 August, 1891.

I shall be glad to know how far the matter of proceeding with the "outfall sewer to Middle Harbour," in my electorate, has progressed.

I might say I wrote you on the matter a fortnight ago.

Yours, &c.,

EDWARD M. CLARK.

91/1,991, and all previous papers, sent Under Secretary, 4/8/91. Tenders are awaiting acceptance; amount, £36,900, loan.—J.B., 19/8/91. Submitted.—J.D., 19/8/91. Inform must stand over until the question of further loan expenditure has been determined.—B.S., 21/8/91. Inform to-day.—J.B., 21/8/91. E. M. Clark, Esq., M.P., 21/8/91. Seen.—R.H., 24/8/91.

## No. 6.

Messrs. Bond and Hudson to The Secretary for Public Works.

*In re* Contract No. 79, Sydney Sewerage Works.

Dear Sir,

88, Sussex-street, Sydney, 28 September, 1891.

On 10th June, of this year, we had the pleasure of submitting a tender for the above works, and, we believe, were successful in being the lowest tenderers.

We have been anticipating the acceptance of our tender for some months, but not hearing from your Department, we have, in the meantime, entered upon other obligations, and must consequently respectfully ask you to permit us to withdraw our tender, and to return us the deposit attached thereto now lying in your hands, viz., £369.

We are, &c.,

C. B. BOND

(Bond and Hudson).

How

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How does this matter stand?—D.C.M'L., 30/9/91. Messrs. Bond and Hudson's tender was recommended for acceptance on 10/6/91. Papers herewith.—F.C.P., 1/10/91. Return deposit.—J.B., 2/10/91. Accountant to return deposit, 2/10/91. I recommend that fresh tenders be invited.—R.H., 6/10/91. Under Secretary. Submitted.—J.B., 9/10/91. Approved.—W.J.L., 22/2/92. Insert notice, 22/2/92. Notice to *Gazette*, 22/2/92. Tenders for 9th March, 1892.

Since writing my minute of 6/10/91, complications have arisen with Carter & Co., *re* their contract No. 72 having been stopped. They have made large claims on this account, some of which no doubt could not be entertained, but on some items they have made a good case. They are prepared, if they obtained this work, to waive all claims on No. 72. As their tender is a reasonable one, and some £3,600 below the estimate, I think it might fairly be accepted. If this course were adopted, work would be given at once to a large number of men.—R.H., 23/2/92. Under Secretary. Important.

As Mr. Hickson thinks Messrs. Carter & Co. could make good a claim for something like £2,000 as compensation on Contract 72 (Moni-street, partly), should they be willing to forego this claim, their tender may be accepted for construction of the main outfall sewer, North Sydney—£39,890, as worked out at schedule rates. If this firm will not agree to the condition imposed, fresh tenders to be invited.—W.J.L., 23/2/92.

Mr. Hickson.—D.C.M'L., for U.S., B.C., 23/2/92. Please see me with Messrs. Carter & Co.—J.B., 23/2/92. Mr. Hickson.

## No. 7.

*Précis* of case up to return of Messrs. Bond and Hudson's deposit.

Department of Public Works, Roads and Bridges and Sewerage Branch,  
Sydney, 29 January, 1892.

*Minute Paper.*

*Subject* :—North Shore Outfall Sewer, Contract No. 79, Sydney Sewerage Works.

TENDERS were received on the 10th June, 1891, for this work, that of Messrs. Bond and Hudson, at £37,254 10s, being the lowest. On the same date Messrs. Carter and Co. and Messrs. Gummow and Gillan conjointly wrote in protesting against the acceptance of Bond and Hudson's tender, as that firm had, on a previous occasion, thrown up a contract, but the protest was not allowed on account of the lapse of time, and as no fraudulent action had taken place, their tender was therefore recommended for acceptance.

On 28th September, 1891, Messrs. Bond and Hudson wrote in asking for the return of their deposit, and to be allowed to withdraw their tender owing to the delay in acceptance of same, and their having entered into other large engagements.

The deposit was returned accordingly on the 7th October, 1891.  
The Engineer-in-Chief for Sewerage.

F.E.P., 29/1/92.

Seen.—R.H., 1/2/92. File.—R.H., 10/3/92.

## No. 8.

## The Chief Clerk to The Tender Board Clerk.

Department of Public Works, Sydney, 23 February, 1892.

*Minute Paper.*

*Subject* :—Main Outfall Sewer, North Sydney.

WITHDRAW notice inviting tenders for the above.

Done, 23/2/92. Put with the papers, 25/2/92.

## No. 9.

## The Under Secretary for Public Works to Messrs. Carter &amp; Co.

Sirs, Department of Public Works, Sydney, 10 March, 1892.

I have the honor, by direction of the Secretary for Public Works, to inform you that your tender, dated 10th June last, is accepted for construction of the North Shore Main Outfall Sewer, from near Long Bay to Mount-street—Contract No. 79, Sydney Sewerage—at your schedule of prices.

The work is to be carried out in strict accordance with the several contract exhibits relating to this contract, and to be completed within twenty-four months from this date.

I have to refer you to the Commissioner for Roads for further information, and to request that you will call upon the officer in charge of Bonds and Contracts at this office, for the purpose of executing the necessary documents for the due observance of your contract.

I am, &c.,  
J. BARLING,  
Under Secretary.

## No. 10.

The Clerk in Charge of Bonds and Contracts to The Engineer-in-Chief for Sewerage.  
Department of Public Works, Bonds and Contracts Branch, Sydney, 3 March, 1892.

*Minute Paper.*

*Subject:—Re Main Outfall Sewer, North Sydney.*

THE agreement and release herein for execution by Messrs. Carter & Co. and George Forrest is sent herewith, together with the papers sent to me as instructions to prepare same.

The amount of stamp duty payable herein is £1 2s.

The plans are also sent herewith.

HAROLD F. NORRIE,  
Per V.C.L.

The Commissioner and Engineer-in-Chief for Roads and Bridges.

This tender might now be accepted conditionally on contractors signing bond and depositing a sum of £2,000.—R.H., 8/3/92. Under Secretary. Ask them to call, 8/3/92. Done, 9/3/92. Send letter of acceptance and get documents signed when the deposit is paid.

## No. 11.

## Contract Agreement, with Annexures.

Department of Public Works, Bonds and Contract Branch, Sydney, 14 March, 1892.

*Minute Paper.*

*Subject:—Re Main Outfall Sewer, North Sydney.*

Contract No. 79, Sydney Sewerage.

THE agreement herein duly prepared has been executed by the contractors, Messrs. Carter & Co., and stamped, and may now be forwarded to the Engineer-in-Chief for Sewerage.

The tender and all other papers herein are sent herewith.

HAROLD F. NORRIE,  
Officer in Charge,  
Per V.C.L.

AGREEMENT made this 10th day of March, in the year of our Lord 1892, between John Carter and David Graham Snodgrass, of Glebe and North Shore respectively, in the Colony of New South Wales, contractors, carrying on business together at the Glebe aforesaid, as contractors, under the name, style, or firm, of "Carter & Co.," and hereinafter styled or referred to as "the contractors," of the first part, George Forrest, of Glebe aforesaid, contractor, of the second part, and Her Most Gracious Majesty Queen Victoria of the third part.

Whereas the Minister for Public Works, of the said Colony, recently called for tenders by notice published in the *Government Gazette* (of which notice a copy is hereunto annexed), for the providing of all materials, labour, and every other thing requisite and necessary for, and the performance of all the works required in and about the construction, erection, and completion of the North Shore Main Outfall Sewer from near Long Bay to Mount-street, in the said Colony, as shown in the drawings relating thereto, and according to the specification, and under and subject to the general conditions and special conditions which are hereunto annexed, and marked respectively "A," "B," and "C." And whereas the contractors made the tender hereunto annexed, marked "D," for the providing of all plant and materials (except such materials as in and by the said specification are mentioned as to be supplied by the Government of the said Colony), labour, tools, and every other thing requisite and necessary for, and the performance of, all the works required in and about the full and proper construction, erection, and completion, and maintenance, of the said works in accordance, in all things, with the said specification, and under, and subject to, the said general conditions and special conditions, and in accordance with the several plans or drawings, relating thereto, in the office of the Engineer-in-Chief for Sewerage, and marked "No. 1," "No. 2," "No. 3," "No. 3a," and "No. 4" to "No. 8," inclusive, and at or for the rates or prices mentioned and set out in the schedule of quantities and prices to the said tender, and to complete the said works within twenty-four months from the date of the acceptance of the said tender, that is to say, on or before the 10th day of March, 1894, as mentioned in the first clause of the said special conditions. And whereas the said contractors and the said George Forrest, carrying on business under the name, style, or firm, of "Carter & Co.," sometime since entered into a contract with Her said Majesty for the construction and maintenance of a storm-water sewer from Munni-street, Macdonald-street, Mitchell-road, to Shea's Creek storm-water channel, in the said Colony—the said contract being called or known as Contract No. 72, Sydney and Suburbs Storm-water Drainage. And whereas the said contractors and the said George Forrest, in carrying out the said contract, made a claim for certain extra works in connection therewith, amounting in all to the sum of £4,050 9s. 6d., which said claim they have agreed, by letter annexed hereto, marked "E," to waive in consideration of the said Minister accepting the present tender of the contractors for the said main outfall sewer, North Shore. And whereas the Minister for Public Works of the said Colony, acting on behalf of the Government of the said Colony, hath accepted the said tender of the contractors on condition that the said contractors and the said George Forrest execute the release hereinafter contained, waiving their said claims on Contract No. 72 hereinbefore referred to. And whereas the contractors have, in compliance with the requirement in clause six of the said special conditions, deposited the sum of £2,000 in the Bank of New Zealand, at Sydney aforesaid, in the name of the Under Secretary for Public Works, aforesaid, at interest, upon fixed deposit Number A7667, dated the 10th day of March, 1892, for twelve months, and have handed the receipt for same to the said Minister for Public Works, to be held by him as such Minister, or the Minister for Public Works for the time being of the said Colony, on behalf of Her Majesty, as security for the due performance of this contract, and all other matters and things herein contained, and which, on the part of the contractors, are to be done and performed. Now this agreement witnesseth that, in pursuance of the said agreement to waive the said claims on said Contract No. 72, and for the consideration aforesaid, and of the sum of 10s. on the execution hereof to the said George Forrest, paid by Her said Majesty (the receipt, whereof the said George Forrest doth hereby admit and acknowledge). They, the

said

said contractors and the said George Forrest do respectively hereby release Her said Majesty, her heirs and successors, the said Minister, and his successors in office, the constructing authority, and his successors, and the Government of the said Colony from all and singular the said claim or claims, and all actions, claims, costs, damages, expenses, and demands which they, the said several parties, hereto of the first and second parts, respectively, now have, or shall, or may, or otherwise could, or might, hereafter have, claim, or demand of, from, or against Her said Majesty, her heirs or successors, or the said Minister, or his successors in office, or the constructing authority, or his successors, or the Government of the said Colony or any of them, respectively, on account of the said claim for extra work, or otherwise on said Contract No. 72, and all interest for or in respect of the same, or for or on account of any other thing relating thereto. And this agreement also witnesseth that in consideration of the premises the contractors do hereby for themselves, their heirs, executors, and administrators, covenant with and to Her said Majesty the Queen her heirs and successors: That they, the contractors, shall and will find and provide all the materials (except such materials as in the said specification are mentioned as to be supplied by the said Government), labour, plant, tackle, tools, implements, carriage, machinery, scaffolding, and every other thing requisite and necessary for, and shall and will perform the various works required in and about the full and proper construction, erection, completion, and maintenance of the main outfall sewer, North Shore, commencing at nought chains, near Long Bay, and extending under private land to Grassmere-street near the eastern boundary of Cammeray Park, under Cammeray Park to corner of Alfred and Ernest Streets, and along Alfred-street to Mount-street, where it terminates, being a total length of about 1 mile 25·8 chains, together with shafts, branches, &c, connected therewith, being a portion of the work for Sydney sewerage—this present contract being called or referred to as “Contract No. 79”—in accordance in all things with the said specification, general conditions, and special conditions, and with the said several plans, or drawings, and which are signed by the contractors, and at or for the rates, or prices, set out in the said schedule of quantities and prices to the said tender. It being also hereby declared that any additions to or deductions from the said works mentioned, or set out in the said specification, or shown in the said plans, are to be paid or allowed for, as the case may be, at and according to the rates or prices in the said schedule of quantities and prices. And shall and will complete the whole of the said works within twenty-four months from the date of acceptance of the said tender, that is to say, on or before the 10th day of March, 1894, in accordance in all things with the said specification, general conditions, special conditions, and plans. And it is hereby agreed and declared between and by the said parties hereto that the said specification, general conditions, special conditions, and tender, all being marked as aforesaid, and the said schedule of quantities and prices, all being hereunto annexed, as aforesaid, shall be read as incorporated in and forming part and parcel of these presents in like manner as if the same had been herein written and set forth at length, and that the said specification, general conditions, special conditions, tender, and schedule of quantities and prices, and these presents shall together be taken to be the contract between the said parties in respect of the said works, and that all and whatsoever by the said specification, general conditions, and special conditions, or any, or either, of them is to be done by the contractors or shown on the said plans shall be done in accordance therewith in all things by the contractors, their executors, or administrators, and that all and whatsoever materials, goods, matters, and things, which by the said specification, general conditions, and special conditions, are to be supplied by the contractors in and about the construction and completion of the said works shall be found, provided, and supplied by the contractors, their executors or administrators, in accordance in all things with the said specification, general conditions, special conditions, and plans. And it is hereby agreed that if the contractors, their executors, or administrators, shall make default in proceeding with the said works, or supplying the materials which, under the said specification, general conditions, and special conditions, are to be supplied by the contractors, or in completing and finishing the said works in accordance in all things with the said specification, general conditions, and special conditions, and all things therein contained and within the time for the completion of the said works as mentioned or provided in the said first clause of the said special conditions, the said sum of £2,000 so deposited as security for the due performance of this contract shall be and become forfeited to Her Majesty the Queen, and may be used, paid, and applied so far as the same may be required in and about carrying out and completing the works in the said specification mentioned, and if any balance shall remain, after the said works are completed, the same shall remain to the credit of the Consolidated Revenue of the said Colony, and that the right of Her Majesty to deal with the said sum of £2,000 in manner aforesaid shall be in addition to all, any, or other rights or remedies which Her Majesty the Queen or the Government of New South Wales shall or may have or be entitled to against the contractors under these presents, or under the said specification, general conditions, and special conditions, or any or either of them or otherwise for any breach or breaches of this contract.

In witness whereof the said parties to these presents have hereunto set their hands and seals the day and year first before written.

Signed, sealed, and delivered by the said John }  
Carter, in the presence of,— }  
V. C. LUMSDAINE. } JOHN CARTER.

Signed, sealed, and delivered by the said }  
David Graham Snodgrass, in the pre- }  
sence of,— }  
V. C. LUMSDAINE. } D. G. SNODGRASS.

Signed, sealed, and delivered by the said }  
George Forrest, in the presence of,— }  
V. C. LUMSDAINE. } GEO. FORREST.

#### MEMORANDUM.

THE return of the security lodged for the due performance of the above contract is and will be accepted by us without prejudice to any of the rights of the constructing authority to enforce the penalties prescribed by the contract, by reason of the non-completion within the time specified, and to all other rights of the constructing authority.

As witness our hands at Sydney this twentieth day of June, A.D. 1894.

Witness,—HAROLD F. NORRIS, J.P.

JOHN CARTER.  
D. G. SNODGRASS.  
Department

Department of Public Works, Sydney, 9 June, 1891.

TENDERS FOR PUBLIC WORKS.

TENDERS will be received at this office, for the public works specified in the Schedule hereunder, up to 11 o'clock a.m. of the various dates set forth in the second column.

All envelopes containing tenders must be addressed to the President of the Tender Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Tenderers may be in attendance when the tenders are opened, and the name of the lowest tenderer will be announced, if possible, before the duties of the Board have terminated.

The following conditions will have to be strictly complied with, otherwise the tenders will not be taken into consideration :—

1st.—Each tender must state the time within which it is proposed to complete the work, and in every instance the full name or names of persons tendering, also the names in full, occupations, and addresses of proposed bondsmen.

2nd.—At the foot of every tender there must be a memorandum, signed by the party tendering and two responsible persons as sureties, agreeing to be answerable for the due performance of the contract, in the event of the tender being accepted; and undertaking, in that event, that they will severally execute and deliver a bond to Her Majesty, in the penal sum mentioned in the specification, or otherwise arranged, for securing such performance.

3rd.—No tender will be considered which shall have been received after 11 o'clock a.m. on the day upon which tenders are to be received, unless there are circumstances which, in the opinion of the Board, render it desirable that it should be received.

4th.—Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive ... ..	£5 0 0
For amounts exceeding £500 and not exceeding £1,000 ... ..	10 0 0

For all sums over £1,000, 1 per cent, on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a Bank draft.

5th.—Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal and rejected accordingly.

6th.—In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all monies deposited by him on account of such contract shall be absolutely forfeited to the Crown, and shall be paid to the credit of the Consolidated Revenue of the Colony.

7th.—Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted, but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

8th.—In the event of any contract being tendered for at a schedule of rates, the approximate quantities as given of each item must be worked out and a total sum shown.

All deposits, with the exception of that of the lowest tenderer, when practicable, will be returned to the persons entitled thereto, immediately after the Board shall have adjourned; and the deposit made by the successful tenderer shall be returned to him on executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200, the deposit with tender will not be returnable until the service is satisfactorily completed.

It is to be understood that the Government does not bind itself to accept the lowest or any tender; and no tender will be accepted until the head of the branch under whose directions the work is to be carried out has reported upon the whole of the tenders received.

BRUCE SMITH.

Roads.

Description of Work or Supplies to be Tendered for.	Dates up to which Tenders will be received.	Where Plan, Specification, and Form of Tender may be seen.	Remarks.
* * * *	*	* * * *	* *
Construction of the North Shore main Outfall Sewer from near Long Bay to Mount-street	10 June, 1891	Sewerage Office, Lincoln's Inn Chambers, Elizabeth-street.	See also special notice.
* * * *	*	* * * *	* *

This is the copy notice referred to in our annexed agreement with Her Majesty the Queen, dated the 10th day of March, A. D. 1892.

Witness,—V. C. LUMSDAINE.

JOHN CARTER,  
D. G. SNODGRASS.

275

"D."

## TENDER for Contract No. 79, Sydney Sewerage.

To the Honorable the Minister for Public Works, Bridge-street, Sydney, N.S.W.

We, the undersigned, do hereby tender and offer to construct, completely finish, and maintain the various works for Contract No. 79, Sydney Sewerage, in accordance with the conditions of contract, specifications, and drawings, prepared for that purpose in your Department, for or at the rates particularly entered in the accompanying schedule of prices, and enclose herewith deposit, as required by clause 20 of the general conditions.

Should this tender be accepted, we undertake to lodge with the Under Secretary for Public Works, within seven days from the date of notification of acceptance of this tender, a bank deposit receipt in the name of the Secretary for Public Works for the sum of two thousand pounds sterling, as security for the due performance of the contract.

In the event of our failing to do so, or to sign the required contract within the time specified in clause 20 of the general conditions, we hereby distinctly agree to forfeit to the Queen the sum deposited with this tender.

June 10th, 1891.

JOHN CARTER,  
North Shore.  
D. G. SNODGRASS,  
North Shore.

This is the tender marked "D" referred to in our annexed agreement with Her Majesty the Queen, dated the 10th day of March, A.D. 1892.

JOHN CARTER,  
D. G. SNODGRASS.

Witness,—V. C. LUMSDAINE.

CONTRACT No. 79.—Schedule of quantities and prices for constructing and completing 1 mile 25·3 chains, more or less, of the main outfall sewer, North Shore, branch and pipe sewers, shafts, junctions, &c., subject to omissions, extras, extensions, additions, enlargements, deviations, or alterations, as provided by the conditions of contract.

The quantities in this schedule are not guaranteed as correct, but are merely given for the guidance of intending contractors, this being a schedule of Prices Contract.

No. of Item.	Description of Works.	Unit.	Probable Quantity	Rate.	Amount.
					£ s. d.
	Excavation in tunnels, in hard rock, for sewer, branches, pipe-sewers, junctions, curves, &c., as specified in clauses 38, 42, 45, 48 to 68, including sub-ducts, timbering, unwatering, and removing the excavated materials beyond actual site of works, as viz :—				
1	Excavation in hard rock, where gadding only is permitted .....	cubic yard	800	63/-	2,520 0 0
2	Excavation in hard rock, where charges of powder 2 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	835	61/-	2,545 15 0
3	Excavation in hard rock, where charges of powder 4 inches in length by 1½ inch in diameter, and such depth of bore-holes as shall be directed only are permitted .....	"	3,000	60/-	9,000 0 0
	Excavation in shafts, shaft-chambers, and sumps, as specified in clauses 39, 52, 53, 71, and 72, including timbering, unwatering, and removing the excavated materials beyond actual site of works, as viz :—				
4	Excavation in road surfaces, sand, soil, clay, pipeclay, shale, and soft rock only .....	"	75	78/-	292 10 0
5	Excavation in hard rock, where gadding only is permitted .....	"	361	83/-	1,498 3 0
6	Excavation in hard rock, where charges of powder 2 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	500	79/-	1,975 0 0
7	Excavation in hard rock, where charges of powder 4 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	2,500	78/-	9,750 0 0
8	Filling in round brick and concrete work of ventilating and intercepting shafts and chambers, man-holes, and into all shafts, as specified in clauses 40, 41, 42, 43, 71, and 72, including withdrawing of timber, depositing in layers, replacing road and other surfaces, ramming, &c. ....	"	120	1/-	6 0 0
9	Timber ordered in writing to be left in tunnels, shafts, as specified in clauses 36 and 37, including all iron used in fixing same .....	cubic feet	500	-/1	2 1 8
10	Sub-duct in hard rock, with tile covers, as specified in clauses 76 and 77	lineal yard	250	-/1	1 0 10
	Sub-duct, as specified in clauses 76 and 78, in more or less hard material, including dry or cement jointing for stoneware pipes, &c. :—				
11	Of 6 inches internal diameter .....	"	100	-/1	0 8 4
12	Of 9 " " " " .....	"	100	-/1	0 8 4
	Sub-duct in water-charged loose ground, as specified in clause 76, including hardwood boxes with packing in same, and dry or cement jointing for pipes of :—				
13	6 inches internal diameter .....	"	100	-/1	0 8 4
14	9 " " " " .....	"	100	-/1	0 8 4
15	10 " " " " .....	"	100	-/1	0 8 4

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate.	Amount.
					£ s. d.
16	Hand-packed stone-filling, 4-inch gauge, as specified in clauses 17, 69, 76 to 78, over sub-ducts, and when ordered, round sewers and pipe-sewers in tunnels, including depositing, packing, and ramming .....	cubic yard	300	-/1	1 5 0
17	Sandstone concrete, any shape, form, or thickness, in shafts, tunnels, sumps, round stoneware pipes, and, where ordered, in any situation in the construction of these works, as specified in clauses 26, 27, 93 to 109, including washing dry surfaces, wetting, and grouting complete .....	"	1,020	37/6	1,012 10 0
18	Bluestone concrete, any shape, form, thickness, arched, circular, or otherwise, in sewer, curved junctions, arches, man-holes, &c., as specified in clauses 24, 27, 93 to 109, including washing dry surfaces, wetting, and grouting, complete .....	"	1,390	56/-	3,892 0 0
	Brickwork in cement in sewer, junctions, shaft-chambers circular, curved, arched, or otherwise, any shape or form or thickness, as specified in clauses 110 to 113, including wetting, flushing, grouting, collar-joints, pointing, where ordered, &c. :-				
19	Of one ring or portion of a ring .....	"	520	50/-	1,300 0 0
20	Of two or more rings, straight, arched, &c. ....	"	180	20/-	180 0 0
21	Cement facing in two thicknesses, $\frac{3}{4}$ inch thick when finished, as specified in clause 114, to all internal (and external, where ordered) surfaces of sewer, junctions, shaft-chambers, culverts, man-holes, and where ordered in any situation in the construction of these works .....	square yard	8,900	2/-	890 0 0
22	Bluestone concrete, any shape, form, or thickness, arched, circular, or otherwise, in shafts, over shaft-chambers, as specified in clauses 93 to 109, including washing dry surfaces, wetting and grouting, complete .....	cubic yard	150	60/-	450 0 0
23	Brickwork in cement, circular, arched, curved, or otherwise, any shape, form, or thickness, as specified in clauses 110 to 113, in shafts, over shaft-chambers, including wetting, flushing, grouting, pointing, where ordered, collar-joint, &c., complete .....	"	570	65/-	2,827 10 0
24	Cement facing in two thicknesses, $\frac{3}{4}$ inch thick when finished, to all internal and external surfaces of shafts, where ordered, as specified in clause 114 .....	square yard	290	2/-	29 0 0
25	Plymouth sandstone, ashlar, set in cement, on top of ventilating shafts, and where ordered, as specified in clauses 116 and 115, complete ...	cubic feet	185	6/-	55 10 0
26	Squared bluestone pictures, 9 inches deep, set in sand, round cast-iron ventilating grates of shafts, where ordered, as specified in clause 116, complete .....	square yard	20	30/-	30 0 0
	Providing, laying, and jointing glazed stoneware, plain pipes, in trenches, and where ordered, including fixing discs, as specified, and including bed joints, in mortar, where required :-				
27	18 inches diameter .....	lineal feet	2	10/-	1 0 0
28	9 " " .....	"	60	2/-	6 0 0
	<b>SURPLUS MATERIALS.</b>				
	Removal of surplus materials from the various excavations throughout this contract, as tunnels and open trenches, including sub-ducts, shafts, sumps, &c., as specified in clauses 40, 42, 43, and 45, as viz. :-				
29	For the first half mile of lead .....	cubic yard	7,950	1/-	398 0 0
30	For every further quarter of a mile of lead .....	"	15,920	-/1	66 6 8
	<b>GOVERNMENT PROPERTY.</b>				
31	Placing, building in, fixing, and jointing only, any metal work, as cast-iron oval and circular pipes, junctions, branches, flanged, and with epigot and faucet ends, gas-checks, ventilating grates, lump-hole boxes, man-hole covers, staples, step-irons, earthenware covers, &c., supplied by the Government, including carriage, as specified in clauses 91, 121, 131 to 133 complete .....	ton	40	60/-	120 0 0
32	Closing of branch sewers and intercepting pipes with earthenware or cast-iron covers, set in cement, labour only, as specified in clause 131 complete .....	each	30	10/-	15 0 0
33	Trapped junction blocks, taking delivery of, and building in .....	"	10	5/-	2 10 0

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate.	Amount.
<b>GENERAL.</b>					£ s. d.
34	Permanent puddle where ordered, in any situation, in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 20, including spreading in 9-inch layers, and ramming, complete .....	cubic yard	20	2/-	2 0 0
35	Special blucstone concrete, as specified in clause 25, where ordered in any situation, in the construction of the works .....	"	10	6/-	3 0 0
36	Blucstone metal (clause 18), 1½-inch gauge, stacked .....	"	10	15/-	7 10 0
37	Sandstone metal (clause 26), 2¼-inch gauge, stacked .....	"	10	2/6	1 5 0
38	Blucstone metal (clause 32), 2¼-inch gauge, stacked .....	"	10	15/-	7 10 0
39	Sharp, clean washed sand (clause 19), stacked .....	"	10	5/-	2 10 0
40	Sawn hard wood, in scantlings or planks (clause 30).....	cubic feet	50	2/-	5 0 0
41	Oregon timber, in scantlings or planks .....	"	50	2/6	6 5 0
42	Wrought-iron in bolts, galvanised step-irons, screws, nails, spikes, straps, &c. (clause 31).....	cwt.	3	56/-	8 8 0
43	Portland cement .....	cask	10	16/-	8 0 0
44	Artisan or mechanic, supplied by contractor.....	day	15	12/-	9 0 0
45	Quarryman or other skilled labourer, supplied by contractor.....	"	15	10/-	7 10 0
46	Ordinary labourer, supplied by contractor.....	"	30	10/-	15 0 0
47	Cart, with one horse and driver, supplied by contractor.....	"	10	20/-	10 0 0
48	One additional horse, supplied by contractor .....	"	10	10/-	5 0 0
<b>MAINTENANCE.</b>					
49	Three months' maintenance after formal delivery of works .....	lump sum	.....	...	21 18 2
Total .....					39,890 0 0

This is the Schedule of Quantities and Prices referred to in our annexed agreement with Her Majesty the Queen, dated the 10th day of March, A.D. 1892.

Witness,—V. C. LUMSDAINE.

JOHN CARTER,  
D. G. SNODGRASS.

#### NOTES.

1. All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in strict accordance with the specification.

2. The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

3. Items Nos. 31, 32, and 33 to include the cost of conveying the Government property from the contractor's store or field office to the various sites of works along line of main and branch sewers, at man-holes, gas-check, and shaft chamber, &c.

4. Prices for items Nos. 36, 37, 38, 39, 40, 41, 42, and 43 are to be for materials in strict accordance with specification, delivered on the works ready for use, and only the actual net quantities ordered and approved of shall be paid for. In case contractor's prices are considered too high by the Engineer at the time such materials may be required, or if the contractor fail to deliver such materials at the time required and ordered, then the Engineer shall have the power to supply the same from any other source, and the contractor shall have no claim for loss or compensation on account of the exercise of such power by the Engineer.

5. Prices for items Nos. 44, 45, 46, 47, and 48 are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day work.

6. The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads crossing over main and pipe sewers, reinstating all road and other surfaces, &c., or any other thing necessary in executing and completing each respective item, in strict accordance with plans and specifications.

"B."

"E."

Sir,

St. John's Road, Glebe, 26 February, 1892.

With reference to our interview with you this morning in connection with contract No. 79, Main Outfall Sewer, North Shore, we do ourselves the honor to notify you that in consideration of our tender for the same being accepted, we are willing and hereby agree to forego all claims for compensation in our contract No. 72, Munni-street Storm-water Channel, Alexandria.

J. Barling, Esq.,  
Under Secretary for Public Works.

We are, &c.,  
CARTER & CO.

Mr. Norrie to prepare the bond at once. Mr. Hickson will explain.—J.B., 25/2/92. Urgent Bond for contract No. 72 herewith.—F.C.P., 29/2/92. Mr. Norrie.

This is the letter marked "E" referred to in our annexed agreement with Her Majesty the Queen, dated the 10th day of March, A.D., 1892.

Witness,—V. C. LUMSDAINE.

JOHN CARTER.  
D. G. SNODGRASS.  
GEO. FORREST.

"A."

*Sydney Sewerage, Contract No. 79 (Main Outfall Sewer, North Shore).*—Specification of the several works required in the construction of the Main Outfall Sewer, North Shore, commencing at 0 chains near Long Bay, and extending under private land to Grassmere-street, near the eastern boundary of Cammeray Park, under Cammeray Park to corner of Alfred and Ernest Streets, and along Alfred-street to Mount-street, where it terminates, being a total distance of about 1 mile 25·3 chains; together with shafts, branches, &c., connected therewith, in accordance with the accompanying Drawings, with such extensions or omissions at both ends, and throughout the length of the contract, as may be ordered in writing, viz. :—

#### 1. Description of Drawings.

1. Drawing No. 1.—General plan.
- " No. 2.—Longitudinal section.
- " No. 3.—Details of shafts at Falcon-street. No. 3 A; details of shafts.
- " No. 4.—Details of shafts.
- " No. 5.— " "
- " No. 6.— " "
- " No. 7.—Cross-sections of sewer, &c.
- " No. 8.—Details of shafts.

#### 2. Extent of Contract.

2. The works comprised in this contract consist in the necessary amount of earth and rock excavation, puddling, shoring, timbering, under-pinning, centering, scaffolding, unwatering, concrete, brickwork, pipe-laying, carpenter's work, ironwork (with exception of the materials supplied by Government, as set forth in clause 131), pitching, paving, ballasting, metalling, masonry, leading surplus materials to spoil, embankment, &c., required in the construction of the Main Outfall Sewer, North Shore, in tunnels through rock, as shown on longitudinal section, and as shall be directed, with all gas-checks, penstocks, junctions, curves, shafts, inlet chambers, pipe-sewers, ventilating shafts, sub-ducts, road-making, &c., and all other works in connection with those herein enumerated, and the maintenance of the whole of these works for a period of three months after they have been formally taken over by the Engineer.

2A. The contractor must include in his Schedule, rates for excavation, the cost of clearing and forming a temporary roadway from Ernest-street to shaft at 27·5 chains in Cammeray Park; and also the cost of providing a tramway or roadway from the shaft at 0 chains to Long Bay, for conveying the surplus materials from this shaft to the Long Bay.

#### 3. Site.

3. Access to the site of the works to be had along its centre lines where such are shown to be along lines of streets, and along all public roads which cross the centre lines of the Main Outfall Sewer, North Shore.

4. Access to shaft in Cammeray Park will be given along a strip of land from Ernest-street, and access to shaft at 0 chains from the Long Bay will also be provided along a strip of land 66 feet wide.

5. For the purpose of sinking, working, and building shafts on lines of streets, and on private ground, when ordered, the contractor to have temporary possession of an area of 24 ft. by 17 ft. over the mouth of each shaft, unless otherwise directed.

6. All areas of strips of land round mouths of shafts hereinbefore referred to, to be set out by the Engineer, to whom written application for their temporary possession must be made by the contractor two weeks prior to the time the said land is required by him.

Such possession, however, not to be exclusive, but subject to the right of entry of the Engineer, his officers, and other persons, carts and horses, &c., required for any purposes of the Government at any time.

7. Any other lands required by the contractor for temporarily depositing materials, erecting winding engines, or for any other purposes in connection with the contract, he will have to procure at his own cost, in strict accordance with clause 6 of the conditions of contract.

8. The contractor shall provide and erect all necessary fences, temporary bridges underneath foot-paths and streets, hoarding-barriers, &c., wherever directed to do so, and all fences, walls, railings, walks, or streets, metalled, grassed, paved, pitched, or asphalted surfaces, to be left by the contractor at the completion of the works in the same order as they were before the commencement of the works, at his sole cost, in strict accordance with the various stipulations and terms contained in clause 41 of this specification, and clause 2 of the conditions of contract, to the entire satisfaction of the city municipal authorities and of the Engineer-in-Chief.

#### 4. Lines, Levels, and Setting-out Work.

9. The centre line of sewer is shown on general plan, drawing No. 1, by a full line, which will be marked on the surface of the ground, the same as on plan, as the works proceed.

After setting-out, the centre line of the works is to be preserved solely by reference to the iron nails, pegs, and other marks and signals which may be placed, fixed, and erected for the purpose of these works along its centre line.

The gradients and levels of the works are to be preserved by reference to any bench-marks which the Engineer may deem necessary to establish along the lines of works during the progress of the contract, subject to check and adjustment, as shall be directed, from other bench-marks established beyond the site of the works.

#### 5. Materials.

10. All materials, as brick, stone, cement, timber, iron, sand, stoneware pipes, clay, lead, &c., which are to be supplied by the contractor, are to be of the best quality and description of their respective kinds. Samples of each kind to be submitted for the approval of the Engineer, and retained in office; and on approval having been obtained, they are to be delivered on the works ready for use, as per sample.

11. The contractor shall inform the Engineer of the sources whence the various materials are supplied, or of the places of their manufacture, and afford him every facility to inspect their supply or manufacture at any stage of the same.

12. The contractor to make and provide proper and approved gauges or scales for measuring or weighing all materials supplied, whether specified to be broken or delivered to special sizes and mixed together in stated proportions or not.

13. Bricks to be of well-mixed material of approved quality and uniform fineness; to be new, sound, hard, well-burnt kiln bricks, free from cracks and all other defects, truly rectangular, with sharp arrises, of approved dimensions and form; to be specially moulded where required for arching inner and outer rings of sewers and circular or segmental shafts, and equal to sample brick to be seen at the Engineer's office, and which must be sealed by the contractor and acknowledged as a sample of the bricks to be used throughout the works. Bricks used in these works will be subjected to the following tests, viz.:—

- (a) *Tensile strength*.—The tensile strength to be tested, in the departmental testing machine, by laying the brick horizontally on its base of 3 inches, between supports 7 inches apart, and the strain applied across the centre of the brick and distributed over a width of  $1\frac{1}{2}$  inch. An average breaking strain of twelve bricks to be taken, which must not be less than 8,000 lb.
- (b) *Porosity*.—Bricks immersed in water for twenty-four hours must not increase in weight more than 3 per cent.

Should the twelve bricks fracture under the foregoing average strain, or prove more impervious to water than 3 per cent., then the Engineer may reject the whole stack of bricks from which the twelve bricks were taken. The whole of the expense incurred in testing the bricks shall be borne solely by the contractor.

14. In the event of the contractor delivering quantities of bricks on the site of the works for the contract of a mixed description and quality, the officer in charge shall have the power to require of the contractor to have those bricks which in his opinion are suitable for the works picked out and stacked where directed, and those defective or unsuitable removed from the site of the contract; and in the event of the contractor refusing or failing to comply with such request within twelve hours from the time it has been made, then in all such cases the superintending officer shall have the power of rejecting the whole of the bricks so delivered by the contractor.

15. Stoneware pipes to be of well ground and mixed material, of tough, tenacious, impervious quality, well burnt, sound, hard, uniform in thickness, true in section, straight longitudinally, uniformly glazed both inside and outside, free from fire or other cracks, flaws, and ash-holes, the collar perfectly joined to the barrel, and in every way equal to sample pipe to be seen at the Engineer's Office. Paving tiles to be of the same materials as the stoneware pipes, to be uniformly glazed on all sides and of approved size and form.

Pipes to be of the following thicknesses and depth of collar, namely:—

Pipes, inside diameter, 9 in. ;	thickness, $1\frac{1}{8}$ in. ;	depth of collar, 2 in.
Do do 12 in. ;	do 1 in. ;	do 2 in.
Do do 15 in. ;	do $1\frac{1}{2}$ in. ;	do $2\frac{1}{2}$ in.
Do do 16 in. ;	do $1\frac{3}{8}$ in. ;	do $2\frac{1}{4}$ in.
Do do 18 in. ;	do $1\frac{1}{2}$ in. ;	do $2\frac{3}{4}$ in.
Do do 21 in. ;	do $1\frac{3}{8}$ in. ;	do $2\frac{3}{8}$ in.
Do do 24 in. ;	do $1\frac{3}{4}$ in. ;	do $2\frac{3}{4}$ in.

All parcels of pipes used in these works will be tested in the departmental testing machine, and submitted to the following crushing strains applied in the centre of the pipe:—

24 inches diameter pipe at 110 lb. per square inch of bearing surface.
18 " " 100 " " "
16 " " 100 " " "
12 " " 100 " " "
9 " " 100 " " "

If the Engineer deems it necessary, the pipes will also be tested for porosity. Should the pipes fracture under the foregoing strains, or not prove impervious to water, then the Engineer may reject the whole of parcel

parcel from which the pipes were taken. The whole of the expense incurred in testing the pipes shall be borne solely by the contractor, and all pipes injured or broken by the testing shall be immediately replaced by sound pipes, subject to the foregoing tests, at contractor's cost.

16. *Stone*.—All stone used in the construction of these works for pitchers, or masonry, unless where otherwise specified, to be sound, solid, hard sandstone of the best description, free from all defects, and as per sample approved.

17. Broken stone for ballast to be sound, solid stone, as specified in clause 18; to be broken to a size to pass freely with its largest dimensions through a ring of 4 inches in diameter. Broken stone for packing round sewer lining, above drains, &c., to be sound and solid, and obtained from rock excavation, broken to the same size as ballast.

18. Broken stone for bluestone concrete to be of basalt or other similar hard stone of approved quality; to be broken by hand or crushing machine, of a size to pass freely with its largest dimensions through a ring of 1½ inch in diameter; the whole of the metal to be free from dirt, quarry refuse, &c.; to be screened through a sieve of meshes ½ inch apart, and then to be washed with fresh water until approved, before it shall be deemed fit and suitable for these works.

19. Sand to be sharp quartz sand, of approved quality, free from all earthy, loamy, clayey matter, &c., and washed perfectly clean whenever the Engineer deems it necessary.

20. *Cement*.—The cement to be used throughout these works to be well packed in strongly-made casks, to be the best Portland cement, of approved brands and manufacture, delivered in thoroughly sound condition, fit for immediate use, and without requiring seasoning or air-slacking, to be free from any symptoms of staleness, caking, damage to the packing, hard or set lumps; and no barrel or portion of same to be used until it has been examined and approved by the Engineer. Samples taken from various casks (not exceeding six in number), and mixed together from each parcel brought on the works, to be submitted for testing:—The weight per struck bushel not to be less than 100 lb., and each cask shall contain not less than 387 lb. weight of cement, exclusive of weight of cask and packing. The specific gravity not to be less than 3.10. The cement, when passed through a wire sieve of 2,500 meshes per square inch, to leave a residue of not more than 10 per cent.; through a sieve of 5,806 meshes, not more than 25 per cent.; and through a sieve 14,400 meshes, not more than 40 per cent. The cement when mixed neat with water, to give a tensile strength of not less than 250 lb. per square inch after three days' setting in water, 450 lb. after seven days, and 550 lb. after twenty-eight days. The cement is to be "slow-setting," and when gauged with water to a stiff paste must set in a damp atmosphere of between 60° and 90° F., in from one and a half to six and a half hours. Neat cement of the consistency above mentioned to be made into pats kept in moist air until set, and then immersed in water at a temperature of between 60° and 80° F., and also placed in Faija's moist-heat and warm-bath apparatus at a temperature of 90° F., as to symptoms of blowing, or any alteration or variation of form or volume. The cement when mixed in the proportion of one of cement to three of standard sand (washed, dried, and sifted through a sieve of 400, and retained upon one of 900 meshes per square inch), and about 10.0 per cent. of the total weight of water, to give a tensile strength of not less than 150 lb. per square inch at seven days, and 230 lb. at twenty-eight days, the briquettes having been kept in a damp atmosphere, put in water twenty-four hours after they were made, and left in water at a temperature of between 60° and 80° F. The tensile strength will be ascertained in the departmental testing machine, with the load increasing at the rate of 20 lb. per minute, and the average breaking weight of six briquettes will be taken for each test. Should the sample fail in any or all of these tests, or not show a proper progressive increase in strength with age of briquette, then the Engineer may reject the whole parcel from which the sample was taken, and the contractor shall at once remove the said parcel of cement from the site of the works at his own expense; failing which, the Engineer may have it removed at the contractor's cost without further notice. Empty casks to be destroyed, as provided in clause 14 of the general conditions. To facilitate the gauging of cement throughout the contract, cement casks will be taken as equal to holding 4 cubic feet, otherwise the contractor to provide and make approved gauge-boxes, holding exactly 4 cubic feet, for measuring cement. Cement of a lighter weight than herein stipulated, but otherwise equal to the specified test, may be permitted to be used in the works, subject to the decision of the Engineer-in-Chief, and provided that the deficiency in weight is made up in quantity.

21. *Mortar*.—The mortar to be used in these works to be composed of one part of Portland cement and of two parts of clean washed sharp sand, as described in clauses 19 and 20, the proportion of each to be correctly ascertained by measurement, the whole to be mixed with fresh water, as may be directed, to be well incorporated, and to be used fresh. Any mortar which has become hard or set to be at once rejected. All mortar to be mixed up on approved sawn timber platforms close to where it is required.

22. Special mortar, composed of one part of cement and one part of sand, and prepared as before described, to be provided and used in all portions of the work where especially specified and directed.

23. *Grout*.—The grout to be made of mortar as described in clause 21, to be mixed fluid in tubs close to where it is required, and to be used fresh.

24. *Bluestone Concrete*.—The concrete to be used in these works to be composed of one part of Portland cement, two parts of sand, and four parts of bluestone metal.

25. Special concrete, if required, to be composed of two parts of Portland cement, three parts of sand, and seven parts of bluestone metal.

26. Sandstone concrete, where ordered to be used in these works, to be composed of one part of Portland cement, two parts of sand, and five parts of sandstone (as specified under clause 16) metal, free from dirt, quarry refuse, sieved (as specified in clause 18), washed, and of a size to pass with its largest dimensions through a ring of 2 inches in diameter. All materials to be mixed in the same manner as hereinafter specified for concrete.

27. All concrete to be prepared close to where it is required on sawn timber plank platform, all proportions to be correctly ascertained by measurement, the metal to be well washed when put on the platform and levelled at top, the sand to be placed in a level layer above the metal, and the cement to be placed upon the sand; after which all materials to be carefully mixed and turned twice over, and then the whole to be mixed with fresh clean water, and thoroughly turned over twice, and oftener if required, until, in the opinion of the Engineer, it shall be well incorporated and fit for the work before it leaves the platform; it shall then be at once conveyed to the works as shall be directed, and to be used fresh.

28. If the concrete is made by machinery, all materials to be prepared as previously described, then to be mixed dry, and afterwards with fresh clean water, as may be directed and as shall be approved of; to be used fresh.

29. Puddle to consist of the best clay to be obtained in the district within a radius of 5 miles ; to be carefully turned over and mixed with fresh clean water, as shall be directed, until the clay, in the opinion of the Engineer, has become of one even and uniform colour and plasticity.

30. Hardwood timber to be ironbark, blue or red gum, box, or other approved colonial hardwood, of the best description, sound, straight, free from sap, wanes, shakes, gum veins, cores, or other defects ; to have clean sharp arrises, and to be of the fullest dimensions shown or specified ; in round timber the diameter given is to be measured at the smallest end, exclusive of bark.

31. *Wrought-iron*.—All wrought-iron work to be of the best description, quality, and workmanship, with square arrises, and of the exact dimensions and forms shown on drawings. All wrought iron to be double H or BB Crown brand, and all ironwork, when finished, to be heated and then dipped in or coated with gas tar.

32. *Bluestone road-metal*.—The stone used for metalling to be basalt or other similar hard stone of approved quality ; to be broken to angular fragments of a size to pass freely with their largest dimensions through a ring  $2\frac{1}{2}$  inches in diameter, and to be free from dirt, quarry refuse, &c.

33. *Bluestone*.—All bluestone used in the construction of these works for pitchers or masonry to be of the best description of basaltic bluestone obtainable, free from honeycomb and all defects, and as per sample approved.

#### 6. General.

34. Earth-borings, have been taken along or close to the main line of sewer, the results of which are described on drawing No. 2 ; but no guarantee is given that the ground to be excavated will be free from subsoil water, or that the proportion of materials will correspond with that shown on longitudinal section.

35. *Diverting surface water and unwatering*.—The prices set forth in schedule accompanying tender for the works comprised in this contract to cover and include the cost of all materials and labour, and everything that is necessary for executing the works of every description required for the proper and effectual deviation of all surface and subsoil drainage from the sites of the works ; in constructing temporary coffer or other dams across the low-lying ground above and below the site of the works, in diverting said subsoil and surface water, from time to time, as the progress of the contract may require ; in providing and constructing adequate and secure fluming for conducting undisturbedly all freshets across the site of the works on or near lines of lowest ground ; in providing and finding all necessary pumping apparatus ; in keeping all trenches and excavations constantly unwatered, and in preventing any injury to the same by floods or any other cause.

36. *Shoring, Timbering, and Temporary Bridges*.—During the excavation for sewers, headings, branch sewers, and pipe-sewers, in tunnels, for shafts, junctions, gas-check chambers, curves, crossings over or underneath existing gas, water and sewer pipes, and oval or circular brick sewers, &c., the contractor to adopt every precaution and provide all materials, as planking, strutting, shoring, timbering, &c., and labour, and carefully execute and construct, at his own cost, wherever considered necessary by the Engineer, and to his entire satisfaction, temporary bridges, underneath lines of streets or footpaths, so as to ensure during the period of the contract, the undisturbed traffic along said streets, &c. ; and execute approved strong and secure shoring and strutting and underpinning where the sewer passes underneath buildings existing pipes and brick sewers, and in sandy or loose soil close timbering, or any other work that may be required to prevent any buildings over and adjacent to the line of sewer, and all other super-structures, road-surfaces, earth, rock, or other materials at top and sides of excavations from settling, cracking, being shaken, slipping, or falling in.

37. As the works proceed, all shoring, timbering, temporary bridges, &c., shall be withdrawn, except in cases where, in the opinion of the Engineer, the withdrawing of the same is impracticable, or would endanger the safety of the works and buildings, existing pipes, sewers, &c., streets, and other surfaces, over and adjacent to same, when the contractor must obtain an order, signed by the Engineer-in-Chief, to the effect that shoring, timbering, &c., may be covered up, with a statement of the quantities, which shall be measured before being covered up, and paid for at schedule rates.

38. The different materials met with in excavating main outfall sewer and branches, junctions, sub-ducts, &c., in tunnel, as hard sandstone or other rock, to be measured and paid for under items Nos. 1, 2, or 3 of the schedule as "Tunnel excavation in solid rock," subject to the conditions contained in clauses 52 and 53.

39. The different materials met with in excavating shafts and sumps, as road-metal, wood-paving, made ground, sand, shale, ironstone, clay, watercharged in places, pipeclay, soft sandstone (water-charged more or less), sound hard rock, &c., to be measured and paid for under items Nos. 4, 5, 6, or 7 of the schedule as "excavation in shafts and sumps," subject to the conditions contained in clauses 52 and 53.

40. *Removal of road-metal, pitching, and wood-paving, &c.*—Prior to commencing any excavation for shaft, junctions, branch sewer, &c., in open cutting (in accordance with the various stipulations and conditions contained in this specification, and in clauses 6 and 11 of the conditions of contract), the sites for each work to be prepared by the removal of all road-metal, ballast, pitching, wood-paving, concrete, asphalt, flagging, turfing, &c., where such occurs, as shall be directed. The materials so removed in the first instance to be laid and stacked aside, as the Engineer may direct, in different spoil-banks ; and as the works proceed, the said materials, if approved of, to be used in reinstating the metalled, pitched, and paved road or other surfaces, as the case may be, and those not approved of to be carted away to such places as shall be ordered, and to be paid for as lead.

41. All sods, road-metal, pitching, ballast, wood-paving, concrete, &c., removed under the conditions of the two foregoing clauses, and damaged, injured, or otherwise not approved of as fit for relaying, placing, setting, and fixing in the reformation and reinstatement of the various road and other surfaces, to be replaced by contractor with new, sound, and approved materials of their respective kinds, and therewith to reinstate and maintain, during continuance of contract, the various road and other surfaces, at his sole cost, as provided in clause 8, in a sound and satisfactory manner, in accordance with clause 11 of the general conditions of contract and to the entire satisfaction of the municipal authorities and of the Engineer-in-Chief.

If required by the Engineer the contractor shall, at the termination of the period of maintenance, procure certificates from the municipal authorities concerned, that the roads, &c., in their respective districts are in a satisfactory condition.

42. *All soft or loose soil, clay, soft and hard rock, and other materials* obtained from tunnels, subducts, sumps, shafts, &c., if approved of shall, in the first instance, be put aside in separate spoil-banks beyond the site of the works, subsequently to be used in refilling round and over pipes, and all concrete, masonry and brickwork, and into all excavations, as hereinafter specified, and as shall be directed at the time; and the surplus not so required shall be cleared away and removed by the contractor from the sites of all the works, and from the surfaces, streets, channels, and footpaths surrounding the same, and disposed of by the contractor, or carted to such places as shall be ordered, and paid for as lead.

The surplus material from shaft at O chains is to be conveyed to the Long Bay, and deposited and spread below high-water mark, as shall be directed, and paid for under Schedule Item No. 29.

43. *Areas at mouth of shafts.*—It is to be distinctly understood that when sinking shafts on lines of streets, and, when ordered, on private ground, &c., the materials excavated and raised, on their arrival at level of staging above mouth of shaft, are to be at once removed from off the streets or other surfaces, as the case may be; and when building material, &c., are to be conveyed through shafts to the tunnel works, that all such materials on arrival at mouth of shafts must be at once conveyed to the works underground, as permission cannot be given to contractor to disturb and impede the usual traffic in the streets, or the usual occupation of the ground by the owners, as the case may be, beyond the possession for the time of an area not exceeding 24 ft. x 17 ft., or less if ordered, over the mouth of each shaft, unless where otherwise determined and directed by the Engineer-in-Chief during the progress of the contract.

44. *Diversion of sewage of existing sewers during the construction of the works.*—During the construction of the works in general, and of all points of intersection of existing and new sewers, and until completion of all works connected therewith, the contractor to provide all materials and labour and everything that may be necessary; and execute all the works of every description required to prevent (and be solely responsible for) all damage and injury which may occur to private property or to the existing or new works by floods, flooding with sewage, choking and bursting of sewers in consequence of insufficient and inadequate pumping apparatus, tanks, dams, fluming, &c., or any other cause; and erect and construct suitable tanks, pumps, watertight temporary dams across existing sewers, above and below points of intersection, and watertight, adequate, and secure fluming, for the purpose of conveying constantly the whole of the sewage which may flow in said sewers at any time across said points of intersection, at his sole cost, to the entire satisfaction of the Engineer-in-Chief.

45. *Measurement of excavation, refilling, and spoil.*—The excavation throughout these works to be measured the net dimensions only of the various cross-sections shown on drawings, or determined at the time by the Engineer, and, where timbering has been ordered, the net dimensions only to the outside of said timbering. All refilling of above described excavations to be measured the net dimensions of same, less the actual net displacement of the permanent works. The whole of the surplus materials to be measured the actual net excavation less the actual net refilling as ascertained in accordance with the foregoing stipulations.

#### 7. *Main Outfall Sewer, North Shore, in Tunnels, through Rock, &c.*

46. The works comprised under the main outfall sewer, North Shore, in tunnels, through rock, &c., consist in the whole of the works of this contract as enumerated in clause 2, and as shown on drawings, and any details which the engineer may provide during the progress of the contract.

47. The internal dimensions of the main outfall sewer are—

From 0 chains to 50 chains	... ..	4 ft. x 3 ft.
„ 50 „	1 milc 25·20 chains	4 ft. x 2 ft. 8 in.

48. The excavation in tunnels, requiring shoring, timbering, and close timbering, the same is to be executed as specified in clause 36, and the unwatering is to be executed as specified in clauses 35, 44, and 60.

49. The cross-sections of sewer in tunnels to be as shown on drawings No. 7, to vary in the quantities and thicknesses of brick and concrete work according to the depths, nature, and solidity of the ground, and position under streets, &c., as shall be directed during the progress of the works.

50. The excavations for the works enumerated in clause 46, to be executed to the various depths, level, or inclined planes, gradients, steps, widths, batters, slopes, curves, longitudinal and cross-sections, &c., as shown on drawings, and any details which the Engineer may provide during the progress of the contract, and to such lesser or greater depths and widths as the Engineer-in-Chief shall direct and approve of from time to time during the progress of the works.

51. Wherever the solidity of the ground permits it, the excavation to be taken out with vertical or curved sides, as the case may be, the net dimensions only of the various cross-sections of the works, as shown on drawings and ordered.

52. *Precaution.*—In all cases at excavations of open trench, and shafts, where rock occurs, and blasting may facilitate such excavations, and in tunnels through rock, the contractor to use every precaution and carry on such operations with such limited charges of powder only, or other approved explosives, as will loosen the rock without shattering the same, and to employ all necessary means, as temporary bridges, staging, chains, rope-nets, fagots, or mats, &c., to prevent effectually and thoroughly all stones and fragments of same, or other materials from being shot or thrown out of said trench, tunnel, and shaft excavations, as he shall be held solely responsible for any accident, damage, and injury resulting from such blasting to any persons, works, or buildings, over the line of sewer or in the neighbourhood of same, &c., and as provided in clause 11 of the conditions of contract under the heading "Liability for Accidents, &c." Blasting will not in any case be allowed between the hours of 10 p.m. and 6 a.m., nor after 1 p.m. on Saturdays, except by the written authority of the Engineer; every hole drilled for blasting purposes will be measured by an inspector, and charged under his supervision, and the work shall be carried on under such further regulations, in conformity with paragraph 7 of clause 14 of the general conditions, as the Engineer may make and shall consider necessary as the contract proceeds.

53. As regards the charges of powder required on the various portions of this contract to loosen the rock without shattering the same, and in order to minimise as much as possible the risk of injuring or damaging buildings over or in the neighbourhood of the line of sewer; it is to be distinctly understood that only powder, or other explosives, of approved quality shall be used, and, when ordered in writing, by the Engineer, in charges of powder not exceeding 2 inches in length by 1½ inch in diameter, and not exceeding 4 inches in length by 1½ inch in diameter respectively. If other explosives are permitted to be used, the quantity and weight of such explosives relatively to powder to be carefully ascertained by the Engineer, and the respective charges made equivalent to those used in the case of powder. 51.

54. The schedule of quantities and prices provides for the excavation of this contract being executed as follows, viz. :—

“Tunnel excavation in solid rock,” subdivided under items—“Hard rock excavation, where gadding only is permitted.” “Hard rock excavation, where blasting is permitted with charges of powder not exceeding 2 inches in length and  $1\frac{1}{2}$  inch in diameter.” “Hard rock excavation, where blasting is permitted, with charges of powder not exceeding 4 inches in length, and  $1\frac{1}{2}$  inch in diameter.”

Excavation in shafts and sumps, subdivided under items—“Hard rock excavation, where gadding only is permitted.” “Hard rock excavation, where blasting is permitted, with charges of powder not exceeding 2 inches in length, and  $1\frac{1}{2}$  inch in diameter.” “Hard rock excavation, where blasting is permitted with charges of powder not exceeding 4 inches in length and  $1\frac{1}{2}$  inch in diameter,” and “excavation in road surfaces, sand, soil, pipe-clay, soft rock only.”

55. No guarantee is given as to the relative quantities of excavation which may be found under the abovenamed items of the schedule in the execution of the work, and they shall be paid for as they occur. The contractor shall not be entitled to claim any compensation for loss or damage in consequence of any alteration, change, increase, decrease, or omission, as the Engineer may order in writing, of any of the respective quantities under the abovenamed items beyond the actual respective rates per cubic yard named in the schedule of quantities and prices for such excavation “in solid rock,” with 2 in. or 4 in. charges of powder or no explosives respectively.

56. The excavations for sewer, branches, &c., as before described, may therefore vary from those shown on drawings, but the exact cross-sections will be determined by the Engineer as the works proceed.

57. A heading of 4 ft. x 3 ft., exclusive of timbering, to be driven for all lines of pipes. The timbering to be executed as specified in clause 36. In good bearing material, all pipes to be laid on solid ground, as hereinafter specified, after which the open trench or heading, as the case may be, to be filled in with approved earth, as specified in clause 60. In less solid soil, where ordered, the pipes are to be laid and jointed on a layer of concrete 9 inches thick, and then to be surrounded with a concrete relieving arch 9 inches thick, as shown on general cross-section, drawing No. 7.

58. The excavation for tunnels is assumed to be sandstone rock, varying in hardness and solidity, and less compact material. In strong compact rock,  $4\frac{1}{2}$  inches concrete and brick lining will be requisite, and, as the materials occur less compact, two or three rings of brickwork or brick and concrete lining, as shall be determined by the Engineer as the heading proceeds, may be required.

59. The excavations for the tunnels in rock, to be taken out to the exact form of the tunnel, leaving just room for the lining ordered. Great care to be taken in gadding or in blasting the rock, so that no portion of the sides, soffit, or invert of tunnel be removed beyond the exact dimensions determined on. In no case shall the excavation be taken out in advance of the brick and concrete lining in excess of internal dimensions of sewer, until the thickness of the lining of the succeeding length has been determined by the Engineer.

60. All water which, during the progress of the work, may accumulate in these excavations to be properly, effectually, and continually pumped out, and the whole to be kept dry until after the completion, setting, and hardening of all brick and concrete work; and the greatest care to be taken to prevent running water passing over any of the brick, concrete, and pipe-work until it has set perfectly hard; any concrete, mortar, and cement jointing exposed to wash of water must be taken up at once, and replaced by fresh concrete, mortar, and jointing at contractor's expense.

61. Great care to be taken while timbering that no portion of end faces, sides, floor, roof, or front faces of excavation in tunnel, or open trench, as the case may be, be removed, or fall in, beyond the exact dimensions determined on; and the contractor to provide and execute at his own cost whatever may be required to prevent such removal or falling in of the excavation, and the wet or dry material surrounding the timbering from being shaken, running, or forced through the joints of the poling-boards and open spaces between the wedges which keep the poling-boards in position; and to provide and have constantly in readiness, close to where they are required, all appliances and materials such as straw, bags, asphalted felt, tarred gasket, puddle, &c., and with the same carefully and securely close up and pack against the outside of the timbering, all such joints and open spaces wherever they occur; and caulk open joints if so directed; and attend to, execute, and maintain the said timbering till completion of the sewer works to the entire satisfaction of the Engineer-in-Chief.

62. In advancing the end faces of excavation in tunnel, particular precaution to be taken by the contractor that such advance is made in a careful, secure, and safe manner, by means of shoring, planking, poling-boards, props, and wedges, together with all packing and caulking materials.

63. In withdrawing timbering from shafts, the same shall be commenced from bottom of excavation, or as the Engineer may direct, from lowest practicable portion of same, and continued upwards; the contractor to exercise every precaution by means of intermediate shoring, planking, props, &c., and the filling in around and above sewer to be carried on simultaneously with the withdrawing of the timbering.

64. Throughout the excavation and timbering of tunnels and shafts, the contractor to take all due precaution against accidents, &c., during the progress of the works, whether arising from insufficient strength of timbering, bad workmanship, breakage of machinery, and plant, inefficient caulking or packing of open joints and spaces, flood, or any cause whatsoever, as he shall be held solely responsible for all damage, injury, or loss that may be occasioned during the progress of the works to the buildings, bridges, railways, tramways, streets, and other surfaces, above and adjacent to the excavations, to persons employed by the contractor, by Government, or otherwise, and to his own or other works; and the cost of all such damage, injury, and loss, shall be valued at the time by the Engineer-in-Chief (whose decision shall be held final and binding on the contractor), and shall be deducted from any money or security held by the Government, and due to the contractor on account of his contract.

65. If the contractor has exceeded the sectional area of excavation as ordered, in consequence of injudicious timbering, gadding, blasting, slips, falling in of sides of excavation, or any other cause, which in the opinion of the Engineer should have been prevented by careful gadding, blasting, timbering, pumping out water, diversion of water, or by any other means, then the contractor shall remove such extra excavation, and make good and fill in same with concrete described in clause 26, at his sole cost, the actual cubic contents only of the excavation and of the concrete work or brickwork shown on drawings, and ordered for each special length of sewer, shall be paid for.

66. If, under the written authority of the Engineer, any portion of the excavation in tunnel has been enlarged or widened out for timbering or other purposes named in such instructions, then the contractor shall fill in such excess of excavation with concrete or brickwork in the manner herein described, and the extra excavations, concrete, or brickwork so built in, shall be paid for at schedule rates.

67. In all cases where a greater thickness of lining, or a greater cross-section area of tunnel is ordered to be executed, from whatever cause, after the length of tunnel in question has been excavated to the profile ordered in the first instance, the excess of excavation so ordered shall be paid for at schedule rate. If such extra excavation, in the opinion of the Engineer, shall require special timbering and shoring, the same shall be dealt with in strict accordance with clause 36.

68. No concrete or brickwork shall be commenced until the portion of sewer excavation in tunnel to be operated upon has been cleaned and levelled, and until the Engineer has examined and approved of same.

69. *Filling.*—The materials obtained from all excavations to be dealt with as specified in clause 43. The most approved materials, as shall be directed, to be used in filling in the spaces between sides of concrete work of sewer, brick, and pipe-shafts, &c., in level layers, spread 6 inches thick, each layer to be rammed and watered, if directed, until approved of, before the succeeding layer is put on. This filling to be carried up to a height of not less than 5 feet above top of sewer; and the filling from this level round ventilating shafts up to surface of ground, to be carried up in level layers, spread 9 inches in thickness, each layer to be rammed and watered, when directed, until approved, before the succeeding layer is put on. The spaces between the excavation (poling-boards) and the brickwork or concrete of sewer in tunnels, to be filled in, unless where this is directed to be done with concrete, with hand-packed broken stone, as specified in clause 17, or other approved materials, in 6-inch layers, each layer to be well rammed until approved, before the next layer is put on. The filling and packing to be carried on simultaneously with, and as the construction of sewer, brick, and pipe-shaft, &c., proceeds, and as the Engineer may direct at the time. Only iron-shod rammers of not less than 10 lb. weight, of approved pattern, to be used, and one man to be employed in ramming to each man to be employed in filling.

70. *Maintenance of Streets.*—The contractor shall maintain the surface of the roads, streets, &c., where the streets, roads, &c., have been broken up or injured during the progress of the work, during the period of the contract time, and afterwards during the period of maintenance, and shall from time to time make good any sinkings in the surface, and shall provide any additional metal, ballast, or other material that may be necessary during these periods, in accordance with clauses 8 and 41.

71. *Shafts.*—Shafts are to be sunk at the various sites shown on longitudinal section and on general plan, drawings Nos. 1 and 2, or, in lieu of those shown on plan, at such other sites as the Engineer from time to time may determine. Wherever shafts are ordered, they are to be sunk truly plumb, and of the full dimensions, 24 ft. x 17 ft. sectional area (or of such other sizes as may be ordered at the time), clear of timbering; the latter to be provided and fixed wherever considered necessary by the Engineer, in strict accordance with clause 36. On completion of concrete, brickwork, &c., in shafts, the spaces between the rock, and earthsides and outer face of brickwork or concrete to be filled in in 9-inch layers, well rammed (and watered where directed) with materials provided for in clause 42, great care being taken in lowering the materials to the bottom of each respective layer, so that stones do not fall on top or against sides of pipe-shafts, brick or concrete lining, that stones are put in in alternate layers with the earth or clay, and that at least 12 inches of earth be placed nearest and round the brick or concrete lining of pipe-shafts, well rammed.

72. Shafts not required as manholes or ventilators, but ordered by the Engineer, to have, on completion of contract, or when directed, all timber withdrawn; and they are at the same time to be carefully filled in as specified in clause 69, with material provided for in clause 42, the first 5 feet over sewer with specially selected and approved materials. The sinking, filling in, &c., of such shafts to be paid for at schedule rates.

73. *Temporary Shafts.*—If the contractor desires, to suit his own convenience, to sink temporary shafts, they are to be sunk only at approved places, and on completion of work to be filled in, as specified in clause 72, to the satisfaction of the Engineer. The cost of sinking, timbering, unwatering, &c., and of filling in, withdrawing, or covering up timber of such shafts, to be defrayed entirely by the contractor.

All temporary shafts to be sunk of the dimensions specified, or directed, clear of timber.

74. All shafts, temporary, or permanent, to be provided and fitted during their construction and completion, or during the progress of the contract, if deemed necessary by the Engineer, with approved winding engines and steel-wire ropes capable of resisting a strain equal to six times that of the working maximum strain, with cages and such other winding arrangements, ladders, staging, &c., as shall be directed and approved of by the Engineer.

75. *Sumps.*—Sumps are to be sunk at the bottom of every shaft, 6 feet deep below invert of sub-ducts, and on completion of the works to be filled in with concrete, as specified in clause 26. Where shafts are ordered to be sunk, the cost of sinking sump-holes and filling same in with concrete to be paid for at schedule rates, and the removal of the excavated material to be paid for as lead.

Any other sumps which the contractor may think fit to sink on line of sewer trenches for his own convenience during the construction of these works, are to be filled in with concrete, as specified in clause 26, and the cost of sinking, timbering, unwatering, and filling in with concrete and removing the materials, &c., to be defrayed entirely by the contractor.

76. *Sub-ducts.*—Sub-ducts to be constructed, when decided on, along lines of tunnels, commencing on each length midway, or thereabouts, between the working shafts or faces, 33 inches below invert of sewer, branches, &c., or as shall be directed at the time, and having a fall towards each working shaft of such gradients as may be determined at the time, after the thickness of sewer-lining required for each length  
between

NOTE CLERICAL ERROR IN CLAUSE 71 :—For sectional area of shaft read "9 ft. x 6 ft." in lieu of "24 ft. x 17 ft." as printed.—F. W. B., 9/6/91.

between shafts or faces has been ascertained and ordered. Sub-ducts of 9 inches, or of a greater or less internal diameter, if directed, to be laid immediately underneath the timber floor of tunnel or open trench, or at sides of sewer, in hardwood boxes varying in size and dimensions as shown on drawing No. 7. Said boxes to be laid straight and true to levels decided upon, and the pipes to be laid therein, upon, and surrounded by sandstone chippings and quarry refuse. Dry stone packing to be put over pipes, as specified in clause 17.

77. In solid compact rock, the sub-duct to be excavated true to cross-section, drawing No. 7, of not less than 9 in. x 7 in. internal dimensions, to be covered with 12 in. x 6 in. x 2 in. paving tiles, laid dry on rock faces prepared and dressed for the purpose. The filling above tiles up to concrete lining of invert of sewer to be executed with dry stones, 4-inch gauge, hand-packed, carefully rammed, and as shall be directed.

78. In disintegrated rock the excavation for sub-duct to be executed as shown on cross-sections, drawing No. 7, and as shall be directed, and the sub-duct to consist of glazed stoneware spigot and faucet pipes of 9 inches internal diameter, more or less, as the case may be. The pipes to be jointed dry, and the filling above same up to underside of sewer, to be of dry stone, hand-packed, as above described. The Engineer may also, if he deems it necessary, order the pipes to be jointed altogether, or in part with tarred gasket,  $1\frac{1}{2}$  inch deep, and cement mortar,  $1\frac{3}{4}$  inch deep. The mortar to be prepared of one part cement to two parts of sand.

#### *Rock-boring Machines and Progress of Excavation.*

79. The excavation of the various tunnels to be commenced from not less than twenty-three different faces simultaneously within nine months, unless otherwise directed, after the date the contract has been signed, to be carried on and continued without interruption, by day and night shifts, unless otherwise directed, as specified in clause 51, and to be completed in the most careful and accurate manner. All rock in tunnels to be taken out as specified in clauses 52 and 53, and where blasting is permitted, by means of compressed air, percussive, or other rock-drill, and blowing machines with ventilating fans, &c., complete, of approved pattern and manufacture, capable of excavating at each working face not less than 12 feet length of tunnel during every working week, and of removing the foul air in one minute immediately after blasting at each working face. *If required, all charges to be fired by means of electric fuse.*

80. The excavation of shafts, where sunk in rock, to be executed in the same manner as specified for tunnels in clauses 52 and 53, and by means of the same appliances and machines as those specified to be used at the driving of the tunnels.

81. The whole of the tunnel excavation, with sub-ducts, shafts, sump-holes, &c., to be carried on as hereinbefore specified, in a manner that the total average progress made at all working faces during every day of twenty-four hours, shall not be less than 46 feet length of tunnel excavation complete.

82. *Existing Gas, Water, or Sewer Pipes, and Sewers.*—During the excavation and construction of these works, the contractor is to take every precaution to prevent damage or injury to existing gas, water, or sewer pipes, and sewers. Such pipes and sewers on being met with at sides, over, or crossing the excavations of these works, to be carefully and securely protected and supported, as the case may require, by chains, timbering, strutting, and underpinning, &c., to prevent said pipes or sewers from being shaken, bent, or broken, and the contractor to provide all materials, plant, and labour required for said timbering, strutting, and underpinning, &c., and maintain the same at his sole cost, until, in the opinion of the Engineer, the refilling of excavation and the general progress of the works render further precaution unnecessary. All damage to existing water, gas, or sewer pipes and sewers, to be repaired at once by contractor at his own cost, to the satisfaction of the Engineer.

#### *Sewer.*

83. As the cross-section area of each respective length of tunnel has been determined, excavated, cleaned, and approved, and after the cross-section and depth of trench for each respective length of sewer has been excavated, cleaned, and approved, the egg-shaped sewers, &c., of the internal dimensions specified in clause 46, to be built therein with such pipes and with such concrete and brick-lining, and backing, and walls round pipe-sewers, and of such thickness, as shown on the various drawings referring to each respective length of sewer, and as shall be determined by the Engineer whenever the excavation of sewer in tunnel has advanced sufficiently to enable him to do so.

84. In very wet ground and under buildings the lining of tunnel to be executed of an extra thickness, and in brickwork only with concrete backing where required right up to timbering or rock, as the case may be, as shall be directed.

85. In dry and compact rock excavation the concrete lining to be filled in solid between internal surfaces of sewer (less  $\frac{1}{8}$ -inch space required for cement rendering) and of tunnel.

86. Under all shafts, when ordered, relieving arches of brick or concrete to be built of a thickness, form, and width as shall be directed at the time of occurrence. Under temporary shafts excavated by contractor for his own convenience, the extra brick and concrete work to be at the contractor's cost.

87. The thickness and description of the lining, whether concrete only, of brick and concrete, or of brick only, required for the different portions of tunnels depends upon the nature of the ground through which they are driven, and shall be determined by the Engineer as the excavation of external cross-section of sewer for each respective length of tunnel advances.

88. Three gas-check chambers, two junction chambers, eleven shaft-chambers for ventilating shafts, one shaft-chamber for ventilating pipe-shafts, eleven ventilating shafts, one ventilating pipe-shaft, six inlet chambers at head of drop pipes, where ordered, spaced as shown on longitudinal section and general plan, and as shall be directed, to be built in connection with these lengths of sewer of concrete, brickwork, freestone, bluestone, stoneware pipes, &c., of the exact sizes, heights, shapes, forms, curves, and dimensions as shown on drawings. All brick shafts to be built, unless where otherwise directed, of 9-inch and 14-inch brickwork and bluestone concrete, with four vertical or battered corners, as the case may be, and curved sides between same, with freestone caps at tops, pierced and prepared for seat of cast-iron frames of ventilating grates, &c.

89. Junctions for branch pipe-sewers, as shown on drawings, to be constructed in concrete, where ordered, to enter the sewers at such level above the invert, with such radius and longitudinal fall as shown, or as shall be determined at the time. All inlet openings of branch and intercepting sewers, unless otherwise directed, to be securely closed for the time being with earthenware, cast-iron, or other covers, set in cement mortar all round, or as shall be directed, and left water-tight.

90. Cast-iron, flanged, circular, or otherwise straight, junction, bent, plain, and faucet and spigot pipes, or other castings, sluice gates, wrought-iron ladders, gratings, &c., gas-check frames, man-hole covers, saddles, stop-board grooves, &c., to be walled and built in, as shown on drawings, at points of intersection, branch junctions, gas-check or other chambers, pipe ventilating shafts, where ordered, &c.

91. Step-irons to be built into side walls of shafts, and anchor bolts for fixing wrought-iron ladders, gratings, and cast-iron frame for gas-check, to be built in as shall be directed. Trapped junction blocks to be built in where ordered and directed. Permanent putlog holes in shapes of reveals, for temporary staging, are to be left in walls of gas-check, shaft-chambers, and shafts where directed; and, in all cases, unless otherwise ordered, the reveals are to be built round of the same thickness of brick or concrete, as shown on walls of shafts or chambers at the places referred to. Putlog holes to be included in the schedule price for brickwork. Stop-board grooves to be formed in concrete, and cement faced, as shall be directed.

92. In the event of it being deemed necessary by the Engineer during the progress of the works (see clause 10 of the Special conditions) to omit, alter, or change any of the shafts, chambers, arches, pipe shafts, and other works connected therewith, and construct and carry out other works of different design and construction instead, or fewer, or additional shafts, chambers, arches, pipe shafts, &c., where ordered in any situation in connection with these works, then the contractor shall be bound to omit or carry out, as the case may be, and execute any such works with the materials and *workmanship* so required at the various schedule rates referring to such items of works, *and as shall be directed and specified hereinafter.*

#### *Concrete Works.*

93. The concrete to be used in foundations of sewer, and in arching and building round stoneware pipes, packing over brick arch in tunnels, where ordered, and in sumps, to be of sandstone concrete of the quality specified in clause 26. The concrete to be used for all other works in sewers, junctions, chambers, shafts, manholes, &c., unless where otherwise directed, to be bluestone concrete of the quality specified in clause 24.

94. The contractor to find, provide, and make at his own cost, all concrete boxes, centres, staging, shoring, planking, &c., of the exact forms, shapes, curves, &c., required, in a proper, secure, and substantial manner, due allowance being made for  $\frac{3}{4}$ -inch thick cement facing over all internal exposed surfaces of concrete work; and great care being taken that all centering and concrete boxes can easily be withdrawn, except where otherwise directed. The designs for centering, concrete boxes, &c., are to be approved by and to the entire satisfaction of the Engineer. After completion of any portion of the concrete or brickwork, the concrete boxes and the centering, as the case may be, shall not be removed until the Engineer or his Superintending Officer has given written permission to that effect.

95. The concrete, after it has been approved of, to be conveyed to the work as may be directed, and as shall be approved of, and tipped into same and upon the surface of each layer from a height not exceeding 18 inches. Commencing at each part of the work at lowest level of excavation, the concrete to be brought up in horizontal and even layers, and on lines of sewer, branch and pipe sewers, junctions, gas-check and shaft chambers, inspecting chambers, &c., unless where otherwise directed, in even layers parallel with specified longitudinal gradients of works; each layer, when spread, to be 9 inches thick throughout before ramming, and, after spreading, to be quickly and evenly rammed all over until approved of, and then allowed time to set before the succeeding layer is put on.

96. After the concrete has been carried up to the level of springing, all concrete arches to be commenced at both walls or abutments simultaneously, and carried on towards centre line in radiating parallel strips, spread 9 inches thick, of the whole width of arch, or in lengths as specified in clause 107, as shall be directed at the time, and rammed as before described, and, where the arch is thicker than 9 inches, the lower layer to be always completed throughout, 12 inches in advance of the upper succeeding layer, and then allowed time to set and harden before the succeeding layer is put on.

97. After completion of the brick closing-arch, all bluestone concrete work above springing of same, at sides of arch, in manhole chambers, gas-check chambers, shafts, &c., to be carried up in the same manner as specified in clause 95, and of exact dimensions, curves, and thicknesses, &c., as shown on drawings.

98. No portion of the concrete work described in the previous clauses (unless otherwise directed in writing) to be covered up with earth or brickwork until it has been examined and approved of by the Engineer. Any leakage that may appear in each layer to be carefully attended to and be made good and repaired at the time, as shall be approved, before each succeeding layer is put on.

99. All end faces of layers of concrete to be stepped back at each respective length of sewer or other work, as shall be directed, to be carefully washed clean with fresh water, and then to be grouted prior to each layer of the adjoining length being commenced and joined on to the same.

100. After the lower layer has set to the satisfaction of the Engineer, its top surface to be carefully washed until approved, and then to be grouted all over prior to each succeeding layer of concrete being put on.

101. In the event of any stoppage occurring to the work, from whatever cause, or in anticipation of rainfall, the contractor, before temporarily stopping work, shall finish it off at whatever level the work may be raised at the time, by thoroughly grouting the whole of the surface with cement grout.

102. In all cases where a layer at mid-day or at evening is left incomplete, the said layer shall not be continued after any stoppage until the surface of the lower and the end of the upper layer have been washed clean and then grouted with cement grout.

103. At the sites of all gas-check and sluice-gate frames, cast-iron manhole covers over stop-boards, branch junctions, and all circular or bent pipes, covers, &c., after the concrete has been built to the exact height and gradient (leaving sufficient space for jointing), the whole of the cast-iron work, after having been washed clean with fresh water, is to be truly laid and jointed or set perfectly plumb or otherwise, as the case may be, and as shall be directed, in the exact positions, lines, and gradients, on fillets of mortar; and

and as the concrete rises against and around the castings, leaving a space of not less than  $\frac{1}{2}$  inch all round between the concrete and the iron, this space round the invert, or underneath bottom of plates, as the case may be, to be filled in with special grout, or mortar, as shall be directed at the time, whilst above the springing line the outer surface of the castings to be grouted with special grout, and then to be covered with a coat of special mortar,  $\frac{1}{2}$  inch thick, before the concrete is built on to and around said pipes, castings and frames.

104. All anchor-bolts in connection with cast-iron frames to be placed in the exact positions required, to be washed clean, wetted, bedded upon, and surrounded with special mortar in each case before the concrete is built round same.

105. All stoneware pipes, where they are shown to be, or ordered to be, surrounded with concrete, to be clean washed with fresh water, to be truly laid and jointed in the exact lines and gradients on fillets of mortar, and to be grouted all round with special grout as the concrete is being built all round same.

106. On completion of concrete work, and after the boxes and centering have been removed, the outer faces shall present compact, solid, even, plain surfaces. All faulty portions, cavities, holes, or other defects shall be at once repaired by the contractor, at his own cost, with concrete or mortar, as the case may require, to the satisfaction of the Engineer. The centering shall not be removed until the Superintending Officer has given written authority to that effect.

107. The concrete and brickwork of sewer in tunnel to be commenced, in accordance with clause 79, in the different lengths of tunnels, and to be carried on in each from each end simultaneously, in not less than three continuous lengths of 16 ft. 6 in. each—that is to say, when the arching of the first 16 ft. 6 in. commences the next 16 ft. 6 in. length must be in progress from height of invert up to the springing of arch, the third 16 ft. 6 in. length must be in progress between floor of tunnel and level of invert of sewer, and in the fourth 16 ft. 6 in. length the excavation and timbering of tunnel must at this time be completed and ready to receive concrete foundation of sewer.

108. When a length of arch is completed the same must be protected from the influences of the weather and sun by bags, or other approved means, and kept constantly moist until it has been examined and ordered to be covered up.

109. The whole of the concrete work of branch, pipe-sewers, including all ventilating shafts, chambers, gas-check chambers, junctions, &c., to be completed in strict accordance with specification and drawings, and of the exact shapes, forms, and dimensions shown thereon, and as shall be directed.

#### *Brickwork.*

110. The brickwork required in lining tunnels, branch sewers, sewers in open trenches, and shafts, to consist of the materials and mortar described under clauses 13, 19, 20, and 21. All circular work and arches of shafts, or elsewhere, to be built of radiating bricks, unless otherwise directed. All bricks to be thoroughly soaked in clean fresh water for not less than five minutes, immediately before being used. All work to be built with whole bricks, and all walls in English bond, with  $\frac{1}{4}$ -inch joints, in alternate courses of headers and stretchers, each brick to break joint with the one above and underneath, and to be set full and rubbed in cement mortar. Every course to be carefully and thoroughly grouted, and well wetted before the succeeding course is put on. All work, wherever directed, to be finished on all outside and inside faces with a neatly struck joint. The brickwork of tunnel lining, branch sewers, sewers in open trenches, &c., to be of the thickness, dimensions, curves, and gradient shown on longitudinal and cross-sections, and as shall be determined and directed from time to time by the Engineer as each different portion of tunnel or open trench excavation becomes ready for concrete or brick lining. Wherever brick lining for sewer is ordered, it shall be built in radiating courses in  $4\frac{1}{2}$ -in. rings, each brick to be set full, and rubbed in cement mortar, with joints not exceeding  $\frac{1}{4}$  inch in thickness, in approved bond, the bricks of each course to break joint over the centre of those of the adjoining course. Where the brickwork consists of two or more rings, said rings to be built simultaneously, the lower ring to be always completed throughout  $4\frac{1}{2}$  inches in advance of the upper succeeding layer of each ring of brickwork, to be carefully and thoroughly wetted and grouted, and then covered with a coat of cement mortar, collar-joint  $\frac{1}{2}$  inch thick, to ensure the thorough bonding of the joints and the different rings of brickwork. At completing any length of brick lining, the courses at end of same to be stepped back as shall be directed, and the end face of each ring or course to be well wetted and then grouted prior to each ring of the succeeding length being commenced.

111. The brickwork of sewer in tunnels to be carried on in conformity with clause 107, and in such a manner that when the arching-in of one length of 16 ft. 6 in. commences the lining of invert of the next 16 ft. 6 in. length must commence at the same time, and as the arching-in of one length is completed the adjoining length must be completed up to springing of arch.

112. Wherever concrete is to be built on to and against brickwork, or brickwork on to and against concrete, the latter in each case to be well wetted and grouted, and then to be covered with a coat of cement mortar, collar joint  $\frac{1}{2}$  inch thick, before the concrete or brickwork is built against it.

113. Prior to commencing any concrete or brickwork which has to be built on to and against rock faces, all shaken and loose rock to be removed, all rock surfaces to be well cleaned, washed, and wetted, and all beds, open joints, and spaces between concrete or brickwork and rock faces to be carefully filled in with cement mortar, and flushed and grouted every course as the brickwork proceeds; and the cost of thus preparing rock faces, washing, grouting, flushing, &c., to be included in, and covered by, the Schedule price per cube yard for the concrete and brickwork herein referred to.

114. *Cement Coating.*—The whole of the internal and external surfaces of sewers, man-holes, chambers, &c., where such is shown on plans, and where directed, to be protected by a cement coating, to be put on in two thicknesses, consisting of mortar of one part of cement to two parts of clean sharp sand. The coating throughout, when finished, to be  $\frac{5}{8}$  inch in thickness.

115. *Pymont Sandstone.*—Pymont sandstone ashlar of the quality specified in clause 16 to be provided for top courses of all ventilating shafts, or where ordered in any situation in the construction of these works, to be worked, pierced, dressed, picked to the exact sizes, dimensions, forms, and shapes as shown on drawings or as may be directed, to be set full upon and in cement mortar, and to be finished, when directed, with a neatly cut and struck joint.

*Bluestone*

116. *Bluestone Ashlar*.—Bluestone ashlar, of the quality specified in clause 33, to be provided in blocks or otherwise, when ordered, in any situation in the construction of these works, to be worked, pierced, grooved, picked, axed, and dressed to the exact sizes, dimensions, forms, and shapes, as shall be shown on detail drawings, or as may be directed; to be washed clean and well wetted before setting, and to be set in the exact positions required, truly level, full upon and in cement mortar, and as may be directed at the time, after which all joints between stones, and between stones and concrete, to be filled in with grout. All joints to be  $\frac{3}{4}$  inch wide, to be carefully raked out  $\frac{3}{4}$  inch deep, and filled in solid with special mortar, neatly pointed, finished flush with exposed faces of stones.

117. *Bluestone Pitching*.—Contractor to provide and find, where ordered, squared bluestone pitchers 9 inches deep throughout, no stone to be less than 9 in. x 9 in. x 9 in., but to be larger and longer, curved and radiating, as shall be directed, to be worked, fitted, and set in sand, one ring round all man-hole covers, with  $\frac{1}{2}$ -inch joints between pitchers and cast-iron frames, as ordered.

#### *Pipe-sewers.*

118. After the foundation layer of concrete has been filled in or the ground excavated, as the case may be, to the exact depths, levels, and gradients (leaving sufficient room for jointing), glazed stoneware pipes of the quality specified in clause 15, and of the required diameter, to be laid thereon, along such lines, curves, and inclinations, as shown on general plan and longitudinal section, as may be ordered at the time, true, straight, and solid (for all vertical branch pipe-sewers and ventilating pipe-shafts, the pipes to be set true, straight, and plumb), and to be jointed, viz. :—

119. The 6-inch pipes with tarred gasket  $\frac{1}{2}$  inch deep after setting, and special cement mortar  $1\frac{1}{4}$  inch deep within socket of pipe; the 9-inch pipes with tarred gasket  $\frac{1}{2}$  inch deep after setting, and special cement mortar  $1\frac{3}{8}$  inch deep within socket of pipe; the 10-inch pipes with tarred gasket  $\frac{1}{2}$  in. deep after setting, and special cement mortar  $1\frac{3}{8}$  inch deep within socket of pipe; the 12-inch pipes with tarred gasket  $\frac{5}{8}$  inch deep after setting, and special cement mortar  $1\frac{3}{8}$  inch deep within socket of pipe; the 15-inch pipes with tarred gasket  $\frac{5}{8}$  inch deep after setting, and special cement mortar  $1\frac{3}{8}$  inch deep within socket of pipe; the 16-inch pipes with tarred gasket  $\frac{3}{4}$  inch deep after setting, and special cement mortar  $1\frac{3}{8}$  inch deep within socket of pipe; the 18-inch pipes with tarred gasket  $\frac{3}{4}$  inch deep after setting, and special cement mortar  $1\frac{7}{8}$  inch deep within socket of pipe; the 24-inch pipes with tarred gasket  $\frac{3}{4}$  inch deep after setting, and special cement mortar 2 inches deep within socket of pipe.

120. After the tarred gasket has been placed in position and set tight round the pipe, and after the joint above has been cleaned and wetted, stiff cement mortar to be packed in solid, splayed off outside and finished with a carefully struck and cut joint, after which the inner joints between two pipes to be likewise carefully filled with cement mortar all round, neatly wiped off as a finish. Each pipe length when thus finished to be carefully cleaned out before another pipe length is added.

121. All spigot and faucet vertical cast-iron 9-inch and 12-inch diameter ventilating and sewer-pipes to be jointed with well caulked  $\frac{3}{4}$ -inch-diameter New Zealand flax spun-yarn and soft pig lead. The spun-yarn to be tightly laid round spigot-end, so as to fill the socket of 9-inch pipe to a depth of 3 inches, and the 12-inch pipe, to a depth of  $3\frac{1}{2}$  inches, after setting up, leaving for the lead joint a depth of  $1\frac{1}{2}$  inch all round for the 9-inch pipe, and a depth of  $1\frac{7}{8}$  inch all round for the 12-inch pipe; the lead joint to be made with one running, and when cold to be set up with proper setting irons to one smooth even plain surface all round the pipe and  $\frac{1}{8}$  inch within socket of same.

#### *8. Power to get Bricks elsewhere, or substitute Concrete.*

122. Should the contractor, at the commencement or during the progress of the contract, at any time fail to provide the specified bricks in any or in such quantities as in the opinion of the Engineer shall be deemed necessary to ensure the progress of the works as stipulated in clauses Nos. 107, 111, and 128, then in all such cases the Engineer shall have the power to supply the same from any other sources, and all additional costs and charges thereby occasioned over and above the contract prices for brickwork shall be incurred solely by the contractor, who shall only be paid for the net quantity of brickwork actually ordered at schedule rates, less the cost of the bricks so delivered on the works by the Engineer; and the contractor shall have no claim for loss, damage, or compensation on account of the exercise of such power by the Engineer.

123. In the event of the specified bricks not being provided by the contractor, and not being procurable by the Engineer from other sources, at any time they are required in the construction of the works, then in all such cases the Engineer shall have the power, whenever he may deem it practicable and suitable to do so, to substitute concrete instead, as described in clauses Nos. 24 and 26, excepting in the case of the  $4\frac{1}{2}$ -inch brick-lining to intrados of sewer, wherever such are shown on the drawings, which must be adhered to; and the contractor shall have no claim for loss, damage, or compensation, on account of the exercise of such power by the Engineer; and he shall be only paid for the net quantity of concrete so ordered in any situation of the work at schedule rates.

#### *9. Order of Works.*

124. The contractor shall, immediately after he gets possession of the ground or any part thereof respectively, commence the various works comprising this contract and proceed to execute the same.

125. Contractor shall provide at his own cost and charges (except where otherwise specified) all materials, labour, tools, plant, tackle, cordage, machinery, scaffolding, staging, planking, timbering, centering, concrete boxes, and everything necessary for the proper construction, erection, execution, and completion of the several works comprising this contract, all of which are to be approved before being used.

126. No excavation to be commenced on any portion of the contract, particularly in tunnels through earth, clay, &c., underneath buildings, streets, &c., until, in the opinion of the Engineer, sufficient quantities of timbering, shoring, staging, scaffolding, cement, bricks, sand, or other materials are ready for immediate use, together with the necessary appliances and plant to ensure the speedy and uninterrupted progress

and

and continuance of the works after they once have been commenced at any locality, without any delay or stoppage. Delays and stoppages in the progress of the works, arising from disputes as to the quality of materials and insufficient supply of any materials, plant, &c., and any danger or injury caused to buildings, to the works of this contract, and adjoining or adjacent works and buildings, or streets, tramways, lands, fences, &c., in consequence of such stoppage and delay, and be entirely and solely at the risk and cost of contractor.

127. Working faces—The working faces available for excavating and constructing the main outfall sewer, North Shore, &c., unless otherwise directed during the progress of the contract, are as follows, viz.:—One working face from shaft at 0 chains, two working faces from shaft at 16.05 chains; two working faces from shaft at 27.5 chains; two working faces from shaft at 38.83 chains; two working faces from shaft at 49.88 chains; two working faces from shaft at 61.22 chains; two working faces from shaft at 72.12 chains; two working faces from shaft at 1 m. 2.63 chains; two working faces from shaft at 1 m. 8.5 chains; two working faces from shaft at 1 m. 13.9 chains; two working faces from shaft at 1 m. 19.5 chains; two working faces from shaft at 1 m. 25.2 chains. The shaft at 0 chains will not be available for constructing sewer, only for excavation.

#### X.—General Progress of Works.

128. The whole of the works as excavating, tunnelling, unwatering, timbering, with all sub-ducts, sumps, shafts, pipes, chambers, temporary headings, filling, concrete, brickwork, masonry, pitching, road-making, fencing, temporary bridges, carting surplus materials to spoil, &c., required in constructing of the main outfall sewer, North Shore, intercepting branches, and all other works connected therewith, shall be executed as hereinbefore specified, and carried on in a manner as viz.:—

That after the working faces are opened up, the average total progress made during one working week with the sewer in tunnel at all working faces, shall not be less than 276 ft. in length of the main outfall sewer, North Shore, complete, as above described.

#### XI.—Power to make use of parts of Work.

129. The Engineer-in-Chief shall have the power, at his discretion, without vacating this contract to enter upon, by himself or his agents, and make use of any part or parts of the work comprised under this contract, and his doing so shall in no wise be held as a waiver of the responsibility of the contractor in respect to his contract, except in so far as any injury may accrue to such work so entered upon by reason of any proved carelessness of any employé of the Government, in which event the contractor shall be free from liability on account thereof, but not otherwise.

#### XII.—Maintenance.

130. The contractor will be bound to maintain the works for a period of three months after their final completion and use by the Government; and if any part should within that period show signs of weakness or of giving way, or should any defective workmanship or materials be detected, the contractor, when called upon to do so, shall make good same at his own cost, to the satisfaction of the Engineer-in-Chief, before the reserve balance will be paid. It is to be distinctly understood that the Government shall have the full, free, and unrestricted use of the said works, without any interference whatever on the part of the contractor, during the currency of this period of maintenance; and such use of the said works on the part of the Government shall not be held as relieving the contractor of any liabilities or obligations whatever in respect of his contract.

#### XIII.—Government Property.

131. All iron and other metal work in gas-checks, anchor-bolts, ladders, gratings, landings, platforms, staples, manhole covers, ventilating grates, lamphole boxes, sluice-gate, oval and circular, straight and bent pipes, branches, junctions, step-irons, and all earthenware covers for branch sewer junctions, trapped junction blocks, &c., to be supplied by the Government as the works proceed and when required, and to be delivered to the contractor free of charges within the resumed land, or, if approved of, at the site set apart as the contractor's yard or store.

132. For each article so delivered the contractor shall give a written receipt, after which he shall be held solely responsible for same, and shall refund to the Government, out of any moneys that may be or may become due to him on account of this contract, the cost of anything (as ascertained and valued by the Engineer) that may be lost, stolen, damaged, or destroyed of said articles during the term of this contract and the period of maintenance.

133. All Government property which, at the completion of the contract, by direction of the Engineer, has not been built or permanently fixed in the works, shall be conveyed by the contractor, as may be directed, to the site of the Field Office, and there to be dealt with in accordance with clause 15 of the general conditions.

#### XIV.—Notice for Inspection.

134. The contractor shall give notice to the Engineer of the commencement or completion of the undermentioned work, and formally submit it for inspection before proceeding to place, execute, or cover it up, viz.:—

- Excavation of trenches, shafts, and tunnels in rock or earth.
- Excavation for foundations.
- Withdrawing of timber in tunnel, shafts, &c.
- Laying of foundation.
- Laying of pipes or sub-ducts.
- Placing centering in position.
- Keying of arches.
- Striking of centres.
- Shifting of concrete boxes.
- Filling in round branch and pipe-sewers into man-holes, sumps, &c.

*XV.—Conditions of Contract.*

135. The special and general conditions attached to this specification shall be held binding on all matters relating to this contract as far as the Engineer-in-Chief may deem the same applicable.

This is the specification marked "A" referred to in our annexed agreement with Her Majesty the Queen, dated the 10th day of March, A.D., 1892.

Witness—V. C. LUMSDAINE.

JOHN CARTER.  
D. G. SNODGRASS.

## "B."

## GENERAL CONDITIONS.

1. *Interpretation of Terms.*

Whenever the terms, hereafter explained in the present clause, occur in the conditions of contract and in the specification, they shall be held to mean, and shall mean as follows:—

- "Minister" shall mean the Secretary of Works of the Colony of New South Wales for the time being or any other person legally acting for him.
- "Engineer" shall mean the Engineer-in-Chief duly appointed by the Minister to have principal charge of the works.
- "Assistant Engineer" shall mean the person duly appointed by the Engineer-in-Chief to act in his behalf.
- "Superintending Officer" shall mean any person, who may from time to time be notified to the contractor by the Engineer-in-Chief as being entrusted with the local superintendence of the works.
- "Overseer" shall mean any person, who may from time to time be appointed by the Engineer-in-Chief, to supervise the works or any part thereof under the immediate direction of the Superintending Officer.
- "Contractor" shall mean "Contractors," when two or more persons have tendered or contracted jointly for the work.
- "Special Conditions" shall mean the "Special Conditions," hereto attached and forming part of the contract; such Special Conditions shall be deemed to be, and shall be, incorporated with the General Conditions.
- "Schedule Price" shall mean the rate, at which the contractor has offered and agreed to execute the kind of work under consideration.
- "Contract Sum" shall mean the sum total, resulting from the finally certified quantities, ascertained in the manner provided in clause 16, and calculated at the schedule rates or arranged prices.
- "Drawings" shall mean and include any plan, section, general or detail drawing, sketch, or illustration referring to the works and explanatory of, or supplementary to, the specification.
- "Extra Work" shall mean any kind or description of work, not comprised in the "Schedule of Prices," and other than those, the distinct mention of which may have been inadvertently omitted in the specifications or drawings and for which provision is made in clause 3 of these conditions.
- "Labour."—All cartage and haulage and work done or to be performed by machinery shall be included in the term "Labour."
- "Plant" shall mean and include all tools, utensils, stores, sheds, timber, scaffold, centres, moulds, templates, coffer dams, cordage, chains, tackle, boats, punts, rafts, sleepers, rails, waggons, trucks, trollies, engines, water and air pumps, boring and ventilating apparatus, signals, lights, diving bells and dresses, and every other thing necessary for the security, proper execution, completion, and specified maintenance of the several works.

2. *Extent of Contract.*

Supply of labour,  
materials, and  
plant.

The contractor shall, except in so far as the specification may expressly state to the contrary, provide at his own cost and expense all labour, material, and plant, and everything else necessary for the proper and complete performance of the contract.

Execution  
works.

All works described in, or implied, by the specification, or shown in any of the drawings, or set forth in any lists or tables thereon or attached thereto as well as those expressly herein provided for under clauses 3 and 4, are to be made and executed in every detail conformably to the several drawings, already prepared, or that may be prepared hereafter for the purpose of this contract, in strict accordance with the provisions of the specification and conditions, both general and special, and to the entire satisfaction of the Engineer.

Should any work be not so executed, it shall be at the sole risk of the contractor, and shall be immediately altered and amended at the contractor's cost and expense.

Setting out.

The contractor shall, at his own expense, set out accurately and to the satisfaction of the Superintending Officer, all the works comprised in this contract, in strict accordance with the drawings and specifications, and shall be solely responsible for their being so set out and executed, and that notwithstanding the Superintending Officer or Overseer may have assisted the contractor in setting out the same.

Contractor

Contractor shall also at his own cost and expense at any time—by day or by night, either on working days or on Sundays or holidays—render all such assistance, and supply all such labour, plant, and lighting, as the Engineer or Superintending Officer may require to check such setting out, or to inspect any portion of the works, which must for that purpose be left clear and free from any obstruction or impediment. During and for the performance of those operations contractor shall be obliged to suspend any or all of his work, if required to do so by the Superintending Officer, and without having any claim for loss or damage on account of such temporary suspension.

All bench marks, pegs and signals on the surface, and all alignments and level marks underground, put in by the Engineer or Superintending Officer for the purpose of checking the contractor's work, will be pointed out to the contractor and confided to his care. He shall, at his own expense, take all proper and reasonable precaution and care to preserve and maintain them in their true positions; in the event, however, of their being disturbed or obliterated by accident or from any other cause whatever, they shall be replaced by the Engineer or Superintending Officer at the contractor's expense, and the cost thereof deducted from any moneys, then or thereafter due to the contractor.

Protecting and maintaining signals and marks.

If two different contractors execute simultaneously two adjoining sections of the works, they shall be held jointly and severally responsible for effecting a proper junction of the sections.

Junction of different Contracts. Maintenance.

During the whole time of construction and during the "period of maintenance," referred to in clauses 10 and 18 hereof and more particularly described in clause 3 of the special conditions, contractor shall keep and maintain in good and sufficient repair all the works, executed or in course of execution, and make good all injury or loss, which may happen or occur to them, or to any materials, or plant, or anything else in connection with the works under this contract.

### 3. Specification and Drawings.

The specification and the drawings (if any), referred to in the specification, shall be taken to explain each other; and anything contained in the specification or in any of the drawings shall be equally binding on contractor, as if it were contained in all.

Specification and Drawings to explain each other.

Any dimensions, written or figured on the drawings, shall usually be taken in preference to measurements by scale; but in cases of doubt in this respect, or in case of any discrepancy between the drawings, specifications, and conditions, or any ambiguity or defective description in them, such doubt, discrepancy, ambiguity or defective description shall not invalidate the contract, but shall be rectified by the Engineer if he deem it requisite, and the contractor shall have no claim for compensation for damages on account of such discrepancy, ambiguity, or defective description.

Written dimensions to be preferred to scaling.

If neither specification nor drawings contain any mention of minor parts of works, which are reasonably and obviously necessary for the satisfactory completion of the works, such parts are to be provided, made, and executed by the contractor, without any extra charge, as if they were specially mentioned, and shall be deemed to be, and hereby are, included in the several schedule prices.

Omission of minor parts.

It is hereby expressly understood, that the contractor is bound to completely and thoroughly inform himself of every circumstance connected with, or relating to, the work, and of the correctness or otherwise of any information contained in, or supplied by, the drawings or specification, as he shall have no claim on account of any errors, omissions, or inaccuracies, that may be found in those documents after the contract shall have been signed, and since he has to provide in his tender for every contingency that may arise.

Errors of information at Contractor's risk.

A copy of the conditions, specifications, and drawings will be furnished to contractor free of charge, but he must himself compare the same with the original, as no claim will be allowed for any errors therein.

Supply of Drawings and Specifications.

All copies of drawings, &c., supplied to contractor are to be returned to the Engineer on completion of contract.

### 4. Increase or Decrease of Works.

The contractor is to execute in like manner and with the same quality of materials, as provided for the works, expressly mentioned in specification and drawings, any extensions, additions, deviations, alterations, or extra works, which the Engineer may require by an order in writing.

Quality.

The work, executed under this clause, will be measured up and paid for at schedule rates in the same manner as provided for the other works under this contract; and if it comprise any work not specified in contract and in schedule of prices, a special agreement shall be made between the Engineer and the contractor, and signed at the time of giving the order for such work.

Quantity. Prices of extra works.

In case the abovenamed parties shall be unable to agree on the value of such extra work, the Engineer shall be at liberty and fully authorised to have it executed by whomsoever he may think fit.

If value cannot be agreed upon.

No extra work, extensions, or any additions, deviations, or alterations whatever, which may be claimed by contractor, will be recognised or admitted under any circumstances, if done or executed without, or contrary to, an order in writing from the Engineer as aforesaid, and the production of such order shall be a condition precedent to contractor receiving payment for them.

The Minister, or the Engineer, acting on his behalf, may from time to time by writing under his hand require the omission of any particular portion or part of the works, described in the specification or shown on drawings; and the contractor shall have no claim for loss of profit, sustained damage, or other compensation on account of any such omission.

Omission of portion of the work.

### 5. Possession of Lands.

The Minister shall, within one month from the date of the signing of the contract by the contractor, put the latter in possession of such parts of the land, required for the execution of the permanent works or access to same, as in the opinion of the Engineer may be necessary for their commencement. And the Minister shall also from time to time put contractor in possession of such other parts of the land, as may, in the opinion of the Engineer, be necessary for the vigorous prosecution and timely completion of all the works.

Lands to be provided by the Minister.

The contractor must, however, procure for himself all other land, which he may deem requisite for any temporary purposes or for his own convenience; but the Minister will, at the expense of the contractor and only to the extent of any legal powers possessed by the Governor or Minister, assist the contractor in procuring such land or in procuring materials, suitable for the construction of the works, from any adjoining lands.

Land to be provided by Contractor.

Should

**Delay in getting possession.** Should any delay take place in giving to the contractor possession of any land required for the construction of the works aforesaid, such delay shall not be deemed a breach of contract, or give contractor any claim for compensation, but the contractor shall be entitled to a commensurate extension of time for the completion of the whole works.

**Possession not exclusive.** Nothing herein contained shall at any time prevent the Minister or any person duly authorised by him from entering upon and making use of such lands or any portion thereof for any purpose whatever.

#### 6. *Trespass.*

**Private lands.** The contractor shall not enter upon any lands outside the limits of the lands, defined by, and held in possession by him under clause 5 hereof for the construction of the works or for any purpose whatever in connection with this contract, without the distinct consent in writing of the occupier and owner of such lands, and shall not, without the permission in writing of the Engineer or Superintending Officer, remove any trees or structures within the limits of the lands defined in said clause 5 hereof.

**Cutting of trees.** Nor shall he open or throw down any part of a fence without making sufficient provision by temporary fences, gates, or other necessary accommodation, to be erected and maintained at contractor's cost, for preventing persons or animals from trespassing or straying from, or into, any enclosure, affected thereby.

**Roads.** Nor shall he interfere with any private or public road without making proper temporary provision for the convenience of owners or users thereof.

**Damage caused.** Any costs or damage incurred by the Government through any legal process on account of any trespass caused by the act or negligence of the contractor or his workmen, shall be considered as payment made to the contractor under this contract, and shall be deducted accordingly at the time of final payment to him.

**If not fenced by contractor, Engineer to have power to do so.** Should the contractor refuse or neglect to erect and maintain, either or both, any such temporary fences or other necessary accommodation, it shall be lawful for, but not obligatory on, the Engineer, after having given to the contractor twenty-four hours' notice in writing of his intention to do so, summarily, and without further process, to cause any such temporary hoarding, fences, gates, bridges, or other accommodation to be erected and maintained, which he may deem necessary for the proper protection either of such lands or of the adjoining lands, or for the safety of the property of the owners and occupiers thereof or of the general public, and the cost of so doing shall be deducted as provided hereinabove.

#### 7. *Sub-letting, Assigning.*

**No sub-letting or assigning.** The contractor shall not sub-let any portion of the works, nor enter into any sub-contract for the execution thereof or any portion thereof, nor shall he assign all or any of the moneys payable or to become payable under the contract, or all or any part of any other benefit whatsoever arising to him or which may arise under the contract, without the consent in writing of the Minister; and no assignment without such consent shall have any effect or be in any way recognised.

#### 8. *Progress of Works.*

**Work to be carried out under the direction of the Engineer.** It shall be lawful for, but not obligatory on, the Engineer or Superintending Officer to direct in writing the contractor to carry out the works in such order and in such manner as he shall deem fit; and

**Non-compliance.** If the contractor shall fail to make such progress with the works as the Engineer or the Superintending Officer shall deem sufficient to insure their completion within the specified time; or  
 If he refuse or fail in the opinion of the Engineer or Superintending Officer to use due diligence in carrying out any particular part of the work, which the Engineer or Superintending Officer shall have directed him in writing to carry out forthwith; or  
 If he shall use or employ bad or insufficient material, or shall execute any work in an imperfect manner or not to the satisfaction of the Engineer or Superintending Officer; or  
 If he shall fail or neglect to take down or remove such work, or to rectify any such work for seven days after being required to do so in writing by the Engineer or Superintending Officer; or  
 If he shall fail to employ what in the opinion of the Engineer or Superintending Officer is a sufficient number of men on the works; or  
 If he shall suspend work without the Engineer's order or sanction in writing; or  
 If the contractor shall in the judgment of the Engineer commit a wilful breach of the contract;

Then, and in any of such cases, it shall be lawful for the Minister to do at his option any of the following things, that is to say:—

**(a) employing additional men.** (a) The Minister or the Engineer may, on giving written notice to the contractor of his intention so to do, forthwith cause additional men to be employed and additional materials and plant to be purchased, and the cost of so doing may be deducted from any moneys, then due, or which may thereafter become due to the contractor.

**(b) absolute determination of contract.** (b) Or the Minister may, by notification in writing under his hand, delivered to the contractor, absolutely determine this contract without further process; and from and after the delivery of such notice as aforesaid, the contract shall be absolutely determined, and on such determination the money, which shall have been previously paid to the contractor under the contract, shall be deemed to be the full value of the work executed, and shall be taken and accepted by the contractor in full payment and satisfaction of all claims and demands under the contract; and the balances retained, including amount deposited as security, together with all materials and plant, then being in or near or upon the works for the purpose of being used or employed in or about the same, shall remain the absolute property of Her Majesty, and may be disposed of as the Minister may think fit.

#### 9. *Bankruptcy.*

**Bankruptcy.** If the contractor shall become bankrupt or insolvent, or shall make an assignment of his estate for the benefit of his creditors, it shall be lawful for the Minister, on behalf of Her Majesty, by notice in writing under his hand, to determine the contract by such notice, and for Her Majesty either to carry on the works under the Engineer's direction or to recontract with another contractor to proceed with and complete

complete the same upon such terms, stipulations, and conditions as shall be deemed expedient by the Minister; and all the then remaining materials and plant may be used in and applied for the purpose of the works; and on the final completion of the works the surplus of such materials and plant shall be delivered to the contractor's assignees or trustees, but without any payment or allowance for any loss or diminution, wear, tear, or injury they may have sustained in the meantime; and any losses, damages, costs, or expenses which shall, in the opinion of the Engineer, have been sustained by Her Majesty by reason of the premises, shall be deducted from the deposit money and the balance retained after payment of the progress payment; and the residue of such deposit money and percentages (if any), or any securities in which the same may be invested (but without any interest thereon), shall belong and be paid or delivered to the said assignees or trustees; and if there should be no residue, but a deficiency, the amount of such deficiency may be proved for as a debt against the estate of the contractor.

#### 10. *Suspension and Completion.*

The whole of the works under this contract shall be completed on or before the day set forth in clause 1 of the special conditions as the "date of completion of contract," and formally delivered up to the Engineer in perfect order and repair, and to his entire satisfaction. Completion.

In the event of any alterations, deviations, additions, or extra works being required to be executed by contractor, or in the event of any delay arising under this clause, or under clauses 5 and 15 hereof, the Engineer may allow such an extension of time (if any) as he shall think adequate for the proper carrying out of such alterations, deviations, additions, or extra works, or for the delay caused (if any). Extension of time.

The Minister, on behalf of the Queen, shall be entitled to deduct or set off for each and every week's delay after the date mentioned as the date of completion of contract, or after the expiration of the "extension of time" (if any) allowed under this clause, as and by way of liquidated damages, the sum mentioned in clause 2 of the special conditions. Liquidated damages.

Such damages shall be deducted from the final balance and the cash security lodged by the contractor in accordance with clause 20 of these conditions and with clauses 5 and 6 of the special conditions, or at the option of the Minister, from any other moneys payable to the contractor under this contract.

On receiving a written notice to that effect from the Engineer, contractor shall suspend the whole or any portion of the works, as may be directed in such notice. He shall have no claim for loss or damage on this account, unless the suspension exceeds one month, and such suspension shall in no wise vitiate the contract, but a commensurate extension of time for completing the works will be granted to the contractor. Suspension.

When, in the judgment of the Engineer, the whole of the works appear to be completed, they shall be tested or examined as may be provided in the specification; if the result of the test or examination be satisfactory, they will be formally taken over by the Engineer, who will issue a certificate to that effect, whereupon the period for maintenance shall begin. Testing.  
Maintenance.

#### 11. *Safety of Works and Persons.*

Contractor shall be liable for the reinstating or making good of any thing whatsoever which may be removed, displaced, damaged, or destroyed during the performance of the works, or by reason of the same; and he shall also be solely responsible for all defects to, and failures in, the works during the whole time of construction and the period of maintenance, whether the said defects arise from insufficient foundations, defective construction, bad materials, or any other cause within the contractor's control, or from the inclemency of the weather, landsprings, or similar cause. Reinstating defects.

Contractor shall also provide and maintain all boarding-barriers, night-lights, and properly-ballasted temporary roads required by any municipal or other authorities having charge or control of streets or roads, or which may be required for the convenience or safety of the public; and he shall also make all arrangements by temporary roads or bridges or otherwise, which may be required by any local authorities or by the Engineer, to prevent stoppage or delay of public traffic or any avoidable inconvenience to the public. Boardings, roads, &c.

During the whole time of construction of the works, and during the period of their maintenance, contractor shall be liable for any accident, damage, or injury whatsoever to the public or to any individual, which may be caused by his operations or his neglect, and also for the safety of any adjacent roads, streets, collars, vaults, pavements, walls, houses, buildings, or other structures, and shall be bound to erect, fix, secure, or remove any scaffolding, timbering, &c., as occasion may require or when ordered by the Engineer to do so; and in case of emergency or probable danger to life or property the Engineer, without notice to contractor, may provide or employ, at contractor's cost, such labour, materials, and plant, as may be necessary to meet the exigency, of which the Engineer himself shall be the sole judge. All such cost to be deducted from any sum then or thereafter due to the contractor under this contract. Liability for accidents, &c.

No opening is to be made in any street until a sufficient quantity of approved material and plant are on the ground to complete the length to be opened. Should any delay or dispute arise as to the supply of any material, the Engineer shall have power to direct any opening made to be filled up and the surface restored at contractor's cost, amount to be deducted from any money due to the contractor.

#### 12. *Agency, Notice, Right of Entry.*

When the contractor is not personally present on the works he must at all times during their progress have a responsible agent on the ground, who shall be deemed to be, and shall be, authorised to represent him for all purposes of this contract. Agency.

In case the contractor or his responsible agent shall not be immediately available at any point of the works, the instructions given by the Engineer, in writing, to any overseer, foreman, or workman employed on the works by contractor, shall have the same effect as if they were given to the contractor or his authorised agent.

Any written instrument or notice to be given or delivered to the contractor under this contract shall be deemed to have been so given or delivered when it is given or delivered to the contractor or his representative on the works, or left at the contractor's usual or last known place of abode or business. Delivery of notice.

The Engineer and any other person duly authorised by him shall have power at all times to enter upon all or any portion of the works; and to travel by any engine, lift, cage, carriage, truck, trolley, or other vehicle which the contractor may be using on, or near, or in connection with the works; and to make examination Entry on works.

examination of any work, fixed or unfixed, or in any state of progress, and of any materials or plant in use or intended to be used for the purposes of this contract; and the contractor shall give or afford facility for the exercise by the Engineer and other duly authorised persons of the powers given under this clause, and shall for that purpose cause the motion of any vehicle, engine, or other machinery to be arrested when requested so to do.

Progress notice.

Due notice shall be given by contractor to the Superintending Officer or overseer before any piles are swung and commenced to be driven; on the completion of all excavations for foundations, or otherwise, and before any foundations are laid therein; when foundation rings for wells are to be laid, or cylinders to be sunk, and before the sinking commences; before the filling in of the wells, cylinders, or other structures, or of sewer or pipe trenches is proceeded with; before centres are struck; before and after tunnel soles are laid; and at such other stages of progress of the works as may be specially directed in the specification.

### 13. *Dismissal and Mode of Payment of Men.*

Dismissal.

The Engineer or Superintending Officer may, for incompetency or misconduct, or inattention to orders, or other sufficient cause, require the dismissal within twenty-four hours by the contractor of any agent, overseer, foreman, workman, or other person employed by him on the works; and in the event of the contractor refusing or neglecting to comply with such requisition all further payments on account of the contract, may be stopped until such dismissal is carried out.

Cash payment.

The workmen, tradesmen, and labourers of every class or kind, employed on the works under this contract shall be paid their wages or other earnings in full in money, current coin of the Colony, at least once in every fortnight, and no ticket or other system of payment by goods of any sort, provisions, or liquor will be allowed on any pretence whatever.

Truck system.

Nor shall the contractor or any person employed by him, or in any way connected with him, establish any shop for the supply of liquors, provisions, or goods, nor shall the contractor cause or oblige his workmen to take their necessaries or goods of any kind from any person in particular.

The workmen or labourers of every kind or class shall be paid on the works (if it be possible) or in some building adjoining; and in no case shall they be paid at a public-house or other place where spirituous or fermented liquors or refreshments are sold.

Statutory declaration.

Before the payment of any money to the contractor, the Minister may require from the contractor a statutory declaration that the tradesmen and labourers of every kind employed on the works to which these conditions refer have been paid their wages and claims of every kind in full money, the current coin of the Colony, and to the latest date to which such wages or claims are due; and the Minister may withhold the payment of any money that may be due, or may become due, to the contractor until such declaration shall have been made and delivered to him.

### 14. *Material.*

Ownership.

All approved materials, plant, and prepared work brought upon the ground for use in or on the works shall be considered, and shall be, the property of Her Majesty the Queen until completion of contract; and contractor shall not take away, remove, or dispose of any such material or plant or prepared work without the written authority of the Superintending Officer.

Quality.

All materials supplied by contractor for, and used in, the works shall be the best of their respective kinds, and in conformity with any further particular directions that may be contained in the specification.

Arrival on ground.

Due notice shall be given by contractor to the Superintending Officer and overseer when any material is brought on the ground, all of which must be neatly stacked in regular heaps, submitted for approval, and approved of in writing by the Superintending Officer, before it may be used in the works; none but that so approved shall be used.

Removal.

The contractor, if so directed, shall remove entirely off the ground any inferior or improper material, or alter or remove any improper or unworkmanlike work at his own expense within twenty-four hours after a written notice in that behalf shall have been served upon him by the Engineer or Superintending Officer.

After the expiration of the time stated in such notice, it shall be lawful for, but not obligatory upon, the Engineer or Superintending Officer at any time to remove and, if necessary, to destroy any such material, or to pull down or alter any such work, and to replace or rebuild the same. The expense of so doing shall be deducted from any moneys then due, or that may thereafter become due, to the contractor under this contract.

Storing.

Cement is to be brought on the ground in quantities of not less than fifty barrels, at least ten clear days before it is intended to be used in the works, and kept in weather-tight sheds under lock and key. After having been tested and approved of, the approved barrels will be marked on the outside, and their contents may be used. After they are empty, they shall, in the presence of the Superintending Officer or any person deputed by him, be broken up, and thereupon removed off the works.

Explosives.

The use by the contractor on the works of blasting powder or any other explosive material shall be confined strictly to the limits, which will be set by an order in writing of the Engineer as to locality, time, quantity, particular kind of material, and precautions to be taken during its use.

Quantities.

In any case no larger quantity of explosive material shall be taken underground than is likely to be used during any current shift.

Storing underground prohibited.

Storing of explosive material underground shall be, and hereby is, absolutely prohibited; and for its storage on the surface special directions will from time to time be issued by the Engineer in accordance with the provisions of the Act regulating storage and conveyance of explosives.

Inspectors of powder.

Should contractor exceed the limits of such order, or not strictly observe the special directions in regard to use of explosives, the Engineer shall have power to appoint, at the contractor's expense, inspectors of powder, in whose presence alone the explosives may be made use of, and who shall have entire charge of all matters connected with their storage or supply to the works.

Reduced prices.

If the contractor shall be found to have supplied materials or executed work not in accordance with the true intent and meaning of the specification and conditions of this contract, and if the Engineer shall elect to allow such materials to be used or such executed work to remain, he shall have power to fix the price to be paid for any such material or work, and contractor shall be bound by the Engineer's valuation.

15. *Government Property.*

Should the Minister furnish to the contractor for the purposes of this contract any materials, or plant, or other articles of value, all of which are hereafter in this clause and in the specification included under the term "Government property," the contractor shall give a detailed receipt in writing to the Superintendent Officer at the time of delivery and before taking possession thereof. Delivery.

If required to do so by the Superintendent Officer, contractor shall erect, at his own expense, sheds or other covering to protect such property from the weather or from theft. Protecting.

He shall likewise make good any loss or injury which may happen to them from any cause whatever, and shall keep them in good and sufficient repair, and renew all moving and working parts which may become worn out, to the satisfaction of the Engineer or Superintendent Officer, during the whole time they are under his care. Repairs.

On the completion of the contract, all such property shall be returned to the Engineer, unless otherwise directed in the specification; and for that purpose it shall be removed, after having been put into a thorough state of repair, to the place or places mentioned in the specification, and there neatly stacked or arranged, as the Superintendent Officer may require. Returning.

The latter shall thereupon give a detailed receipt in writing for everything so returned, and until such receipt shall have been given the property shall be deemed to be, and shall be, under the care of the contractor. Discharge.

Should any delay occur in supplying contractor with any drawings, or specifications, or any Government property which may be specified to be supplied or delivered to contractor by the Minister, the contractor shall have no claim for compensation for any such delay other than that (if any) particularly set forth in the specification; but the contractor shall be entitled to such reasonable extension of time for the completion of the works as shall be fixed by the Engineer. Delay in delivery.

16. *Measurements, Quantities, and Accounts.*

Except in cases for which the specification distinctly prescribes another method or rule of ascertaining measurements or weights, the *net* measurements, according to the actual dimensions or weights, will always be taken, notwithstanding any custom to the contrary. The surplus materials to be removed from excavations shall be calculated as equal to the space actually occupied by the permanent works. Net measurements.  
Surplus soil.  
Quantity.

The distance of lead shall be measured from top of shaft or end of open cutting to centre of spoil-bank or other place of deposit. The schedule price for excavation shall cover all haulage in tunnels or cuttings, unless otherwise specified. Lead.

The contractor shall be present at all measurements, and, if required, assist in making the same. If he fail to attend after twenty-four hours' notice in writing has been delivered to him of the Superintendent Officer's intention to take measurements, and clearly setting forth the locality of such intended operation, the measurements made by the Superintendent Officer shall be binding on the contractor. In contractor's presence.

On the satisfactory completion of any part or portion of the works, and at all other suitable times, the dimensions of such piece of work shall be measured by the Superintendent Officer, recorded on drawings, kept or to be made for the purpose, and the quantities ascertained therefrom and entered into a quantity book, to serve as the basis for arriving at the cost of contract on completion of same. Time.

Within forty-eight hours of such measurements having been effected, contractor shall furnish to the Engineer an account of the work thus intended to have been finally measured up, showing in detail the dimensions, quantities, prices, and value, specifying day of measuring, in whose presence measured, and signed by contractor. Check accounts.

For the purpose of making progress payments, the dimensions of still unfinished portions of the work will be measured in a summary way monthly, or as near as may be, but without prejudice to the ultimate acceptance or rejection of such portions of work. Progress measurements.

On the day following the conclusion of such summary measurement, contractor shall furnish to the Superintendent Officer an account of all completed work and work done during the preceding month, giving detail quantities, prices, and approximate value of each. Monthly accounts.

Any final account to be presented by the contractor must be on similar form, and under the same heads as the printed tender form, with additional items at foot of same. Final account.

17. *Jobbing.*

When desired by the Superintendent Officer so to do, contractor shall furnish to said officer any skilled artizans, labourers, or carts with horses and drivers, for the performance of such services as the aforesaid officer may desire to be performed in connection with, for, on, or near the works under the contract. Jobbing.

Contractor shall supply those artizans, labourers, &c., with the necessary plant and lighting, and shall be paid for all services thus rendered the full amount provided therefor in the schedule of prices, under the head of "jobbing," at the end of every month, or as nearly as may be thereafter. The accounts for this "jobbing" shall, however, be rendered by contractor to the Superintendent Officer or overseer in half-weekly intervals, that is to say, during the forenoon of every Monday and Thursday, failing which he shall lose all claim to payments for the jobbing performed by him during the preceding three days. Paid monthly in full.  
Half-weekly accounts.

18. *Progress and Final Payments.*

No payments shall be legally due to contractor until after the entire completion of the contract; but progress payments on account, subject to all deductions herein provided for, will be made monthly, or as nearly so as may be, during the continuance of the contract, on the certificate in writing of the Engineer, at rates not exceeding those stated in clause 4 of the special conditions. Monthly progress payments.

The balance of the moneys due for works executed under this contract, less 5 per cent. and less the deductions properly to be made hereunder, will be paid within thirty days, or as nearly as may be, after the Engineer shall have certified under his hand that all the works under the contract, less those of maintenance, have been fully and satisfactorily completed, and that such balance, less the 5 per cent., is due to contractor. Balance.  
Provided

Insufficient balance. Provided that if the amount for maintenance, as entered by contractor in his tender, shall appear to the Engineer to be insufficient, the Minister may retain, on the declaration to that effect in writing by the Engineer, either the whole or any part of the sum otherwise deemed payable to contractor, till all the works under the contract, including those of maintenance, shall have been finally and satisfactorily executed.

Final payment. The said five (5) per cent., together with the "cash security" provided for in clause 20 of these conditions, will be retained until after the expiration of the "period of maintenance" more particularly described in clause 3 of the special conditions, and shall be paid to contractor (less the costs of any repairs or defects, should the contractor fail to execute the same) on the production of a certificate from the Engineer that all the works under the contract, including those of maintenance, have been finally and satisfactorily executed.

No progress payment after expiration of contract time. No progress payments will be made after the date specified for the completion of the contract until the whole of the works shall have been properly completed to the satisfaction of the Engineer.

Suspension of payment. If, in the opinion of the Engineer, further inquiry is desirable or necessary before payment is made on any certificate, the Engineer shall have power to suspend the payment of all or any part of the amount mentioned in any such certificate for a period not exceeding one month from the date at which, in the ordinary course, the money would have been paid, and no interest shall be due or accruing on any money the payment of which shall have been so suspended.

Certificates without prejudice. No certificate given to the contractor for any purpose whatever during the progress of the work shall prevent the Engineer, at any time before the final payment, from rejecting any unsound material or improper workmanship which may be discovered in the work, or from requiring the contractor to remove or amend at his own cost any work which may be found not to have been performed in accordance with the contract, or from deducting from any money which may be due or become due to the contractor the whole amount which may have been paid to the contractor for such material or work.

No claim without certificate. The obtaining of the Engineer's certificate that all the works under the contract, including those of maintenance, have been finally and satisfactorily executed, shall be a condition precedent to any claim or cause of action in respect of work done, as well as to the final payment to be made hereunder.

#### 19. Arbitration Clause.

1. All questions or disputes which shall arise respecting the true construction or meaning of the drawings or specification, or the quality of the workmanship, or quantity or quality of materials necessary for the whole or any part of the contract, and all questions and disputes respecting the matters next hereinafter mentioned, when the aggregate amount claimed in respect of such last-mentioned matters shall not amount to the sum of one thousand pounds, shall be decided by the Engineer-in-Chief for Roads, Bridges, and Sewerage, whose decision shall be absolute and final.

2. But all questions as to the cancellation of the contract, as to the right of the contractor to extension of time, as to the infliction of penalties, as to the true value of any extra work that has not been previously agreed upon, or as to the value of work omitted from the works specified to be done under the contract, shall, if the aggregate amount of the claims in respect of such matters shall be one thousand pounds or upwards, upon the completion of the works under the said contract, and before payment of the retention money and the money deposited as security for the due carrying out of the contract, be fixed and determined by arbitration as hereinafter provided.

3. If the contractor or the Minister in charge of the Department under which the works in the contract have been or are being carried out considers that he has claims in respect of the several matters mentioned in paragraph 2, as those in which arbitration may be claimed, he shall furnish to the other of them full particulars in writing of such claims, breaches, doubts, disputes, and differences in respect of which he desires arbitration, giving distinct and separate items, and the amount, if any, claimed under each item; and the other party may thereupon furnish particulars of all claims he has in respect of such matters, irrespective of the aggregate amount of such claims; and the party furnishing the same shall be bound by such particulars; and no claim not included in such statement shall be taken into consideration at such arbitration, or become subject of arbitration or action; and the claim or respective claims so made as aforesaid shall be determined by arbitrators, to be appointed as hereinafter provided, that is to say—

4. If the Engineer-in-Chief for Roads, Bridges, and Sewerage and the contractor concur in the appointment of a single arbitrator, then the matter and question aforesaid shall be referred to and decided by such single arbitrator; but if the Engineer-in-Chief for Roads, Bridges, and Sewerage and the contractor cannot concur in the appointment of a single arbitrator, each party, on the request in writing of the other party, shall, by writing under his hand, nominate and appoint an arbitrator, to whom the said questions and matters shall be referred. Every such appointment shall be delivered to the arbitrator, and be deemed a submission to arbitration on the part of the party by whom the same shall have been made, and neither party shall have power to revoke the same without the consent in writing of the other, nor shall the death of either party operate as a revocation.

5. And if, for twenty-one days after the notice in writing by the contractor or by the Engineer-in-Chief for Roads, Bridges, and Sewerage, that the contractor and the Engineer-in-Chief for Roads, Bridges, and Sewerage cannot agree, shall have been served, and for seven days after a request in writing to appoint an arbitrator shall have been served by the one party on the other, such last-mentioned party fail to appoint such arbitrator, then, upon such failure, the party making the request, and having himself appointed an arbitrator, may appoint such arbitrator to act on behalf of both parties; and the arbitrator may proceed to hear and determine the matter or question between the contractor and the Engineer aforesaid, and in such case the award or determination of such single arbitrator shall be final. If, before the matter so referred shall be determined, either arbitrator shall die or become incapable, the party by whom such arbitrator was appointed may nominate and appoint some other person as arbitrator to act in his place; and if, for the space of seven days after notice in writing from the other party for that purpose, he fail to do so, the remaining or other arbitrator may proceed *ex parte*; and in case the matter in dispute shall stand referred to a sole arbitrator in default of the appointment by the other party, and such sole arbitrator shall die, the party by whom he was appointed shall appoint another sole arbitrator in his place; and every arbitrator so to be substituted in either of the cases aforesaid shall have the same powers and authorities as were vested in the former arbitrator at the time of his death or disability.

6. If more than one arbitrator shall be appointed, such arbitrators shall, before they enter into the matter or question referred to them, nominate and appoint, by writing under their hands, an umpire to decide on the matter so referred; and if such umpire shall die or become incapable of acting, they shall forthwith, after such death or incapacity, appoint another umpire in his place, and the decision of every such umpire on the matters referred to him shall be final.

7. If, in either of the cases aforesaid, the said arbitrators shall refuse, or shall, for seven days after request of either party, neglect to appoint an umpire, a Judge of the Supreme Court, upon application made to him by either party, shall appoint an umpire, whose decision shall be final.

8. If a single arbitrator shall be appointed, and he shall die or become incapable to act before he shall have made his award, the matters referred to him shall be determined by arbitrators appointed hereunder, as if the arbitrator so dying had not been appointed.

9. If more than one arbitrator be appointed, and either of them shall refuse or for seven days neglect to act, the person by whom such defaulting arbitrator was appointed shall, within seven days after notice in writing, proceed to appoint another arbitrator to act for the arbitrator so refusing or neglecting, or the other arbitrator may proceed *ex parte*; and the decision of such other arbitrator shall be as effectual as if he had been the single arbitrator appointed by both parties.

10. If more than one arbitrator shall be appointed, and neither of them shall refuse or neglect to act, as aforesaid, then if such arbitrators shall fail to make their award within thirty days after the day on which the last of such arbitrators shall have been appointed, or within such further time as may be granted by a Judge of the Supreme Court on application by either party, the matters so referred to them shall be determined by the umpire appointed as aforesaid.

11. The arbitrators, or any two of them, shall have power to hear, receive, and examine evidence; and the witnesses on any reference herein may be examined on oath or affirmation. Neither of the parties hereto shall be at liberty to appear before the arbitrator by counsel or solicitor.

12. The award of the arbitrator or arbitrators or umpire shall be in writing, ready to be delivered to either party within the time appointed for making the said award. This submission may be made a rule of the Supreme Court. The amount of costs, umpire's and arbitrators' fees, shall be decided by the arbitrators, arbitrator, or umpire; the amount of costs, including arbitrators' and umpire's fees and witnesses' expenses, the items thereof being shown in the account annexed to said award.

13. If upon an arbitration in respect of claims made by the contractor the sum awarded to the contractor shall be less than one-half of the amount of his said claim, all the costs, charges, and expenses of and incident to the said arbitration and award shall be borne and paid by the contractor; but if the amount awarded shall exceed one-half of the amount of the said claim, then each party shall pay his own costs and one-half of the arbitrator's and umpire's fees.

14. It is to be distinctly understood that all claims by the contractor or by the Minister to have any of the matters which under paragraph No. 2 may be submitted to arbitration so dealt with, must be made upon the whole of the work being completed, and before payment to the contractor of the retention money or of the money deposited as security for the due performance of the contract, and that the acceptance by the contractor of payment of the retention money in cases where a bond to secure the completion of the works has been given, and in other cases of the retention money or of any balance thereof, and of the money deposited as security for the due performance of the contract, shall be conclusive proof that the contractor has no such claim or claims.

15. The Engineer shall not be required to defend or answer, or be made a party to, any bill, claim, action, or other proceedings at law or in equity at the instance of the contractor. Engineer no party to lawsuit.

16. The exercise by the Minister, Engineer, or Superintending Officer, of any of their respective powers shall not relieve the contractor from any liability to which he may be subject for any breach of the contract. Liability to remain.

17. None of the clauses or provisions of the specification, or of these conditions, or of any other part of this contract, shall be varied, waived, discharged, or released, either at law or equity, unless by the express consent in writing of the Minister. Provisions not to be varied.

#### 20. Tender, Cash Security, &c.

Tenders to be sent in on a printed form, accompanied by the printed schedule of prices, with all the blanks properly filled in, enclosed in an envelope, and addressed, as directed in the advertisement, calling for tenders. Form of tender.

The approximate quantities only are given as a guidance to intending contractors, and the contract being at a schedule of prices, will be subject to such extensions, extras, additions, deductions, enlargements, deviations, alterations, and omissions as therein provided. The Minister will be only liable to pay for the actual measured quantity of each respective kind of work done and ordered at the rates set forth in the schedule, and if there be no rate in the schedule for any that may be ordered, then at such rate as shall be fixed by the Engineer-in-Chief, whether such measured quantities shall be less or more than the quantity stated in the schedule of quantities and prices. The approximate quantities, as given of each item in the schedule, must be worked out, and a total sum shown in the tender. Schedule rates of contract.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz.:—For amounts up to £500, £5; for amounts exceeding £500 and not exceeding £1,000, £10; for all sums over £1,000, 1 per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the manager of the bank upon which it is drawn, or a bank draft. Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly. Deposit with tender.

All deposits, with the exception of that of the successful tenderer shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed. Returning of preliminary deposit.

Within seven days from the date of notification in writing to any tenderer of the acceptance of his tender by the Minister, the successful tenderer must lodge with the Under Secretary for Public Works the sum named in clause 6 of the special conditions, which sum will be retained as security for the due performance of the contract until after the expiration of the "period of maintenance," and returned to the contractor (if at all) only on the day of final payment, and less any deductions, which hereunder may properly be made therefrom. Cash security.

Within

Signing of contract.

Within three days after lodging the aforesaid deposit, the successful tenderer shall attend at the office of the Crown Solicitor, and execute the contract.

Forfeiture of cash security.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof, or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Fresh Tenders.

Whenever a Tenderer shall fail to proceed with a Contract as aforesaid, fresh Tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another Tender in the same series to be accepted; but the Tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

Defaulting Tenderers.

Full names, &c., to be given.

In submitting a Tender the full Christian name of the Tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the Tender. The omission of this information will render the Tender liable to be declared informal.

Lowest or any tender. Stamps, fees, &c.

The Board shall not be bound to accept the lowest or any tender.

The contractor shall bear and pay all duty stamps, licences, building or surveyor's fees, or other charges or fees whatsoever, legally demanded by any municipal or other authorities, also the amount of all patent rights and royalties due to any patentee.

Commencement of work.

No tenderer will be allowed to proceed with the work tendered for until he shall have signed the required contract.

ROBT. HICKSON,  
Engineer-in-Chief for Sewerage.

Public Works Department, Sewerage Branch,  
Sydney, 14th May, 1891.

These are the General Conditions marked "B" referred to in our annexed Agreement with Her Majesty the Queen, dated the 10th day of March, A.D. 1892.

JOHN CARTER,  
D. G. SNODGRASS.

Witness—V. C. LUMSDAINE.

"C."

SPECIAL CONDITIONS.

Clause 10 of General Conditions.

1. The "date of completion of contract" shall be twenty-four months from the date of acceptance of tender—that is to say, the day of , 1893.

Clause 10 of General Conditions.

2. The sum to be deducted or set off as or for "liquidated damages," shall be £20 sterling a week.

Clauses 2, 10, and 18 of General Conditions.

3. The "period of maintenance" shall be three calendar months from the date of the certificate of the Engineer that all the works under the contract, less those of maintenance, have been fully and satisfactorily completed.

Clause 18 of General Conditions.

4. The "rates of progress payment" shall be 90 per cent. of the value of work actually done, performed, and delivered, as the Engineer may approve of as fit and necessary for the work.

Clause 20 of General Conditions.

5. The "deposit" to accompany the tender shall be as required by clause 20 of the general conditions.

6. The sum to be lodged with the Under Secretary for Public Works as security shall be a Bank deposit receipt, in the name of the Secretary for Public Works, for £2,000 sterling.

Clause 2 of General Conditions.

7. Even after the expiration of the period of maintenance, contractor will still be held liable for all defects in the works which were not visible, or which may have been kept secret, at the time of the works being taken over by the Engineer, since he is, and hereby distinctly agrees to be, *responsible for all faults or neglects of, or all deception practised by, his agent, overseers, or workmen, irrespective of the time at which such faults, neglects, or deceptions may be detected.*

Clause 3 of General Conditions.

8. Although the information in possession of the Government has been freely placed at the disposal of the tenderers, by being noted on the drawing or otherwise, the Government undertake no guarantee whatever regarding the kinds of soil that will be met with; or the firmness or stratification of the ground to be excavated, or the amount of unwatering to be done, or the strength of the timbering that may be required, or the nature and extent of other precautions which may have to be adopted.

Clause 4 of General Conditions.

9. Contractor shall not be entitled to claim or receive any compensation whatever over and above payment for the actual increase of quantities at schedule rates, and where there are no schedule rates, at such rates as shall be determined at the time by the Engineer-in-Chief, for any additions to, deviations from, or alterations of the various designs comprised in this contract. These conditions shall also apply to, viz., variations in manholes, junctions, flushing chambers, &c., and in consequence of meeting with any existing gas, water, or sewer pipes or sewers, as referred to and in accordance with clause 82 of the specification, the position of which it is impossible to ascertain until the ground for the construction of the works comprising this contract is opened up,—

Variations in inclination of slopes and gradients.

" depth, shape, or size of excavation for sewer, &c.

" depth, shape, or size of concrete of sewers, manholes, junctions, flushing chambers, &c.

" internal diameter of pipe sewers.

" alteration or extension of sewer lines.

Any decrease in quantities to be deducted as provided for.

Clause

*Clause 14 of General Conditions, paragraph 6.*

10. Cement is to be brought on the ground in quantities of not less than fifty barrels, provided that this quantity is sufficient for fourteen days' supply, but in no case is less than fourteen days' supply (whatever that may prove to be) to be brought on the ground in one parcel; nor is the supply stored on works to be at any time less than fourteen days' supply.

*Clause 8 of General Conditions.*

11. Suspension of works and non-compliance with clauses 52, 53, 79, 80, 81, 120, and 124 of the specification on the part of the contractor shall constitute a wilful breach of contract.

*Clause 18 of General Conditions.*

12. The acceptance by contractor of the final payment shall be deemed equivalent to a distinct declaration on his part that he has no further demands on the Government in respect to this contract.

These are the Special Conditions marked "C," referred to in our annexed Agreement with Her Majesty the Queen, dated the 10th day of March, A.D. 1892.

Witness—V. C. LUMSDAINE.

JOHN CARTER.  
D. G. SNODGRASS.

*TENDER for Contract No. 79, Sydney Sewerage.*

To the Honorable the Minister for Public Works, Bridge-street, Sydney, N.S.W.

I [We], the undersigned, do hereby tender and offer to construct, completely finish, and maintain the various works for Contract No. 79, Sydney Sewerage, in accordance with the conditions of contract, specifications, and drawings, prepared for that purpose in your Department, for or at the rates particularly entered in the accompanying schedule of prices, and enclose herewith deposit, as required by clause 20 of the general conditions.

Should this tender be accepted, I [we] undertake to lodge with the Under Secretary for Public Works, within seven days from the date of notification of acceptance of this tender, a bank deposit receipt in the name of the Secretary for Public Works for the sum of two thousand pounds sterling, as security for the due performance of the contract.

In the event of my [our] failing to do so, or to sign the required contract within the time specified in clause 20 of the general conditions, I [we] hereby distinctly agree to forfeit to the Queen the sum deposited with this tender.

(Date.)

Name } of Firm (if any).  
Address }

Name } of Partners (if any).  
Address }

**CONTRACT NO. 79.**—Schedule of quantities and prices for constructing and completing 1 mile 25·3 chains, more or less, of the main outfall sewer, North Shore, branch and pipe sewers, shafts, junctions, &c., subject to omissions, extras, extensions, additions, enlargements, deviations, or alterations, as provided by the conditions of contract.

The quantities in this schedule are not guaranteed as correct, but are merely given for the guidance of intending contractors, this being a schedule of Prices Contract.

No. of Item.	Description of Works.	Unit.	Probable Quantity	Rate.	Amount.	
					£	s. d.
1	Excavation in tunnels, in hard rock, for sewer, branches, pipe-sewers, junctions, curves, &c., as specified in clauses 38, 42, 45, 48 to 68, including sub-ducts, timbering, unwatering, and removing the excavated materials beyond actual site of works, as viz. :—	cubic yard	800			
2	Excavation in hard rock, where gadding only is permitted.....					
3	Excavation in hard rock, where charges of powder 2 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	835			
4	Excavation in hard rock, where charges of powder 4 inches in length by 1½ inch in diameter, and such depth of bore-holes as shall be directed only are permitted .....	"	3,000			
5	Excavation in shafts, shaft-chambers, and sumps, as specified in clauses 39, 52, 53, 71, and 72, including timbering, unwatering, and removing the excavated materials beyond actual site of works, as viz. :—					
6	Excavation in road surfaces, sand, soil, clay, pipeclay, shale, and soft rock only .....	"	75			
7	Excavation in hard rock, where gadding only is permitted .....	"	361			
8	Excavation in hard rock, where charges of powder 2 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	500			
9	Excavation in hard rock, where charges of powder 4 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	2,500			
10	Filling in round brick and concrete work of ventilating and intercepting shafts and chambers, man-holes, and into all shafts, as specified in clauses 40, 41, 42, 43, 71, and 72, including withdrawing of timber, depositing in layers, replacing road and other surfaces, ramming, &c. ....	"	120			

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate.	Amount.
					£ s. d.
9	Timber ordered in writing to be left in tunnels, shafts, as specified in clauses 36 and 37, including all iron used in fixing same .....	cubic feet	500		
10	Sub-duct in hard rock, with tile covers, as specified in clauses 76 and 77	lineal yard	250		
	Sub-duct, as specified in clauses 76 and 78, in more or less hard material, including dry or cement jointing for stoneware pipes, &c. :—				
11	Of 6 inches internal diameter .....	"	100		
12	Of 9 " " " " .....	"	100		
	Sub-duct in water-charged loose ground, as specified in clause 76, including hardwood boxes with packing in same, and dry or cement jointing for pipes of :—				
13	6 inches internal diameter .....	"	100		
14	9 " " " " .....	"	100		
15	10 " " " " .....	"	100		
16	Hand-packed stone-filling, 4-inch gauge, as specified in clauses 17, 69, 76 to 78, over sub-ducts, and when ordered, round sewers and pipe-sewers in tunnels, including depositing, packing, and ramming .....	cubic yard	300		
17	Sandstone concrete, any shape, form, or thickness, in shafts, tunnels, sumps, round stoneware pipes, and, where ordered, in any situation in the construction of these works, as specified in clauses 26, 27, 93 to 109, including washing dry surfaces, wetting, and grouting, complete .....	"	1,020		
18	Bluestone concrete, any shape, form, thickness, arched, circular, or otherwise, in sewer, curved junctions, arches, man-holes, &c., as specified in clauses 24, 27, 93 to 109, including washing dry surfaces, wetting, and grouting, complete .....	"	1,390		
	Brickwork in cement in sewer, junctions, shaft-chambers, circular, curved, arched, or otherwise, any shape or form or thickness, as specified in clauses 110 to 113, including wetting, flushing, grouting, collar-joints, pointing, where ordered, &c. :—				
19	Of one ring or portion of a ring .....	"	520		
20	Of two or more rings, straight, arched, &c. ....	"	180		
21	Cement facing in two thicknesses, $\frac{3}{4}$ inch thick when finished, as specified in clause 114, to all internal (and external, where ordered) surfaces of sewer, junctions, shaft-chambers, culverts, man-holes, and where ordered in any situation in the construction of these works .....	square yard	8,900		
22	Bluestone concrete, any shape, form, or thickness, arched, circular, or otherwise, in shafts, over shaft-chambers, as specified in clauses 93 to 109, including washing dry surfaces, wetting, and grouting, complete .....	cubic yard	150		
23	Brickwork in cement, circular, arched, curved, or otherwise, any shape, form, or thickness, as specified in clauses 110 to 113, in shafts, over shaft-chambers, including wetting, flushing, grouting, pointing, where ordered, collar-joints, &c., complete .....	"	870		
24	Cement facing in two thicknesses, $\frac{3}{4}$ inch thick when finished, to all internal and external surfaces of shafts, where ordered, as specified in clause 114 .....	square yard	290		
25	Plymouth sandstone, ashlar, set in cement, on top of ventilating shafts, and where ordered, as specified in clauses 16 and 115, complete ...	cubic feet	185		
26	Squared bluestone pictures, 9 inches deep, set in sand, round cast-iron ventilating grates of shafts, where ordered, as specified in clause 116, complete .....	square yard	20		
	Providing, laying, and jointing glazed stoneware, plain pipes, in trenches, and where ordered, including fixing discs, as specified, and including bed joints, in mortar, where required :—				
27	18 inches diameter .....	lineal feet	2		
28	9 " " " " .....	"	60		
	<b>SURPLUS MATERIALS.</b>				
	Removal of surplus materials from the various excavations throughout this contract, as tunnels and open trenches, including sub-ducts, shafts, sumps, &c., as specified in clauses 40, 42, 43, and 45, as viz. :—				
29	For the first half mile of lead .....	cubic yard	7,960		
30	For every further quarter of a mile of lead .....	"	15,920		

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate.	Amount.
<b>GOVERNMENT PROPERTY.</b>					£ s. d.
31	Placing, building in, fixing, and jointing only, any metal work, as cast-iron oval and circular pipes, junctions, branches, flanged, and with spigot and faucet ends, gas-checks, ventilating grates, lamp-hole boxes, man-hole covers, staples, step-irons, earthenware covers, &c., supplied by the Government, including carriage, as specified in clauses 91, 121, 131 to 133 complete .....	ton	40		
32	Closing of branch sewers and intercepting pipes with earthenware or cast-iron covers, set in cement, labour only, as specified in clause 131 complete .....	each	30		
33	Trapped junction blocks, taking delivery of, and building in .....	"	10		
<b>GENERAL.</b>					
34	Permanent puddle where ordered, in any situation, in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 29, including spreading in 9-inch layers, and ramming, complete .....	cubic yard	20		
35	Special bluestone concrete, as specified in clause 25, where ordered in any situation, in the construction of the works .....	"	10		
36	Bluestone metal (clause 18), 1½-inch gauge, stacked .....	"	10		
37	Sandstone metal (clause 26), 2½-inch gauge, stacked .....	"	10		
38	Bluestone metal (clause 32), 2½-inch gauge, stacked .....	"	10		
39	Sharp, clean washed sand (clause 19), stacked .....	"	10		
40	Sawn hardwood, in scantlings or planks (clause 30).....	cubic feet	50		
41	Oregon timber, in scantlings or planks .....	"	50		
42	Wrought-iron in bolts, galvanised step-irons, screws, nails, spikes, straps, &c. (clause 31) .....	cwt.	3		
43	Portland cement .....	cask	10		
44	Artisan or mechanic, supplied by contractor.....	day	15		
45	Quarryman or other skilled labourer, supplied by contractor.....	"	15		
46	Ordinary labourer, supplied by contractor.....	"	30		
47	Cart, with one horse and driver, supplied by contractor.....	"	10		
48	One additional horse, supplied by contractor .....	"	10		
<b>MAINTENANCE.</b>					
49	Three months' maintenance after formal delivery of works .....	lump sum	.....		
Total .....		.....	.....		

## NOTES.

1. All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in strict accordance with the specification.

2. The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

3. Items Nos. 31, 32, and 33 to include the cost of conveying the Government property from the contractor's store or field office to the various sites of works along line of main and branch sewers, at man-holes, gas-check, and shaft chamber, &c.

4. Prices for items Nos. 36, 37, 38, 39, 40, 41, 42, and 43 are to be for materials in strict accordance with specification, delivered on the works ready for use, and only the actual net quantities ordered and approved of shall be paid for. In case contractor's prices are considered too high by the Engineer at the time such materials may be required, or if the contractor fail to deliver such materials at the time required and ordered, then the Engineer shall have the power to supply the same from any other source, and the contractor shall have no claim for loss or compensation on account of the exercise of such power by the Engineer.

5. Prices for items Nos. 44, 45, 46, 47, and 48 are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night work being ordered, it is to be paid for at 25 per cent advance on the time rates set down for day work.

6. The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads crossing over main and pipe sewers, reinstating all road and other surfaces, &c., or any other thing necessary in executing and completing each respective item, in strict accordance with plans and specifications.

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No. 12.

Mr. F. Punch to The Secretary for Public Works.

Dear Mr. Lyne,

24 February, 1892.

Permit me to thank you for the prompt manner you have settled the North Sydney sewerage contract. I am sure the people in the district will join with me in praise of you for the consideration you have given them on all occasions when your assistance has been asked for the carrying out of public works. Long may you continue in your present place, for I feel sure the country will progress with such men as you at the head of affairs.

Again thanking you, I am, dear Mr. Lyne.

Yours, &amp;c.,

F. PUNCH.

Put with the papers.—J.L., 25/2/92.

Seen.—R.H., 26/2/92.

No. 13.

The Council Clerk, North Sydney, to The Secretary for Public Works.

Sir,

Town Hall, 17 March, 1892.

I am directed to inform you that a resolution has been adopted by the Municipal Council of this borough thanking you for the consideration shown for the interests of the borough by accepting a tender for the construction of the main outfall sewer ending at Willoughby Falls.

I have, &amp;c.,

W. BARNETT SMITH,

Council Clerk.

No. 14.

Supervising-Engineer Davis to Messrs. Carter &amp; Co.

Gentlemen,

42, Elizabeth-street, 15 March, 1893.

I beg to enclose a list of the shafts on your contract, with sizes of same. You will please understand that neither the excavation for the chambers at the top, centre, and bottom of shaft, nor that for the top pipes, &c., in the shaft, are included. These will be taken out in accordance with drawing, and it will be at your discretion whether you excavate them at the same time as the shaft or operations.

Yours, &amp;c.,

J. DAVIS

(Through Mr. Boys).

No. 15.

Supervising-Engineer Davis to Messrs. Carter &amp; Co.

Gentlemen,

42, Elizabeth-street, 23 March, 1892.

With respect to the mode of excavating the "solid rock" on your North Sydney sewerage contract, I have to request that for the present 4-inch charges of compressed powder be used.

The excavation in tunnels and shafts done in this way will be paid for under schedule items Nos. 3 and 7 respectively.

Yours, &amp;c.,

J. DAVIS

(Through Mr. Boys).

No. 16.

Supervising-Engineer Davis to Messrs. Carter &amp; Co.

*Minute Paper.**Subject* :—Contract No. 79—Shaft at Falcon-street to be moved.

Department of Public Works, Roads and Bridges and Sewerage Branch,

Sydney, 13 April, 1892.

It has been decided to build the tramway along Falcon-street, I understand, at once, and as our shaft at that place would be in the way, would Mr. Boys please have the shaft moved into Alfred-street, south of Falcon-street. If it is clear of the southern side of Falcon-street it will do. The contractors can erect their engine on the south side of the shaft.

Take measurements of the work done in the present shaft, so that excavation and filling can be paid for.

J.D.

I have laid out the shaft south of Falcon-street, and 10 feet back from the building line.—  
J. W. F. Boys, 19/4/92. Please put away.—J.D., 21/4/92. Mr. Piper.

No. 17.

The Council Clerk, North Sydney, to The Engineer-in-Chief for Sewerage.

Sir,

Town Hall, 11 April, 1892.

I am directed to forward you copy of a letter received by this Council from Mr. E. Weitzel, in relation to the nuisance caused by blasting operations in connection with the North Shore sewerage works, and to request that, if possible to do so, you will direct the adoption of some such measures as suggested by Mr. Weitzel.

I have, &amp;c.,

W. BARNETT SMITH,

Council Clerk.

For report.—R.H., 12/4/92.

Mr. Davis.—J.W.F.B., 13/4/92.

No. 18

## No. 18.

## Resident-Engineer Boys to Supervising-Engineer Davis.

*Subject* :—Blasting in Alfred-street, North Sydney, Contract 79. Complaint made of blasting all night, and of excessive charges used.

Department of Public Works, Roads and Bridges and Sewerage Branch,  
23 April, 1892.

BLASTING was carried on all night at shafts No. 9 and No. 10, the part of Alfred-street from which the complaints were made.

This was stopped as soon as I was informed, and no blasting has been carried on in this part between the hours of 10 p.m. and 6 a.m. since the 13th. The charges used are the usual 4-inch, and have not been exceeded.

J. W. F. BOYS.

There is no inspector on the night shift, and it was not found out that blasting was being done after 10 p.m. for a few days before the date of the Council clerk's letter. Before, however, the complaint reached me, the night blasting was stopped in the locality in question, so that now blasting is only taking place between 6 a.m. and 10 p.m. I do not think there is any reason for complaint on account of the size of the charges, as the maximum quantity of compressed powder in each shot is only 4-inch. The Council clerk might be informed accordingly.—J.D., 23/4/92. Mr. Bagge. The Engineer-in-Chief.—C. H. O. BAGGE, 25/4/92. North Sydney Council, 25/4/92.

Gentlemen,

79, Pitt-street, Sydney, 9 April, 1892.

On behalf of self and several of my neighbours, notably Messrs. Musgrave, Lenehan, and Anderson, I beg to complain about the nuisance created in our part of Alfred-street through the blasting in connection with the sewerage work. Not only are the shots unnecessarily heavy, but the blasting is at some of the shafts carried on all through the night, thereby disturbing our peace, and I am to ask you if the Council has the power to stop at least this night blasting, and, if so, to be good enough to take the necessary steps to have the nuisance abated.

Yours, &c.,

E. WEITZEL.

The Mayor and Aldermen, Borough of North Sydney.

## No. 19.

## Supervising-Engineer Davis to Resident Engineer Boys.

MEMO.—CONTRACT No. 79.

PLEASE let me have by Wednesday next the following :—

1. Cost of 1-inch lining over 5-inch.
2. " 2 " " 5 "
2. " 2½ " " 5 "
3. " 3 " " 5 "
4. " 4 " " 5 "

Sandstone and bluestone concrete separate for the whole length of contract.

J.D., 23/5/92.

Attached is the information required.—J. W. F. BOYS, 25/5/92.

NORTH SYDNEY SEWERAGE.—Cost of lining over sewers 4 ft. x 2 ft. 8 in., and 4 ft. x 3 ft. Taking ordinary thickness of sewer at 5 inches.

		Linal feet, 3,282·5—Length of sewer ; 4 ft. x 2 ft. 8 in. :—			
		lin. yd.		£	s. d.
Sandstone concrete, 1-inch thick	.....	62	at 37/6	116	5 0
" 2 "	.....	121·12	"	245	17 0
" 2½ "	.....	162·73	"	305	2 4
" 3 "	.....	195·13	"	365	17 4
" 4 "	.....	261·75	"	490	15 7
Bluestone concrete, 1 "	.....	79·76	at 56/-	223	6 7
" 2 "	.....	162·17	"	454	1 6
" 2½ "	.....	204·38	"	572	5 3
" 3 "	.....	247·24	"	692	5 5
" 4 "	.....	334·97	"	937	18 4
Length of sewer, 4 ft. x 3 ft. = 2,539 linal feet :—					
Sandstone concrete, 1-inch thick	.....	49·56	at 37/6	92	18 6
" 2 "	.....	101·09	"	189	10 10
" 2½ "	.....	127·60	"	239	7 3
" 3 "	.....	155·05	"	290	14 4
" 4 "	.....	210·31	"	394	6 7
Bluestone concrete, 1 "	.....	61·80	at 56/-	173	0 10
" 2 "	.....	127·65	"	351	16 5
" 2½ "	.....	158·35	"	443	7 7
" 3 "	.....	191·56	"	536	7 4
" 4 "	.....	259·52	"	726	13 1

NORTH SYDNEY SEWERAGE.—Comparative cost for varying thicknesses of two lengths of sewers, 4 ft. x 2 ft. 8 in. ; length, 3,282·5 linal feet :—

		£	s. d.	£	s. d.
Sandstone concrete, 1-inch thick	.....	116	5 0		
Bluestone " 1 "	.....	223	6 7		
		339		11	7
Sandstone " 2 "	.....	245	17 0		
Bluestone " 2 "	.....	454	1 6		
		699		18	6

Sandstone

		£	s.	d.	£	s.	d.
Sandstone concrete	2½-in. thick	305	2	4			
Bluestone	2½ "	572	5	3			
					877	7	7
Sandstone	3 "	365	17	4			
Bluestone	3 "	692	5	5			
					1,058	2	9
Sandstone	4 "	490	15	7			
Bluestone	4 "	937	18	4			
					1,428	13	11
Four feet x 3 feet lengths; 2,539 lineal feet:—							
Sandstone concrete,	1-inch thick	92	18	6			
Bluestone	1 "	173	0	10			
					265	19	4
Sandstone	2 "	189	10	10			
Bluestone	2 "	351	16	5			
					541	7	3
Sandstone	2½ "	239	7	3			
Bluestone	2½ "	443	7	7			
					682	14	10
Sandstone	3 "	290	14	4			
Bluestone	3 "	536	7	4			
					827	1	8
Sandstone	4 "	394	6	7			
Bluestone	4 "	726	13	1			
					1,120	19	8

NORTH SYDNEY SEWERAGE.—Comparative cost of packing for varying thicknesses over whole length of sewer.  
Total length, 6,821·5 lineal feet.

		£	s.	d.	£	s.	d.
Sandstone and bluestone	in 4 ft. x 2 ft. 8 in. = 1 in. thick..	339	11	7			
"	" 4 ft. x 3 ft. = 1 in. "	265	19	4			
					605	10	11
"	" 4 ft. x 2 ft. 8 in. = 2 in. "	699	18	6			
"	" 4 ft. x 3 ft. = 2 in. "	541	7	3			
					1,241	5	9
"	" 4 ft. x 2 ft. 8 in. = 2½ in. "	877	7	7			
"	" 4 ft. x 3 ft. = 2½ in. "	682	14	10			
					1,560	2	5
"	" 4 ft. x 2 ft. 8 in. = 3 in. "	1,058	2	9			
"	" 4 ft. x 3 ft. = 3 in. "	827	1	8			
					1,885	4	5
"	" 4 ft. x 2 ft. 8 in. = 4 in. "	1,428	13	11			
"	" 4 ft. x 3 ft. = 4 in. "	1,120	19	8			
					2,549	13	7

The proportion of cost stands as follows:—

Taking the packing at 1-inch thickness as	1·
" " 2 "	2·049
" " 2½ "	2·576
" " 3 "	3·113
" " 4 "	4·21

J. W. F. BOYS, 25/5/92.

No. 20.

Messrs. Carter & Co. to Supervising-Engineer Davis.

Contract No. 79—North Sydney Sewerage.

Sir,

Box No. 10, North Sydney Post Office, 26 April, 1892.

We have the honor to ask you to be good enough to allow us to work three shifts on the above contract in shafts Nos. 2, 3, 4, 5, 6, 7, 8.

Our reasons for asking this are that the ground is both deep and hard, and we would like to point out that the probable hours of working if our request is granted will be from 5 a.m. to 11 p.m. only.

We are, &c.,  
CARTER & CO.

No. 21.

Supervising-Engineer Davis to The Engineer-in-Chief for Sewerage.

Minute Paper.

Subject:—Contract No. 79—North Shore Sewerage.—Blasting between 5 a.m. and 11 p.m.

Department of Public Works, Roads and Bridges and Sewerage Branch,

Sydney, 26 April, 1892.

THE contractors ask to have the hours during which blasting is permitted extended an hour in the morning and an hour in the evening at all the shafts except the three in the most thickly populated parts of Alfred-street. Already there have been complaints from residents in Alfred-street, and I do not think it would be advisable to sanction blasting in that street except between the hours specified, viz., 6 a.m. and 10 p.m.

Perhaps the contractors' request might be granted as to shafts Nos. 2 and 3, which are some distance from any houses in the park land near Long Bay.

J. DAVIS.

I quite agree to Mr. Davis' suggestion, until complaints come in. I beg to recommend that a letter be forwarded to the contractor as suggested by Mr. Davis.—C. H. OHLFSEN BAGGE, 26/4/92. Engineer-in-Chief. Write.—R.H., 26/4/92. Carter & Co., 26/4/92.

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No. 22.

The Engineer-in-Chief for Sewerage to Messrs. Carter &amp; Co.

Gentlemen,

Public Works Department, Sewerage Branch, 26 April, 1892.

In reply to your letter of the 26th inst., asking to be allowed to blast between the hours of 5 a.m. and 11 p.m. at shafts Nos. 2 to 8 on contract No. 79, Sydney Sewerage Works (North Sydney), I have the honor to inform you that as there have already been complaints about the blasting in Alfred-street I cannot sanction blasting in that street except between the hours specified (6 a.m. to 10 p.m.)

But with regard to shafts 2 and 3, which are some distance from any houses, you may blast as requested between 5 a.m. and 11 p.m. until complaints are sent in by the residents, when the hours laid down in the specification will have to be reverted to.

I have, &amp;c.,

ROBERT HICKSON,

Engineer-in-Chief for Sewerage.

No. 23.

Supervising-Engineer Davis to The Engineer-in-Chief for Sewerage.

*Minute Paper.**Subject* :—Contract No. 79—North Sydney Outfall Sewer.—Driving of Tunnels.

Department of Public Works, Roads and Bridges and Sewerage Branch,

Sydney, 19 May, 1892.

THE tunnels from some of the shafts on this contract will be commenced in a few days, and it is, therefore, necessary that it should be settled how they are to be driven, whether with 4-inch charges of compressed powder, 2-inch charges, or without blasting.

With a view of arriving at the method which would give the least annoyance to the residents in the vicinity of the sewer, consistent with economy, I have made comparative estimates.

The excavation by "guttering and gadding" will cost 3s. per cubic yard more than with 4-inch charges of compressed powder, but as it is impossible to drive the tunnel by blasting to the exact size desired, considerably more concrete has to be used in lining when the driving is done by blasting than when done by "guttering and gadding," and taking this into consideration, I estimate it will cost about £1,250 less to do the tunnels without blasting compared with doing it with 4 inches of powder.

The 2-inch charges, with the extra supervision that would be required, would be the most costly of any.

I wish, however, to point out that while it would save annoyance and money to drive the tunnels without explosives, it would take longer to do the work.

J. DAVIS.

Messrs. Carter & Co. have undoubtedly fixed their schedule prices speculatively to increase their profits on the contract as much as possible, and, if so, to the loss of the Department. Mr. Davis seems, therefore, justified in the suggestions made, as they would likely cause a saving of £1,000, and clause 55 of the specification is no doubt a saving clause against speculative prices.—C. H. OHLFSEN BAGGE, 19/5/92. The Engineer-in-Chief.

Ask contractors to see me on Thursday morning.—R.H., 23/5/92. Messrs. Carter & Co., 23/5/92.

While I think the Department would hardly be justified in adopting this unusual method of carrying out the work, it is very clear we should aim at getting our work done as economically as possible. Blasting may, therefore, be allowed on the understanding that the average allowance of 4 inches for concrete packing over and above specified size of tunnels be reduced to 2 inches.—R.H., 26/5/92. Mr. Davis.

Contractors informed. Copy of letter attached.—J.D., 27/5/92.

No. 24.

Supervising-Engineer Davis to Messrs. Carter &amp; Co.

Gentlemen,

42, Elizabeth-street, 27 May, 1893.

Referring to the conversation which your Messrs. Carter and Snodgrass had with the Engineer-in-Chief respecting the mode of driving the tunnels in your sewerage contract No. 79, and to your verbal agreement that on condition you were allowed to do the tunnel excavation under item No. 3 of the schedule of prices, by blasting with 4-inch charges of compressed powder, you would not ask to be paid for more than 7 inches of lining, such 7 inches to include the 4-inch thickness of cement rendering, I am directed to inform you that the Engineer-in-Chief has approved of the above agreement without prejudice to his right, under clause 55 of the specification, to order the excavation to be taken out otherwise should he deem it necessary to do so.

The cross-sections will be taken in the usual manner, and you will be paid for the excavation ordered, and for a maximum of 2 inches of concrete lining in excess of the excavation ordered.

Would you kindly write, intimating your acceptance of this arrangement.

Yours, &amp;c.,

J. DAVIS.

No. 25.

Messrs. Carter &amp; Co. to Supervising-Engineer Davis.

Contract No. 79, North Sydney Sewerage.

Sir,

Box No. 10, North Sydney, 21 May, 1892.

With reference to the outlet works of the above contract, we request your permission to extend the tunnel excavation from the shaft at \* \* \* along the line of "carrier" for a distance of 85 links, and to cut from this point to high-water mark for the purposes of drainage and disposal of spoil.

We are, &amp;c.,

CARTER &amp; CO.

## No. 26.

## Supervising-Engineer Davies to The Engineer-in-Chief for Sewerage.

*Minute Paper.*

*Subject* :—Contract No. 79, North Shore Outfall—Recommending that excavation be extended 85 links near Long Bay.

Department of Public Works, Roads and Bridges and Sewerage Branch,  
Sydney, 26 May, 1892.

THE contractors ask that the excavation in their contract be extended 85 links nearer to Long Bay to give an outlet to the tunnel west of shaft at 0 chains. This length of excavation would have been included in contract No. 79 to enable the surplus material to be conveniently taken to Long Bay where it has to be deposited, but at the time that contract was let the exact line of sewer east of shaft at 0 chains had not been finally settled.

I recommend that the contractors be given this short length of work which will cost—tunnel excavation 40 cubic yards at 60s., £120.

J. DAVIS.

Mr. Davis' statement is quite correct, and since the outlet end of this tunnel has now been decided upon, it will undoubtedly be of great convenience to the contractor to excavate the outlet end of 85 links at a cost of £120.—C. H. OHLFSEN BAGGE, 26/5/92.

The Engineer-in-Chief. Approved.—R.H., 26/5/92. Contractors informed.—J.D., 27/5/92.

## No. 27.

## Supervising-Engineer Davis to Messrs. Carter &amp; Co.

Gentlemen,

42, Elizabeth-street, 27 May, 1892.

I have to acknowledge the receipt of your letter of the 21st instant, asking to be allowed to extend your tunnel excavation for 85 links east of shaft at 0 chains, and in reply I have the honor to inform you that the Engineer-in-Chief has approved of you doing as you wish, the excavation to be paid for under schedule item No. 3, and the tunnel to be taken out to admit of 4 feet by 3 feet sewer with one ring (5 inches) of mining being inserted.

You may also make a cutting from the point where the 85 links terminate, as shown on accompanying tracing, but this work must be done at your own cost.

Yours, &c.,  
J. DAVIS.

Tracing showing line of sewer for the 85 links extension enclosed.—J.D.

## No. 28.

## Messrs. Carter &amp; Co. to Supervising-Engineer Davis.

Contract No. 79, North Sydney Outfall Sewer.

Sir,

Box No. 10, North Sydney Post Office, 2 June, 1892.

In reply to your letter of the 27th May, we hereby agree to accept the terms of the same, viz. :—That the excavation (tunnel) on the above contract shall be carried out under item No. 3 in the schedule of prices, and that the lining shall be paid for to a maximum thickness of 2 inches over plan dimension, making a total thickness of 7½ inches instead of 7 inches as set down in your letter.

We are, &c.,  
CARTER & CO.

This is according to contract drawings.—J.D., 6/6/92.

## No. 29.

## Resident-Engineer Boys to Supervising-Engineer Davis.

Public Works Department, Sewerage Branch, Lincoln's Inn Chambers, and

Dear Sir,

40, Elizabeth-street, Sydney, 15 July, 1892.

Messrs. Carter & Co. have drawn attention to an error in the areas of excavation for to 4 ft. by 3 ft. and 4 ft. by 2 ft. 8 in. sewers North Shore.

	Office area.	By Carter & Co.	By J.W.T.B.
* Size of sewer—4 ft. by 2 ft. 8 in. ....	12.89	12.9663	12.9682
†                   4 ft. by 3 ft. 0 in. ....	14.44	14.4614	14.4613

Yours, &c.,  
J. W. T. BOYS.

Would Mr. Bagge please get the areas given in the contract drawing checked.—J. D., 15/7/92. This has been checked at, viz., \* 12.9672; † 14.4611.—C.H.O.B., 18/7/92. Mr. Davis. The amended areas to be taken in computing quantities of excavation.—J.D., 18/7/92. Mr. Boys. Areas to be paid for—12.97 for 4 ft. by 2 ft. 8 in.; 14.46 for 4 ft. by 3 ft.—J.W.T.B., 11/8/92. Scen. Paper might be put away.—J.D., 15/8/92.

## No. 30.

The Secretary of the Sewerage Miners' Association to Thos. Houghton, Esq., M.P.

Dear Sir,

40, Charles-lane, Woolloomooloo.

Having been requested by my Association to write to the Works Department to obtain particulars whether there is any provision made for miners being provided with air, I done so through the secretary of the Trades Hall, thinking that it would have more effect, but up to the present it is nil.

Although we are a registered association, up to the present we are not recognised by the Board of Conciliation and of Arbitration, though we are looking forward to it, as in all probability we may be the first to use that Board, us being engaged on Government contracts, and our case is a calamity. I urge upon you to act on our behalf at once. *Re* this information, our general meeting is next Saturday, 30th instant.

My reason for being so urgent is this—our men are dying off so fast; I have to report another death no later than last Tuesday. We sent two to Victoria to benefit their health. I am expecting to hear of their death every day, as their case is hopeless. One of our members came to me to-day; he says, "This is terrible; I am dying—lingering in misery"; has not been able to work this six months; a walking skeleton. We have always a large percentage to support out of our pittance, which, God knows, is only an average of 5s. per day. Out of this our fellows subscribe manfully. We are sure our turn is not far off. There is no man following this work who can live long; we all feel the effects—a husky cough, and galloping consumption follows, and our end is not far off. When we apply to the hospital we are sent to Little Bay as incurable. We have to rush smoke and foul air and dust, and work in unnatural positions to obtain even that average wage. I have pay-sheets to prove my statements, and a glance at my books may prove a death-rate that would not be believed,—that is ten per cent.—the result of us rushing this foul air and not being able to eat during working-hours. Our wives has to nurse us and bathe our aching heads at night, as we are at times almost lunatics when we ought to be resting. Our limbs weaken, and we can no longer work. We are forced to accept this death or starve our wives and children, and we do accept death to obtain them bread. There is terrible suffering amongst our members. They are willing to work, but the work is shut down from them. Although the Works Department let the contracts, they are powerless to compel them to employ labour. The North Shore underground sewerage job, Messrs. Carter & Co., has kept their shafts idle for weeks past. Men who sunk the shafts—some as deep as 250 feet odd—has been forced to fill the ranks of the unemployed. They are actually starving us into a death price. Up to the present we have never been provided with air; what air we have had we had to provide ourselves; so hoping you will take steps on our behalf,

I remain, &c.,

JOS. LYNCH,

Sec., S.M.A., Sydney.

Received by me 4/8/92.—R.H., 8/8/92. Will Mr. Hudson please have this looked into at once.—J.B., 2/5/92. T. Houghton, M.P., 2/5/92. Mr. Davis.—F.C.P., 5/8/92.

## No. 31.

Supervising-Engineer Davis to Resident-Engineer Boys.

MEMO.

Will Mr. Boys please let me have report generally upon this letter, with the following particulars, by to-morrow morning:—

1. Description of fans, pipes, &c., used for ventilating each shaft?
2. Whether it is a fact that shafts have been standing for weeks past, and, if so, for what reason?
3. Whether the appliances are sufficient to keep the tunnel in a good state of ventilation, and, if not in any instance, what he recommends?

J.D., 5/8/92.

1. All steam-power fans at present used on 2, 3, 4, 5, 6, 7, 8 with black iron 9-inch pipes.
2. It is a fact in one instance, but that was on account of the water met with.
3. The appliances are excellent in every way, with the exception of No. 12 shaft, and I am informed that a hand-power fan is to be placed there at once by the contractor.

J.W.T.B., 5/8/92.

## No. 32.

Resident-Engineer Boys to Supervising-Engineer Davis.

*Subject*:—Secretary, Sewerage Miners' Association—Want of provision for supplying miners with air, Contract 79, North Sydney, cited as an example.

Department of Public Works, Roads and Bridges and Sewerage Branch,

6 August, 1892.

The Secretary asks whether there is any provision made for miners being provided with air.

Clause 79 of the specification, Contract 79, provides that the contractor shall provide suitable apparatus for clearing the tunnels.

The contractors have provided fans and pipes to nearly all the principal shafts on this contract, namely, at 2, 3, 4, 5, 6, 7, 8. These fans are of approved make, and are driven off the winding engines at each of these shafts. The pipes are excellent, and are 9-inch diameter, and made of black iron, well tarred inside and out, preventing leakage at the joints.

I have heard no complaints on the score of bad air from any of the miners, with the exception of those at No. 12 shaft.

The

The following describes the means of working each shaft, and the time each was idle :—

No. 1 is at work, but was idle for a week, miners asking more pay for driving. The air is good, and no fan required, owing to there being an open end.

No. 2. Miners finished sinking shaft on 12th July. A fan and hose was put in this shaft after the first 100 feet was sunk, and this was also the case at 3, 4, 5, 6, and 7. These fans were driven off the winding engine. Since the 12th, 9-inch black iron pipes have been permanently fixed.

No. 3 was stopped for a week to enable air-pipes to be fixed permanently.

No. 4 was bottomed on 8th July, and driving started 26th July. During this time air-pipes were fixed. There was a disagreement about the price of driving, and old gang refused to continue the work.

No. 5. No stoppage at this shaft beyond shifting position of shaft.

No. 6. No stoppage.

No. 7. No stoppage.

No. 8 was idle for three or four days after sinking. The fan and air-pipes and pump were fixed to this shaft after the sinking was completed. Depth of shaft, 104 feet.

No. 9. No provision made for extra air. A few days stoppage on account of change of men.

No. 10. No provision made for extra air. There was a stoppage for a few weeks. Contractors, reasons were given that they wished 9 and 11 to be sunk the same time, so as to start the driving together.

No. 11 stopped for about four weeks—11th June to 6th July—on account of large amount of water met with. Contractors waited to see if it would take up. This shaft is now down to full depth. No provision for extra air.

No. 12. No provision made as yet for extra air. Shaft has been stopped for the last ten days. The men complain of bad air and the smoke hanging for a long time. This is the only case of bad air, and I am informed that the contractors are about to put a hand-fan at this shaft, which is 95 feet deep, and the drive is 44 feet in.

The appliances on the work are in good order, and quite sufficient wherever steam power is used, namely, at shafts 2, 3, 4, 5, 6, 7, 8.

It will soon be necessary to have air driven into 9 and 10.

Nos. 9, 10, and 11 are shallow shafts, and the drives between them are not long. Hand-power fans will be sufficient for these shafts, but are not necessary just yet.

No. 12 shaft should be supplied with a fan at once.

J. W. T. BOYS.  
6/8/92.

### No. 33.

Resident-Engineer Rudolph to Supervising-Engineer Davis.

*Subject* :—Want of provision for supplying miners with air.

Department of Public Works, Roads and Bridges and Sewerage Branch,  
Sydney, 8 August, 1892.

*Re* the provision of supplying miners with air on contract No. 80, I have to report that nothing has been done yet. I spoke both to Mr. Farley and his foreman about this subject repeatedly, and was assured on one occasion that windsails had been ordered, and on another occasion I heard Mr. Farley give instructions to find out if Carter & Co. had any blowers for sale suitable for his work, but up to the present nothing but the bends for down-pipes are on the ground. Our drives in most instances have not been too far away from the face of the shafts, but now there is no doubt but it becomes a necessity to have ventilation provided at every shaft, and it will be still more wanted if the weather should get warmer. I therefore beg leave to recommend that the contractor be instructed to provide such means as are wanted to send fresh air into the drives, and that his attention may be specially called upon to have the air blown right into the faces where men are employed in gadding out the work, to help as much as possible for the quick setting down of the stone-dust in these places.

H. RUDOLPH,  
Resident Engineer.

### No. 34.

Supervising-Engineer Davis to The Engineer-in-Chief for Sewerage.

*Minute Paper.*

*Subject* :—North Shore and Darling Point Sewers—Ventilation of Tunnels.

Department of Public Works, Roads and Bridges and Sewerage Branch,  
Sydney, 8 August, 1892.

THE only tunnelling which is at present being done in this branch is at North Sydney and Darling Point, and as the Secretary of the Sydney Miners' Association makes general statements with reference to the lack of fresh air supplied to miners, I have obtained reports from the resident engineers who are in charge of these two sewers which I enclose.

There are twelve shafts on the North Sydney works, and of these seven are provided with blowers driven by steam power, three do not require artificial ventilation at present, and at the remaining two, fans are necessary at once. Where the ventilation is done by steam power, it is all that can be desired, and the contractors, I understand, are making arrangements to supply the two shafts with the fans necessary.

Mr. Lynch states what is certainly not a fact, when he says that shafts at North Sydney have been idle for weeks past on account of a lack of adequate ventilation. Messrs. Carter & Co. have made excellent progress with their work, and, with the exception of one shaft (which was not standing for bad ventilation), the rate of progress has been far more than provided by the contract.

At Darling Point the shafts are shallow, and there is not, therefore, the same necessity as at North Sydney for steam power for driving the fans. Hand-fans will meet all the requirements, and now that the tunnels are being driven, the contractors have been requested to provide means of artificial ventilation, which they have promised to do.

Miners'

Miners' work is clearly and unhealthy occupation, and no doubt they must feel the effects of the class of work they do. I do not think, however, that more can be done at North Sydney, except in the case of the two shafts referred to above. At Darling Point hand-fans, or some such contrivance must be adopted for forcing the air into the tunnels.

There is a clause in each of these tunnel contracts binding the contractors to provide "blowing machine with ventilating fans \* \* \* capable \* \* \* of removing the foul air in one minute after blasting at each working-face."

J. DAVIS.

Mr. Houghton might be sent a copy of these reports, and informed that the Department will exercise its full powers as regards compelling all our contractors to provide suitable ventilating appliances.—R.H., 8/8/92. Under Secretary. Write.—J.B., 8/8/92. T. J. Houghton, Esq., M.P., 12/8/92. Seen.—R.H., 15/8/92. Mr. Davis to note.—F.C.P., 15/8/92. Noted.—J.D., 15/8/92.

No. 35.

Resident-Engineer Boys to Messrs. Carter & Co.

Dear Sirs,

North Shore, 12 August, 1892.

Will you kindly inform me why there is no one working at the shafts and drives to-day.

Yours, &c.,

J. W. T. BOYS.

In the absence of the contractors, I cannot say further than that I think the men demand more money.—Jno. R. RAID.

No. 36.

Inspector J. Parsons to The Resident Engineer.

INSPECTOR'S DAILY REPORT OF CONTRACT No. 79.

North Shore, 12 August, 1892.

Workmen employed by Contractor—

Labourers ... ..	2
Carpenters ... ..	2
Masons and other mechanics, blacksmiths ... ..	2

*Remarks.*—No work going on here to-day. The men all came out on strike this morning. The reason is they want more money, not being able to make wages at what they have been getting.

JOHN PARSONS,

Inspector.

It appears from these reports that the miners employed on the North Shore Outfall Sewer are out on strike for an increase of wages.—J.D., 13/8/92. Engineer-in-Chief. Seen.—R.H., 15/8/92. Mr. Davis.—F.C.P., 15/8/92. Mr. Boys may require these reports for posting journal.—J.D., 15/8/92. Mr. Boys. Report finished with.—J.W.T.B., 18/8/92.

No. 37.

The Secretary, Trades and Labour Council, to The Secretary for Public Works.

Sir,

Trades Hall, Goulburn and Dixon Streets, Sydney, 19 August, 1892.

I have been instructed, by resolution of the above Council, to write and ascertain if you will be pleased to appoint a date, time, and place for the reception of a deputation relative to certain matters of a vexed nature at present existing between the contractor for and the miners employed on the sewerage works at North Shore.

I should take it as a great favour if you would kindly afford me a day or two prior notice of the date appointed for deputation's reception.

I remain, &c.,

JOHN RIDDELL,

Secretary.

The deputation waited on the Minister yesterday. Resubmit, with the notes of the interview.—J.B., 30/8/92.

No. 38.

Minute by The Under Secretary for Public Works.

Department of Public Works, Sydney, 23 August, 1892.

PLEASE get me the papers at once respecting the application of Mr. Riddell for a deputation respecting a grievance of the miners employed on the North Shore Sewerage Works.

J.B.

Attach papers.—F.C.P., 24/8/92. No papers registered here. Mr. Riddell's application has not yet been received.—E.H. Mr. Piper,—Paper now attached.—F.C.P., 24/8/92. Papers here with.—R.H., 25/8/92.

No. 39.

Shorthand-writer's notes of the Interviews between The Secretary for Public Works and the Deputation from the Sewerage Miners' Association.

*Minute Paper.*

*Subject* :—Deputation—Grievances of Sewerage Miners employed on Works at North Shore and Darling Point.

Department of Public Works, Sydney, 29 August, 1892.

A DEPUTATION representing the Sewerage Miners' Association, accompanied by the Secretary of the Trades and Labour Council of New South Wales (Mr. Riddell), waited upon the Minister this morning to represent certain grievances of the miners employed on the sewerage works at North Shore and Darling Point.

It

It was pointed out that the miners were deprived of air in the underground workings in consequence of the contractors failing to keep the air-courses clear of mullock; that sometimes the miners had but a space of 20 inches to crawl through, on account of mullock not being cleared away, and that no matter how much air were pumped into the courses the smoke to be found therein could not escape unless the courses were kept quite clear.

Reference was made to a minute written by Mr. Bruce Smith authorising the contractors to sublet in connection with the contract for the sewerage work at North Shore.

The Minister said there might be some special arrangement in connection with the contract in question giving the contractors power to sublet; but subletting was not allowed unless the consent of the Department were obtained. In this case the contractors (Messrs. Carter and Company), he discovered, had been allowed to sublet. It appeared that unless objection were raised contractors were allowed to do so. In this particular case the contractors had been allowed to sublet by consent.

The deputation explained that the men were all on piecework on the sewerage works in question (No. 79), and that the contractors would not give daywork. They wished to ask whether the Department could not compel the contractors to give daywork. Figures they had proved that some of the men made only 5s. 4d. a day on piecework, while the average wages had been but 6s. 6d. per day since the work was started—under the piecework system—and yet the contractors were progressing under their contract time.

It was contended that the minute empowering the contractors of the works at North Shore to sublet had had the effect of causing the miners to work under very unhealthy conditions. The unhealthy conditions had seriously affected the health of the men. One miner had died the other day, and they expected two more deaths. The conditions under which the miners were working were killing them. No matter what their wages were the conditions were exceedingly unhealthy, and almost intolerable, all on account of the contractors neglecting the air-courses, which were almost blocked up in places with mullock, which they ought to clear away.

They could not work under such conditions; could not make a fair day's wage, and the result was that they had to stand up for higher wages, and as the contractors had refused to increase the rates the men had struck, and had been out on strike for three weeks. The contractors would not pay a reasonable price. The work was offered by the cubic yard; it had been going on for years, and the contractors knew exactly what could be done, and cut the men down as low as possible.

It was represented that the mullock was not cleared away from the air-courses because it would involve extra expense for the contractors, and the deputation attributed this state of things to the practice of subletting, which they desired the Department to prohibit.

The Minister said that so far as subletting was concerned he could not interfere, as the contractors had the power to sublet. He could not interfere more than the conditions would allow him, but he would certainly send to the contractors' foreman with reference to the ventilation of the underground workings, because they certainly ought to keep the men supplied with sufficient air. He had a right to speak on that point, for the health of the men was endangered.

The deputation pointed out that if such high deposits in connection with contracts were not required, they could carry out the work at the same rates as the contractors, and do just as good work.

The Minister said that it was his desire to avoid too much supervision in connection with public works.

It was pointed out that the contractors of the North Shore works left much in the hands of the men—they did not give them any centres or levels, but only marked the work out. They desired to explain this to the Minister to show that there was not much supervision required in connection with some of their work; their association had the tools to do such work if the Department would but give it to them, and it would save all the trouble created by the practice of subletting. Their object was to ask the Minister to stop the practice.

The Minister said it would be a pretty rough thing to do to say to a contractor that they would accept his contract at a certain price, but would not allow him to sublet. He felt that at the present time he would not be justified in taking any action to prevent subletting. He thought it would be just as well to inform the contractor of the North Shore works of the representations the deputation had put before him; he would take good care that he should know. With regard to the system of payment, he might say that he would rather be more liberal in paying for piecework than for daywork, for it encouraged the men to work with a will. He supposed that if the contractors of the North Shore works had given a little better pay they would not have had the trouble and loss of time attending a three weeks' strike. He would make no promise as to the conditions of future contracts; but after hearing what they had said he would send for the contractor, and talk the matter over with him, and let him know what he thought about the matter. It might have a salubrious effect if he told the contractor what his intentions were as to future contracts.

The deputation pointed out that they had no chance of competing with established contractors in this class of work on account of the deposits being so high. If the Department would accept bondsmen instead of cash they could compete with anyone.

The Minister repeated that it was his desire to avoid too much supervision in connection with contracts. He thought that large contracts of (say) £60,000 could fairly be cut up into sub-contracts, but in smaller works it only increased the supervision unnecessarily. He would, however, see the contractor of the North Shore works, after which he would be in a better position to say whether any improvement could be effected on the present system. He did not think it would be a good thing to prohibit subletting altogether, because there were cases where the system of subletting might be very advantageous. The more legitimate course would, he thought, be to advise the contractor that in case of trouble arising through the practice of subletting, the power on the part of the contractor to sublet would be cancelled; but in this case he could not interfere with the contractor.

The deputation pointed out that so far as the underground work at North Shore was concerned the Department could do nothing to improve the conditions under which the miners were working unless the contractors were compelled to keep the air-shafts clear.

The Minister replied that he had a perfect right to take action with respect to that matter for the sake of the public health. He would take very good care that proper air was supplied to the miners, or he would take action to have it supplied.

With

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With reference to the representation that the men on the North Shore works were not supplied with an ycentres or levels, the Minister said he was glad the deputation had pointed that out to him, and he would make inquiries concerning the matter, as the Department had been put to considerable trouble with a contractor named Rochester through a similar omission, which was a serious matter.

Mr. Hickson.—J.B., 1/9/92. Seen.—R.H., 2/9/92.

No. 40.

Resident-Inspector Boys to Supervising-Engineer Davis.

Public Works Department, Sewerage Branch, Lincoln's Inn Chambers, and 40, Elizabeth-street,  
Sydney, 7 September, 1892.

Sir, I beg to inform you that the Contract 79, Messrs. Carter & Co., is being proceeded with. The men started yesterday afternoon, the 6th instant.

Yours, &c.,  
J. W. T. BOYS.

For the information of the Engineer-in-Chief.—J.D., 7/9/92. Seen.—R.H., 8/9/92.

No. 41.

T. J. Houghton, Esq., M.P., to The Under Secretary for Public Works.

Dear Mr. Barling, Parliament House, Sydney, 28 September, 1892.

I enclose a letter I have just received from the Secretary of the Sewerage Employees Union, and would feel obliged if you would kindly have the matter attended to at once, and let me know the result.

Yours, &c.,  
T. J. HOUGHTON.

Mr. Hickson.—J.B., B.C., 29/9/92. Urgent. For report.—R.H., 31/9/92. Mr. Davis.  
Report herewith.—J.W.T.B., 4/10/92.

[Enclosure.]

Sir,

I am directed by our Association to once more trouble you to visit the Works Department *re* the ventilation of No. 10 shaft on Carter & Co.'s sewerage contract, North Shore.

There is a hand-fan erected on the shaft, and pipes are connected to the bottom of the shaft only, and the drives are in from 60 to 80 feet.

The contractor refuses to connect any pipes into the drives where the men are at work; also refuses to put labour on to pump the supply of air. Therefore our men are working under deplorable conditions, and the inspectors insist that they cannot act on our behalf. Hoping you will see to this.

I remain, &c.,  
JAS. LYNCH, Secretary,  
Sewerage Miners' Association.

T. J. Houghton, Esq., M.P.

No. 42.

Resident-Engineer Boys to Supervising-Engineer Davis.

*Minute Paper.*

*Subject* :—Complaints *re* ventilation of Shaft No. 10, Contract 79. (See letter 92-2,160, 30th September.)

Department of Public Works, Roads and Bridges and Sewerage Branch,  
North Sydney, 4 October, 1892.

THERE is a hand-power fan and pipes in this shaft, and the pipes are within 30 feet of the face in the north drive. This is as near to the face as practicable.

In the south drive the pipes are in 16 ft. 6 in., and there are plenty of pipes ready at the shaft to be joined in when required.

The contractors state that by their arrangement with the men the contractors supply pipes and put them in to the bottom of the shaft, and fix a T piece on, and that the men are supplied with pipes.

The men fix the pipes in the drives and supply the labour for driving in the air as required.

The inspector reports to me and to the contractors whenever the men require anything, or have any complaints to make, and the men themselves have never made any formal complaint to me.

The inspector states that it is necessary to blow the fan continually now to keep the drives fresh, but at present the men only blow out the smoke after firing.

J. W. T. BOYS.

No. 43.

Supervising-Engineer Davis to The Engineer-in-Chief for Sewerage.

*Minute Paper.*

*Subject* :—Contract No. 79, North Shore Outfall—*Re* ventilation of Shaft No. 10.

Department of Public Works, Roads and Bridges and Sewerage Branch,  
Sydney, 4 October, 1892.

I HAVE seen the contractors with reference to Mr. Lynch's complaint, and I have also obtained a report from Mr. Boys, which I enclose. It appears that the miners by arrangement have undertaken to fix the air-pipes in the drives, and that, therefore, if there was delay in these pipes being put in position it was due to the miners themselves. Since Mr. Lynch wrote his letter they have fixed the pipes from the shaft to within about 30 feet of the face of north drive, and within about 50 feet of the face of south drive, and pipes are available, so that this last drive can be ventilated in the same way as the north drive. If the pipes are carried within 30 feet of the face, it is as near as they should be, as they would be damaged by the blasting if taken nearer.

The

The contractors state that the price paid for excavating the tunnel was to include the cost of turning the hand-fan. At present it is only being turned immediately after a shot is fired, but this is not sufficient. Arrangements should be made for the fan to be kept in motion the whole time miners are engaged in the tunnels.

I would suggest that the contractors be written to in terms of the draft letter attached.

J. DAVIS.

See letter written to contractors. It appears, however, that it is really the miners' own fault that sufficient air is not supplied.—R.H., 5/10/92. Under Secretary. Inform.—J.B., 5/10/92. T. J. Houghton, Esq., M.P., 10/10/92.

#### No. 44.

The Engineer-in-Chief for Sewerage to Messrs. Carter & Co.

Gentlemen,

4 October, 1892.

It is reported to me by the resident engineer that the ventilation at shaft No. 10 is not at all satisfactory. The air-pipes are only fixed a short distance from the shaft in the tunnel which is being driven in a southerly direction, and there is about 45 feet of the drive without pipes, and that the hand-fan is only being turned immediately after shots are fired, instead of being kept constantly going. I have, therefore, to draw your particular attention to clause 79 of the specification, and to request that immediate steps be taken to lay additional air-pipes, and also that the fan be kept in motion the whole time miners are engaged in the tunnel.

I have, &c.,

ROBT. HICKSON,

Engineer-in-Chief for Sewerage.

#### No. 45.

Messrs. Carter & Co. to Supervising-Engineer Davis.

Contract No. 79, North Sydney Sewerage.

Sir,

Box No. 10, North Sydney, 1 November, 1892.

Understanding that the main outfall sewer has to be eventually extended south from shaft No. 12 on the above contract, we request your permission to drive the tunnel in that direction, at our schedule rate, until the drive is through between shafts Nos. 11 and 12, or to such distance as you may determine.

Trusting that our application may meet with your approval.

Yours obediently,

CARTER & CO.

Messrs. Carter & Co. might be allowed to drive half-way (about 3 chains) between their end shaft in Mount-street and the future next shaft in Whaling Road, as per tracing. This would be about 70 cubic yards at 60s., equal to £210. C. H. OHLFSEN BAGGE, 7/11/92. The Engineer-in-Chief. Approved.—R.H., 8/11/92. Carter & Co., 10/11/92. Mr. Davis to note.—F.O.P., 12/11/92. Noted.—J.D., 14/11/92.

#### No. 46.

The Engineer-in-Chief for Sewerage to Messrs. Carter & Co.

Gentlemen,

Public Works Department, Sewerage Branch, 10 November, 1892.

In reply to your letter of the 1st instant, asking permission to extend the tunnel of the main outfall sewer, North Shore, southwards, until the drive is through between shafts 11 and 12, at schedule rates, contract No. 79, I have the honor to inform you that you may extend the tunnel from 1 mile 25·3 chains for a distance of 3 chains to 1 mile 28·3 chains, including excavation and lining, at schedule rates, contract No. 79, and on the understanding that the conditions laid down in Mr. Davis's letter of the 27th May last apply equally to the extension now granted.

I have, &c.,

ROBERT HICKSON,

Engineer-in-Chief for Sewerage.

#### No. 47.

Resident-Engineer Boys to Supervising-Engineer Davis.

Public Works Department, Sewerage Branch, Lincoln's Inn Chambers, and 42, Elizabeth-street, Sydney, 21 November, 1892.

ENCLOSED please find information of shafts and drives requiring checking on contract 79.

When the officer who is going to check this work is ready I will go over the ground with him and point out all points made use of on top.

J. W. T. BOYS.

The shafts on this contract are deep, and some distance apart, and I think, therefore, it would be advisable to have the lines and levels checked. Could Mr. Peake be spared to do this work? If so, he might be instructed to come to me, and I will give him particulars.—J.D., 22/11/92. Mr. Bagge.

It may be judicious to allow Mr. Peake to check these alignments on account of the great depths of the shafts.—C. H. OHLFSEN BAGGE, 22/11/92. Mr. Mollison. Mr. Peake.—R.H., 22/11/92. Noted.—A.P., 22/11/92. Instructions carried out and returned.—6/1/93.

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No. 48.

## Resident-Engineer Boys to Supervising-Engineer Davis.

Public Works Department, Sewerage Branch, Lincoln's Inn Chambers, and 40, Elizabeth-street,  
Sydney, 10 November, 1892.

It is reported by the men working at No. 6 shaft that a boy living in the house nearest that shaft has blown himself up with a cap on Tuesday evening after the men had finished their work. On Wednesday the father of the boy brought two caps over to the men at this shaft.

It is not known whether the boy actually got the caps out of the box there, or on the work at all. The only thing to point to such a conclusion is that the caps are the same as used on this work. Inspector Parsons will try and find out more about this at once, also the name of the people. I asked the doctor attending, but he refused to give me any information beyond that the boy was seriously hurt, and that the people wish to keep it quiet.

J. W. T. BOYS.

For the information of the Engineer-in-Chief.—J.D., 11/11/92. Engineer-in-Chief. Seen.—R.H., 11/11/92.

No. 49.

## Resident-Engineer Boys to Supervising-Engineer Davis.

Public Works Department, Sewerage Branch, Lincoln's Inn Chambers, and 40, Elizabeth-street,  
Sydney, 13 December, 1892.

HEREWITH is a memo. from Messrs. Carter & Co. in reference to stoppage at shaft No. 6. I should recommend the Department to allow this piece of work to be idle, as proposed, until the new year, as it will not retard the general work on this contract; and the boy is in such a highly nervous state that the shock of the blasting is likely to do him a permanent injury. The contractors must be held responsible for the delay.

J. W. T. BOYS.

This boy was seriously injured by explosives which he is believed to have taken from the miners' box. As the delay at this shaft will not retard the completion of the contract, I recommend that it remain idle until the beginning of the new year, when further inquiries can be made.—J.D., 14/12/92. Engineer-in-Chief.

Approved.—R.H., 14/12/92. Mr. Davis to see.—F.C.P., 15/12/92. Seen.—J.D., 16/12/92. Mr. Boys, for further report after holidays.—J.D., 16/12/92. Mr. Boys. This shaft (No. 6) started to work on 3rd January, 1893.—J.W.T.B., 5/1/93. Might be put away.—J.D., 6/1/93.

Public Works Department, Sewerage Branch, Lincoln's Inn Chambers, and 40, Elizabeth-street,  
Sydney, 8 December, 1892.

Memo. to Messrs. Carter & Co., contractors, Contract 79.  
SHAFT No. 6 has been idle since 11th November. When will this work be continued?

J. W. T. BOYS.

Work will be resumed at the above shaft in about a fortnight from date.

The boy whose injuries necessitated the stoppage of the shaft in question is now recovering, and will be removed from the vicinity before the end of the year.

CARTER &amp; CO.

No. 50.

## Supervising-Engineer Davis to Resident-Engineer Boys.

*Minute Paper.**Subject:—Contract No. 79.*Department of Public Works, Roads and Bridges and Sewerage Branch,  
Sydney, 22 December, 1892.

TRACING of section of portion of main outfall sewer, North Sydney, forwarded herewith for the information of the Resident Engineer.

The invert levels of extension of sewer from shaft at junction of Mount and Alfred Streets, as finally decided upon, are figured in red.

For Mr. Boys, through Mr. Davis.—J.S.M., 23/12/92.

It is rather late in the day to "finally decide" upon invert levels of the sewer on the south side of the shaft at Mount-street, seeing that work has been in progress over nine months, and a matter of 50 feet of this tunnel has been driven from the centre of that shaft. Moreover, in addition to sewer being lowered 0'17—the size of the sewer has been reduced from 4 ft. x 2 ft. 8 in. to 3 ft. 3 in. x 2 ft. 2 in. As the instruction does not appear to have come from Mr. Bagge, and as he possibly has not seen the proposed change, I return the paper to him for his instruction.—J.D., 23/12/92. Mr. Bagge.

This should have been arranged at the time, but by some oversight the matter has been delayed. I think, however, that it would be better to do the work as shown on section if it does not incur much expense.—C. H. OILFSEN BAGGE, 28/12/92. Mr. Davis.

Mr. Boys to make arrangements to reduce size of sewer and work to levels given from present face of tunnel, and make an estimate of the cost of extra excavation and concrete necessary in the length of tunnel already driven.—J.D., 29/12/92. Mr. Boys.

Noted.—J.W.T.B., 31/8/94.

No. 51.

Surveyor Peake to The Assistant Chief Engineer for Sewerage.

Check Surveys—Contract No. 79, North Sydney.

Sewerage Construction Branch, Lincoln's Inn Chambers,

Elizabeth-street, 6 January, 1893.

Sir,

I have the honor to transmit herewith a table and diagram, showing the results of my check survey of the alignments and levels upon contract No. 79, North Sydney.

My alignments were obtained, with few exceptions from one set of observations of the wires at each shaft.

In the case of shaft No. 4, where the curve commences, the wires were dropped twice, and the mean of the results was taken as a base for the underground survey.

I consider that the check work done would point out any grave discrepancy in the alignment, if such existed, and is sufficient at the present stage of operations.

I have, &c.,

ALG. PEAKE.

These check alignments and levels agree fairly well, but I think that further check should take place where the differences are the greatest.—R.H., 9/1/93. Mr. Bagge. For the information of Mr. Davis.—C.H.O.B., 9/1/93.

Mr. Peake does not quite agree with Mr. Boys at two or three of the shafts. The chief difference is at the curve at shaft No. 4. Will Mr. Boys please check his work, and report.—J.D., 9/1/93. Mr. Boys.

The work at shaft No. 4 was checked on 28th January, 1893, and alterations made. Mr. Boys has also consulted with Mr. Peake on the matter, and they have struck an average for the plugs in the curve.—J.W.F.B., 2/2/93.

CONTRACT No. 79.—Survey of alignments and levels of drives (figures in arabic by Mr. Boys, figures in *italic* by Mr. Peake).

No. of shaft.	Chainage.	Size of shaft.	Chainage up stream.	Chainage down stream.	B.M. on top.	B.M. bottom.	Tape reading in feet and decimals.	Chainage of springing line.	Down stream value.	Chainage of spring line.	Up stream value.	Down stream scale reading.	Up stream scale reading.	Grade.	Size of sewer.
	m. c. f.	ft.	m. c. f.	m. c. f.	ft.	ft.	ft.	m. c. f.	ft.	m. c. f.	ft.	in.	in.		
1	0 0 0	6 x 5	0 0 3 0 0 2.8	0 0 3 0 0 3.2	41.95 .....*	20.22 .....*	24.73 .....*	0 0 0 0 0 0	22.72 22.69	0 0 10 0 0 10 0 1 00 0 0 65.4	22.74 22.74 22.84 22.81	1.375 1.61	1.00 1.37		
2	0 16 3.3	9 x 6	0 16 7.8 0 16 7.7	0 15 64.8 0 15 64.8	215.99 215.99	22.18 22.20	193.81 193.79	0 15 30.3 0 15 15.3 0 15 16.1	24.62 24.58 24.67	0 16 18.3 0 16 17.9 0 16 60.8	24.71 24.72 24.78 24.77	1.60 1.60	1.50 1.50		
3	0 27 3.3	9 x 6	0 27 37.5 0 27 37.6	0 27 28.5 0 27 28.6	238.83 238.83	23.58 23.67	215.25 215.16	0 27 33 0 27 33 0 26 58 0 26 59	26.08 26.06 26.01 25.99	0 27 53 0 27 53 0 28 7 0 28 6.5	26.12 26.11 26.15 26.12	1.35 1.60	1.45 1.65		
4	0 38 58.82	9 x 6	0 38 63.32 0 38 63.3	0 38 54.32 0 38 54.3	250.85 250.85	24.96 24.98	225.89 225.87	0 38 31.82 0 38 30.6 0 37 58.82 0 37 59.9	27.41 27.42 27.34 27.35	0 39 25.82 0 39 25.8 0 38 58.62 0 39 58.6	27.56 27.57 27.81 27.80	1.40 1.65	1.45 1.34		
5	0 50 39.5	9 x 6	0 50 44 0 50 45.4	0 50 35 0 50 33.4	274.57 274.57	26.47 26.49	248.10 248.04	0 50 21.2 0 50 21.1	29.10 29.16						
6	0 61 15.01	9 x 6	0 61 19.51	0 61 10.51	297.59	Shaft not yet bottomed.									
7	0 72 7.92	9 x 6	0 72 12.42 0 72 12.3	0 72 3.42 0 72 3.3	215.14 215.14	23.61 23.71	186.45 186.43	0 72 7.92 0 72 7.9	31.36 31.96	..... .....	..... .....	2.50 3.16	1.50 1.87		
8	1 2 41.53	9 x 6	1 2 46.08 1 2 46.1	1 2 37.08 1 2 37.1	124.91 124.88	23.77 23.77	95.14 95.11	1 2 8.58 1 2 8.58	32.39 32.39	1 3 8.58 1 3 8.58	32.16 32.66	1.55 1.55	1.76 1.65		
9	1 8 32.42	6 x 5	1 8 35.42 1 8 37.2	1 8 20.42 1 8 31.2	75.92 75.86	30.38 30.38	45.54 45.69	1 7 65.42 1 8 14.7 1 7 32.42	33.00 28.91 32.96	1 8 65.42 1 9 1.4 1 9 32.42	33.03 33.03 33.135	1.50 1.22	1.18 1.65		
10	1 13 62.87	7.5 x 5	1 14 0.62 1 14 1.0	1 13 50.12 1 13 59.6	88.57 88.58	30.25 30.25	57.62 57.63	1 13 62.87 1 13 62.87	33.51 33.47	1 14 20.87 1 14 62.87	34.18 34.22	1.35 1.30	1.40 1.30		
11	1 18 35	6 x 5	1 18 38 1 18 38.6	1 18 32 1 18 33	93.15 93.09	31.88 31.84	61.27 61.27	1 18 35 1 18 37.3	34.55 34.49	1 18 50 1 18 60.8	34.57 34.62	1.50 1.32	1.35 1.68		
12	1 25 13.56	9 x 6	1 25 17.76 1 25 18.7	1 25 8.76 1 25 9.6	127.16 127.18	32.58 32.60	94.58 94.58	1 25 13.56 1 25 13.8	35.13 35.18	1 24 0 1 24 49.56	..... 35.09	..... 1.46	..... 1.35		

\* Not checked. † Could not check, survey mark damaged.  
 NOTES.—The differences in plate readings are partly due to slight alterations of the surface alignment.

No. 52.

Messrs. Carter & Co. to Supervising-Engineer Davis.

Contract No. 79—North Sydney Sewerage.

Sir,

Box No. 10, North Sydney, 24 January, 1893.

Seeing that the lower and shallower portion of the above contract will be completed many months before the upper portion, we hereby request your permission to work three shifts in the deeper ground.

The drives on this length are now in some considerable distance, and we do not think any serious annoyance will be caused to the residents in the vicinity through our working the three shifts.

We may mention that we have personally interviewed a number of the people in the neighbourhood who are agreeable to the extension of our working hours.

We are, &c.,  
 CARTER & CO.

These

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These shafts being deep, and the whole of the tunnels being driven some distance from the shafts, I think the contractors might be allowed to work three shifts; of course, with the distinct understanding that should the residents complain the present arrangement to be reverted to, viz., from 6 a.m. to 10 p.m.—J.D., 25/1/93. Mr. Bagge.

Contractor might be informed accordingly. Engineer-in-Chief.—C.H.O.B., 25/1/93. Approved.—R.H., 25/1/93. Contractors informed.—J.D., 31/1/93.

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No. 53.

Supervising-Engineer Davis to Messrs. Carter & Co.

Gentlemen,

Department of Public Works, Sydney, 31 January, 1893.

I have to acknowledge the receipt of yours of the 24th instant, asking to be allowed to work three shifts in the deep tunnels, and in reply, I have to inform you that the Engineer-in-Chief has approved of your doing as you wish, but it is to be distinctly understood that should the residents complain of the nuisances arising from the blasting, the present working hours are to be reverted to.

I have, &c.,

J. DAVIS,

Supervising Engineer.

Through Mr. Boys.

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No. 54.

The Chief Clerk to the Commissioner for Roads.

Main Outfall Sewer, North Sydney.—Carter & Co., contractors.

Public Works Department, Sydney, 6 March, 1893.

The Bank fixed deposit receipt for £2,000 held in respect of the above contract will mature on the 10th instant. Should it be renewed?

D.C.M'L.

(Pro U.S.)

Mr. Davis.—F.C.P., 6/3/93. Contract time does not expire for another twelve months. The deposit might therefore be renewed for another twelve months. Engineer-in-Chief.—J.D., 7/3/93. W. Mitchell, 7/3/93. Under Sec.—R.H., 7/3/93. Messrs. Carter & Co. asked to say, 7/3/93.—27/3/93.

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No. 55.

The Under Secretary for Public Works to Messrs. Carter & Co.

Gentlemen,

Department of Public Works, Sydney, 7 March, 1893.

As the Bank fixed deposit receipt for £2,000 held in respect of your contract for the main outfall sewer, North Sydney, will mature on the 10th instant, I am directed by the Secretary for Public Works to ask whether you wish the deposit to be renewed, and if so, for what period?

I am also to ask that you will be good enough to say what action is to be taken in regard to the interest which will accrue under the present deposit.

I have, &c.,

J. BARLING,

Under Secretary

(Per D.C.M'L.)

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No. 56.

The Under Secretary for Public Works to Messrs. Carter & Co.

Gentlemen,

Department of Public Works, Sydney, 27 March, 1893.

I am directed by the Secretary for Public Works to ask that you will be good enough to furnish a reply to my letter of the 7th instant in regard to the security lodged in respect of your contract for construction of the main outfall sewer, North Sydney.

I have, &c.,

J. BARLING,

Under Secretary

(Per D.C.M'L.)

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No. 57.

The Agent for Messrs. Carter & Co. to The Secretary for Public Works.

Sir,

5, Spring-street, Sydney, 23 March, 1893.

Referring to contract now in course of construction by Messrs. Carter & Co., sewer construction, North Shore, I have the honor to direct your attention to the fact that the retention money now held by the Government is in excess of the amount originally lodged with tender, and that such amount is adequate security for the Government to ensure the just and proper fulfilment of the contract.

I have, therefore, on behalf of my clients, to apply for a return of the deposit of £2,000 held by the Crown.

I have, &c.,

W. ARMSTRONG,

Agent for Carter & Co.

B.C. Mr. Hickson for report.—J.B., 23/3/93. Mr. Bagge.—F.C.P., 24/3/93. Mr. Davis.—C.H.O.B., 24/3/93. Report herewith.—J.D., 24/3/93.

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No. 58.

## No. 58.

## The Engineer-in-Chief for Sewerage to The Secretary for Public Works.

*Minute Paper.*

*Subject*:—Contract No. 79, North Sydney Outfall Sewer.—Contractors ask that fixed deposit be returned.  
Department of Public Works, Roads and Bridges and Sewerage Branch,  
Sydney, 24 March, 1893.

THE tender for this contract amounted to £39,890, of which £20,709 14s. worth of work has been executed, or about half the total quantity. The fixed deposit in all cases is held until the completion of the work, as a guarantee for the due fulfilment of the contract, and I do not think in this instance an exception should be made. On some occasions the Minister has approved of retention money being returned after the amount in hand, including the fixed deposit, has reached 10 per cent. of the amount of the tender, but as much of the work remaining to be done is put down in the schedule of prices at very low rates, and the work finished, in some instances, at high rates, I could not recommend that any of the retention money be returned.

At present the Department holds the following:—

	£	s.	d.
Fixed deposit ... ..	2,000	0	0
Retention money ... ..	2,070	19	5
Total ... ..	£4,070	19	5
10 per cent. of tender would amount to ... ..	£3,989	0	0

J. DAVIS.

For the approval of the Engineer-in-Chief.—C. H. OHLFSEN BAGGE, 25/3/93.

All that contractors would be entitled to if the new general conditions were in force would be £70 19s. 5d. As these are not yet in force and contractors have good prices for work done, whereas work to be done is put down at low figures, I cannot recommend that their application be granted.—R.H., 25/3/93. Under Secretary.

List to refuse.—J.B. 27/3/93. Approved by Minister, W.J.L., order No. 867.—D. M'L., 11/4/93. J.B. Roads, B.C., 12/4/93. Seen.—J.D., 14/4/93. Armstrong informed, 17/4/93.

## No. 59.

## The Engineer-in-Chief for Sewerage to The Agent for Messrs. Carter &amp; Co.

Sir,

Public Works Department, Sewerage Branch, 17 April, 1893.

In reply to your letter of 25th ult., applying, on behalf of Messrs. Carter & Co., for return of deposit money on contract money No. 79, North Shore Sewerage, I have the honor to inform you that it is a rule of this Department to hold the "fixed deposit" until the contract is finished, and in this case no exception can be made. Moreover, as the "fixed deposit and retention money do not amount to more than 10 per cent. of the tender, at present no portion of the retention money can be returned.

I have, &amp;c.,

ROBERT HICKSON,

Engineer-in-Chief for Sewerage.

## No. 60.

## Supervising-Engineer Davis to Inspector Rowney.

*Minute Paper.*

*Subject*:—Contract No. 79, North Shore Outfall.—Check of curve north of shaft No. 4.  
Department of Public Works, Roads and Bridges and Sewerage Branch,  
Sydney, 17 April, 1893.

Mr. Boys' chord-pegs were checked by Mr. Rowney during his absence on leave, and, as he did not agree with the work done by Mr. Boys, I thought it advisable, so that there might be no doubt in the matter, to ask Mr. Bagge to allow Mr. Peake to continue his survey to the T.P. at the north end of the curve in question. This he has now done, and the result is shown on sketch marked A. Mr. Peake's work does not quite coincide with Mr. Rowney's, but I think, as he comes between Mr. Boys and Mr. Rowney, the tunnel beyond the T.P. should be driven to Mr. Peake's line.

J.D.

Mr. Rowney to note. Noted.—G.H.R., 18/4/92. Noted.—J.W.F.B., 2/2/93.

## No. 61.

## The Agent to Messrs. Carter &amp; Co. to The Secretary for Public Works.

Sir,

5, Spring-street, Sydney, 21 April, 1893.

I have the honor to ask reconsideration of your refusal to allow a return of part of the retention money held on account of contract No. 79, North Shore Sewerage, and to point out that in addition to deposit of £2,000; retention money now amounts to £2,000, and that Messrs. Carter have plant and machinery on the contract amounting to £3,500, and also materials to the value of £800, making a total of security value of upwards of £8,000.

I respectfully submit that the Department will hold very ample security after a deduction of £2,000 from the retention money.

I have, &amp;c.,

W. ARMSTRONG.

Mr. Hickson.—D.C.M'L. (*pro* U.S.), B.C., 21/4/93. Mr. Davis, 21/4/93. Please attach previous papers.—J.D., 21/4/93. Papers herewith.—F.C.P., 22/4/93. A voucher has been signed to-day for work done amounting to £1,453 9s.—R.H., 27/4/93.

No. 62.

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No. 62.

Messrs. Carter &amp; Co. to The Under Secretary for Public Works.

Deposit Security—North Shore Outfall Sewer.

Sir,

Box No. 10, North Sydney, 23 April, 1893.

In reply to your letter *re* the above security, we have to ask you to be good enough to renew the same with the Bank of New Zealand for a further period of six months, and to pay the accrued interest into our current account with the same bank.

We are, &amp;c.,

CARTER &amp; CO.

Mr. Mitchell, 25/4/93.  
J.D., 27/4/93.

Receipt for renewal to Bank of New Zealand, 26/4/93.

Seen.—

No. 63.

The Manager, Bank of New Zealand, to The Under Secretary for Public Works.

Main Outfall Sewer, North Sydney.

Sir,

Bank of New Zealand, Sydney, 1 May, 1893.

I beg to acknowledge receipt of your letter of 26th April, and, as requested, I have renewed the fixed deposit of £2,000 for six months at 3 per cent., and beg to enclose new receipt. I have credited the interest on the matured receipt to Messrs. Carter & Co.'s account.

I have, &amp;c.,

F. E. CORKILL

(Pro Manager).

Mr. Mitchell with Fixed Deposit Receipt.—D.C.M'L., B.C., 2/5/93.  
acknowledged. Document placed in safe.—W.F.M., 2/5/93.

Receipt of document

No. 64.

The Clerk-in-Charge of Bonds and Contracts to The Engineer-in-Chief for Sewerage.

*Minute Paper.**Subject*:—Main Outfall Sewer, North Sydney.

Bonds and Contract Branch, Department of Public Works, Sydney, 3 August, 1893.

MEMORANDUM herewith duly signed by the contractors, Messrs. Carter & Co., agreeing to repay advances made from time to time on material not on the contract site.

The original agreement is also sent herewith.

HAROLD F. NORRIE.

Seen.—R.H., 4/8/93. Mr. Davis to note.—F.C.P., 4/8/93. Noted.—J.D., 4/8/93.  
Accountant to note.—F.C.P., 4/8/93. Noted.—O.C., 4/8/93. Final return forwarded to Treasury for payment this day. Bond 92-538 and agreement 93-974, attached herewith, may now be filed with the papers.—O.C. (*per* E.H.), 13/12/94.

MEMORANDUM.

IN consideration of the Minister for Public Works in and for the Colony of New South Wales advancing to us the sum of £1,360, and of any future advances to be made to us, we hereby agree to repay to the said Minister for Public Works the said sum of £1,360 and future advances, together with interest at the rate of £6 per centum per annum on such sums respectively from the date of advance on demand. And we hereby charge all moneys due or payable, or becoming due or payable, to us under a certain contract for the construction of the North Shore main outfall sewer from near Long Bay to Mount-street, in the said Colony, entered into by us with the Government of the said Colony, also all cement, building materials, and every other thing already used or to be used in connection with our said contract with the repayment of the said sum of £1,360, and any future advances and interest at the rate aforesaid. And we hereby undertake to give, whenever called upon to do so, a valid bill of sale to the said Minister for Public Works over the said cement, building materials, and every other thing used in connection with our said contract now stored in our premises at Alfred-street, North Sydney, in the said Colony, or elsewhere, such bill of sale to contain a power of sale and such other powers, provisoes, and agreements as the said Minister for Public Works may be advised. Also, further undertake to give immediate possession of same to the said Minister, or any person appointed by him for that purpose, whenever called upon to do so.

As witness our hands, at Sydney, this 3rd day of August, A.D. 1893.

Witness,—

HAROLD F. NORRIE, J.P.

H.F.N., 3/8/93.

JOHN CARTER.

D. G. SNODGRASS.

No. 65.

Messrs. Carter &amp; Co. to Supervising-Engineer Davis.

Sir,

Box No. 10, North Sydney, 10 August, 1893.

Referring to our letter of 2nd June, 1893, in which we accept a maximum thickness of 2 inches over plan dimension as the quantity to be paid for lining tunnel on contract No. 79, North Sydney sewerage; we beg to state that this was agreed to on the supposition that the ground would admit of such dimension being practicable.

In this contract, as in some others of a similar character, notably contract No. 53, Waverley sewerage, the ground met with is of such a nature as to render it impossible to keep within the usual limits.

The 2 inches referred to was fixed as being 2 inches less than usually works out as an average cross-section, but owing to the foregoing reason, and to unavoidable errors in the alignment, we ask to be allowed cross-sections equal to those of contract No. 53, less the 2 inches which was intended to be deducted.

We are, &amp;c.,

CARTER &amp; CO.

Register and connect papers.—J.D., 9/8/93. Previous papers 92/1,216 herewith.—F.C.P., 10/8/93.

No. 66.

## No. 66.

## Supervising-Engineer Davis to The Engineer-in-Chief for Sewerage.

*Minute Paper.*

*Subject* :—North Sydney Outfall Sewer, Contract No. 79—Contractors write asking that the question of thickness of lining in tunnel should be reconsidered.

Department of Public Works, Roads and Bridges and Sewerage Branch,  
Sydney, 14 August, 1893.

IN June of last year, at the time the tunnelling was commenced on this contract, the contractors undertook, if they were allowed to do the excavation under item No. 3 of the schedule of prices, they would not require payment for more than  $7\frac{1}{2}$  inches lining or a margin of 2 inches over the cross-sections of the tunnel excavation ordered.

The tunnel excavation is nearly finished and the first length of about 18 chains of lining is in progress.

The contractors now write asking that the question of the thickness of the lining to be paid for should be reconsidered.

They allege that the ground met with in the tunnels was of an exceptional nature, and similar to that on the Waverley and Woollahra branch sewer (contract No. 53), and they, therefore, desire that they be allowed cross-sections equal to those paid for on that contract, less 2 inches.

The rock in the tunnels at Waverley and North Shore, is certainly alike, and a number of "floors" and "faces" were met with at both places which materially increase the area of the tunnels. The cross-sections as a consequence were unusually large at Waverley, the average margin of the lining over the excavation ordered being about  $5\frac{1}{2}$  inches. Difficulties of the same nature have been experienced at North Shore, and the cross-sections are likely to work out equally as large as the Waverley ones.

The papers show that when the agreement was made it was thought that there would be no exceptional difficulties to be encountered in the driving, and that the lining would not exceed the cross-section of excavation by more than 4 inches. On this understanding, Messrs. Carter & Co. offered to forego 2 inches of the lining if they were allowed to do the excavation as they desired. The question now arises whether (seeing that the rock has proved to be similar to Waverley), they should have the agreement modified so as to be paid on the basis of that contract.

It was evidently the intention of the Engineer-in-Chief for the contractor to bear the expense of 2 inches of lining, and the contractors ask that by regarding Waverley and North Shore as parallel cases this should be done.

I, therefore, beg to recommend that the 2 inches to margin of tunnel-lining be increased to  $3\frac{1}{2}$  inches in thickness.

J. DAVIS.

The 2 inches was decided upon on the assumption that the average allowance for concrete-packing was 4 inches. As it is now stated this really works out at  $5\frac{1}{4}$  inches. Mr. Davis' suggestion is only fair and equitable, and may therefore be adopted.—R.H., 15/8/93.

For the consideration of the Engineer-in-Chief.—C. H. OHLFSEN BAGGE, 15/8/93. Messrs. Carter & Co. informed.—J.D., 21/8/93.

## No. 67.

## Supervising-Engineer Davis to Messrs. Carter &amp; Co.

Gentlemen,

Department of Public Works, Sydney, 21 August, 1893.

I have to acknowledge the receipt of yours of the 10th instant, stating the nature of the ground through which the tunnels have passed is not what is was anticipated, and that therefore the maximum thickness of 2 inches over the cross section ordered for, the excavation (see my letter, 27th May, 1892), is not sufficient, and asking that as the nature of the rock is similar to that passed through in the tunnels of the Waverley and Woollahra Branch Sewer, the cases be regarded as parallel, and that you be allowed the cross sections equal to those on that contract less 2 inches.

In reply I have to inform you that the Engineer-in-Chief has decided, on account of the nature of the rock, to modify the agreement, contained in my letter of 27th May, 1892, to the extent of increasing the margin of 2 inches thickness of lining, over the cross section of excavation ordered, to a maximum of  $3\frac{1}{4}$  inches. Otherwise the terms of the letter to remain unaltered.

It is also to be understood that this additional allowance in the lining is to cover the cost of any extra concrete, which will be required through unavoidable errors in the levels and alignments of the tunnels, including those between shafts Nos. 3 and 4.

Will you please accept this modification of the agreement previously made respecting the lining of the tunnels in writing.

I have, &c.,

J. DAVIS,

Supervising Engineer.

## No. 68.

## Messrs. Carter &amp; Co. to Supervising-Engineer Davis.

Sir,

Alfred-street, North Sydney, 28 August, 1893.

We have the honor to acknowledge your letter of 21st August re maximum of lining to be allowed in tunnels on contract No. 79, North Sydney Sewerage, and to inform you that we agree to accept the same according to the terms of your letter.

We have, &c.,

CARTER & CO.

Please put with other papers.—J.D., 30/8/93.

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No. 69.

Resident-Engineer Boys to Supervising-Engineer Davis.

Department of Public Works, Roads and Bridges and Sewerage Branch,

Dear Sir,

Sydney, 23 August, 1893.

I find that in section 88 of specification, bluestone concrete packing is to be used in the shafts behind the brickwork, but as we have always used sandstone packing, with the exception of that used round the pipes in the high drop shafts, will you advise me if it is right to pack with the sandstone packing, as we are just starting the brickwork in shafts 4 and 12; and also will you be so good as to define what thickness of bluestone concrete is to be used round the pipes, if you decide to use sandstone in the shafts.

The joints in the brickwork are specified to be "struck," but as we usually have them "cut and struck," will you order this if you think it necessary; it would improve the work very much. I should be glad if you could come over for half-an-hour to-morrow if you have time, as there are a few little points which would be better for settling.

And I should be glad if you could send me another inspector or two, as the work is increasing rapidly.

I have, &amp;c.,

J. W. T. BOYS.

The clause referred to does not comprise the packing, but merely the chambers which are of course to be built with bluestone concrete. The shafts are to be packed as usual with concrete sandstone packing with 6 inches of bluestone concrete round down pipes in the body of the shaft. I will see Mr. Boys to-day *re* inspectors and also joints.—J.D., 25/8/93. Mr. Boys.

Noted.—J.W.H.B., 31/8/94.

No. 70.

The Chief Clerk to The Commissioner for Roads.

Main Outfall Sewer, North Sydney—Carter &amp; Co., contractors.

Public Works Department, Sydney, 4 September, 1893.

The bank fixed deposit receipt for £2,000, held in respect of the above contract, will mature on the 20th instant. Should it be renewed?

D. C. M'L.

(Pro U.S.)

Mr. Davis, F.C.P., 4/9/93.

Contract time does not expire until the beginning of March of next year, and the work will certainly not be finished before that date. I should, therefore, think the deposit should be renewed for another six months.—J.D., 4/9/93. Engineer-in-Chief.

Recommended.—R.H., 5/9/93. Mr. Mitchell, 6/9/93. Messrs. Carter & Co. asked to say for what period deposit is to be renewed, 7/9/93.

No. 71.

The Under Secretary for Public Works to Messrs. Carter &amp; Co.

Gentlemen,

Department of Public Works, Sydney, 7th September, 1893.

As the Bank fixed deposit receipt for £2,000, held in respect of your contract for the construction of the main outfall sewer at North Sydney will mature on the 10th instant, I am directed by the Secretary for Public Works to ask whether you desire the deposit to be renewed, and, if so, for what period?

I am also to request that you will be good enough to say what action is to be taken in regard to the interest which will accrue under the present deposit.

I have, &amp;c.,

J. BARLING,

Under Secretary

(Per D. C. M'L.)

No. 72.

Messrs. Carter &amp; Co. to The Under Secretary for Public Works.

Fixed Deposit Receipt, Contract No. 79—North Sydney Sewerage.

Sir,

Box No. 10, Alfred-street, North Sydney, 18 September, 1893.

Referring to your letter *re* the above, we have the honor to ask you to be good enough to renew the same for a further period of six months, and to pay the accrued interest to credit of "Carter & Co., North Shore Contract," with the Bank of New Zealand, Pitt-street.

We have, &amp;c.,

CARTER &amp; CO.,

Mr. Mitchell.—D.C.M'L., 19/9/93.

Receipt for renewal to Bank of New Zealand, 19/9/93.

No. 72A.

The Under Secretary for Public Works to The Manager, Bank of New Zealand.

Sir,

Department of Public Works, Sydney, 19 September, 1893.

I am directed by the Secretary for Public Works to forward herewith, for renewal for six months from the 10th instant, fixed deposit receipt No. A 21,807 for the sum of £2,000 issued by your Bank and lodged in connection with Messrs. Carter & Co.'s contract for the construction of the main outfall sewer, North Sydney.

I am to ask that the interest which has accrued under the present deposit may be placed to the credit of "Messrs. Carter & Co., North Shore Contract."

I have, &amp;c.,

J. BARLING,

Under Secretary

(Per D. C. M'L.)

No. 73.

## No. 73.

The Manager, Bank of New Zealand, to the Under Secretary for Public Works.

Sir,

Bank of New Zealand, Sydney, 21 September, 1893.

I have the honor to hand you our fixed deposit receipt No. A 21,821 in your favour for £2,000, being renewal of No. A 21,807 for a like sum issued in connection with Messrs. Carter & Co.'s contract for the construction of the main outfall sewer, North Sydney.

The interest accrued on the old receipt has been credited to "Messrs. Carter & Co., North Shore contract," as requested by you.

I have, &c.,

R. B. RIGG,  
(Pro Manager).

Mr. Mitchell.—D.C.M'L., 22/9/93.

## No. 74.

The Under Secretary for Public Works to Messrs. Carter & Co.

Gentlemen,

Department of Public Works, Sydney, 22 September, 1893.

I am directed by the Secretary for Public Works to inform you that, in compliance with the request contained in your letter of the 18th instant, the fixed deposit receipt for £2,000 held in respect of your contract for the main outfall sewer, North Sydney, has been renewed for a period of six months from the 10th instant.

I am to add that the Bank states that the interest which has accrued under the original deposit has been placed to the credit of the account "Messrs. Carter & Co., North Shore contract."

I have, &c.,

J. BARLING,  
Under Secretary,  
(Per D.C.M'L.)

## No. 75.

Supervising-Engineer Davis to The Engineer-in-Chief for Sewerage.

*Minute Paper.*

*Subject*:—Contract No. 79, North Sydney Outfall, Ernest-street Branch Sewer.

Department of Public Works, Roads and Bridges and Sewerage Branch,

Sydney, 19 October, 1893.

A LENGTH of 33 feet of the Ernest-street branch sewer was included in the above contract. The levels of the remaining 568 feet could not be fixed at the time the contract was let, as the details of the reticulation draining to Ernest-street had not been worked out. The reticulation carried out is shown on attached plan in thick blue line, and that for which plans are ready in thin blue lines. At present the sewage from the pipes, and from the houses in the district, is draining into a creek, which crosses Walker-street near Ernest-street, and as there are great complaints from the residents of the serious nuisance caused thereby, it is most desirable that the sewage should be diverted into the outfall sewer as soon as possible. If the balance of the Ernest-street branch is constructed simultaneously with the outfall sewer, then, on the completion of that sewer (which will be in about six months), and the outfall works (designs for which are ready), the whole of the sewerage of the district referred to and shown on plan attached will be provided for.

By carrying out this branch in conjunction with contract No. 79, a shaft, which is estimated to cost £160, which otherwise would have to be sunk and built, can be saved.

I recommend that Messrs. Carter & Co. be asked to do the work in question at their schedule rates for contract No. 79, amounting to £1,220.

J. DAVIS.

As Mr. Davis has explained, it will be a saving of £160 if this Ernest-street branch sewer is constructed now, while the work for the main sewer is in progress, and by the time the main sewer is completed, the drainage of the Holterman and Berry Estate (which is ready for tendering) can be at once discharged into the main sewer through this branch. I beg, therefore, to submit Mr. Davis' recommendation for favourable consideration.—C. H. OLSEN BAGGE, 19/10/93. Engineer-in-Chief.

Recommended. It would be a most desirable thing, from a sanitary point of view, to let this work be done now as an extension of the existing contract. Funds are available.—R.H., 20/10/93. Under Secretary.

List for approval.—J.B., 21/10/93. Approved by Minister. W.J.L. Order No. 3,737.—D.C.M'L., 28/10/93. J.B. Roads.—B.C., 30/10/93. Seen. Mr. Davis to note.—R.H., 31/10/93. Contractors informed.—J.D., 27/11/93.

## No. 76.

Supervising-Engineer Davis to Messrs. Carter & Co.

Gentlemen,

Department of Public Works, Sydney, 27 November, 1893.

I have the honor to inform you that the Minister has approved of your executing the Ernest-street branch sewer, as shown on the accompanying plan, in connection with your sewerage contract No. 79, at your schedule rates for that contract.

I enclose a schedule in which is given the probable quantities of the different kinds of work in this branch sewer.

Will you please sign this schedule, undertaking to do the work at the rates referred to above, and given in the schedule.

Yours, &c.,

J. DAVIS,  
Supervising Engineer for Sewerage.  
(Through MR. BOYS).

No. 77.

## No. 77.

Memoranda respecting certain small items in connection with Messrs. Carter & Co.'s account.

Date.		Time.	Quantity.	Rate.	£	s.	d.
1893.							
July 4.	Single team, Bondi ... ..	day	1	£1	1	0	0
	Ferry ... ..				0	1	6
	7. Single team, Bondi ... ..	day	1	£1	1	0	0
	Extra horse ... ..	day	1	10s.	0	10	0
	Ferry ... ..				0	3	0
	28. Single team, Bondi ... ..	day	1	£1	1	0	0
	Ferry ... ..				0	1	6
Sept. 14.	Single team, Bondi ... ..	day	1	£1	1	0	0
	Extra horse ... ..	day	1	10s.	0	10	0
	Ferry ... ..				0	3	0
					<hr/>		
J. Davis, Esq., Supervising Engineer, Sewerage.					£5	9	0

Inspector Wagg will know if these items are correct.—J. W. F. Boys, 16/12/93. Are these charges correct?—J.D., 16/12/93. Inspector Wagg. Cartage correct. Charges for same, I expect, are in accordance with Messrs. Carter & Co.'s schedule rates.—Inspector Wagg, 16/12/93. Include in next progress return.—J.D., 17/12/93. Mr. Boys. Cont. 79. Charged for.—J. W. F. Boys, 17/12/93.

43.	Cement ... ..	7 barrels at 16s.	5	12	0		
44.	Mechanic... ..	3½ days at 12s.	1	19	0		
46.	Labourer... ..	13 days at 10s.	6	10	0		
47.	Single team ... ..	6½ days at 20s.	6	10	0		
48.	Extra horse ... ..	3½ days at 10s.	1	15	0		
	Ferry fares ... ..		0	12	0		
	Galvanized iron, 1 sheet for Inspector's office ... ..		0	5	0		
	Screws and washers do ... ..		0	1	0		
					<hr/>		
Amount already paid ... ..					£23	4	0
Remainder ... ..					12	2	0
					11	2	0

J. Davis, Esq.

I have marked the items I know about; Inspector Wagg will know the rest.—J. W. F. Boys, 4/12/93. Report attached, describing the work in full that Mr. Boys knows about, in compliance with Mr. Davis' memo.—7/12/93. Particulars attached. Tools supplied to be charged as well.

Sewerage Branch, Public Works Department.—Dr. to Carter & Co.

			£	s.	d.		
1892.	Labourer at No. 5A shaft ... ..	13 days at 10s.	6	10	0		
1893.							
July 4.	Single team to Bondi ... ..	1 day at 20s.	1	0	0		
	Freight ... ..		0	1	6		
Aug. 7.	Single team, Bondi ... ..	1 day at 20s.	1	0	0		
	Extra horse ... ..	1 day at 10s.	0	10	0		
	Freight ... ..		0	3	0		
	Cement ... ..	5 barrels at 16s.	4	0	0		
26.	Single team, Bondi ... ..	1 day	1	0	0		
	Cement ... ..	2 barrels	1	12	0		
	Freight ... ..		0	1	6		
	Single team, Newtown ... ..	1 day	1	0	0		
	Freight ... ..		0	1	6		
	Mechanic cutting pipe ... ..	half day	0	6	0		
Sept. 2.	Mechanic cutting pipe ... ..	quarter day	0	3	0		
5.	1 sheet galvanized iron ... ..		0	5	0		
	Screws and washers ... ..		0	1	0		
	Mechanic cutting pipe ... ..	half day	0	6	0		
	Single team, shifting office ... ..	half day	0	10	0		
	Extra horse ... ..	1½ day	0	15	0		
14.	Single team, Bondi ... ..	1 day	1	0	0		
	Extra horse ... ..	1 day	0	10	0		
	Freight ... ..		0	3	0		
	Mechanic cutting pipe ... ..	half day	0	6	0		
	Single team, Newtown ... ..	1 day	1	0	0		
	Freight ... ..		0	1	6		
Nov. 1.	Mechanic cutting pipe ... ..	quarter day	0	3	0		
4.	Do ... ..	half day	0	6	0		
20.	Do ... ..	¼ day	0	9	0		
					<hr/>		
					£23	4	0

## Explanation of Messrs. Carter &amp; Co.'s Bill attached.

7 December, 1893.

		1892.	£	s.	d.
Labour at 5A shaft, 13 days, at 10s.	...	...	6	10	0
Paid for in voucher dated 12th May, 1892. This was for shifting timber work and re-erecting on altered position of shaft, Falcon-street and Alfred-street, out of way of tram-line.					
		1893.			
August 7—Cement, B Bls., 5 at 16s.	...	...	4	0	0
This cement went to Bondi.					
August 28—Additional B Bls., 2 at 16s.	...	...	1	12	0
Sent to Bondi.					
August 28—Single team, Newtown, 1 day	...	...	1	0	0
Do freight (mean ferry)	...	...	0	1	6
Sent for ironwork required on contract 79.					
August 28—Mechanic cutting pipe, $\frac{1}{2}$ day	...	...	0	6	0
September 2—do do $\frac{1}{4}$ day	...	...	0	3	0
These pipes were cut for No. 12 shaft, water cushion chamber, and also for 9A shaft.					
September 5—1 sheet galvanised iron	...	...	0	5	0
Screws and washers...	...	...	0	1	0
For the Inspector's office roof was injured, and permission granted for repairs.					
September 5—Mechanic cutting pipe, $\frac{1}{2}$ day	...	...	0	6	0
At Mount-st. shaft, inlet chamber.					
September 5—Single team, shifting office, $\frac{1}{2}$ day	...	...	0	10	0
Extra horse, $1\frac{1}{2}$ day	...	...	0	15	0
Shifting office from Neutral Bay out of sand, and placing at low-level road, Alfred-street, near No. 9 shaft.					
September 14—Mechanic cutting pipe, $\frac{1}{2}$ day	...	...	0	6	0
Fitting pipes at first W. cushion, No. 4 shaft, Ernest-street.					
September 14—Single team, Newtown, 1 day	...	...	1	0	0
Freight (means ferry)	...	...	0	1	6
Bringing remainder of ironwork for contract 79.					
November 1—Mechanic, cutting pipe, $\frac{1}{4}$ day	...	...	0	3	0
November 4—do do $\frac{1}{2}$ day	...	...	0	6	0
November 20—do do $\frac{1}{4}$ day	...	...	0	9	0
Cutting pipes for water cushions in No. 4 shaft, Ernest-street.					
I have had great difficulty in getting the contractors to send in their account, hence the delay.					

J. W. F. BOYS.

J. Davis, Esq., Supervising Engineer, Sewerage Contract.

Mr. Boys to include what has not been paid in next progress return. If there are other items which Mr. Boys cannot certify to will he please let me have a list to send on to Inspector Wagg.—J.D., 14/12/93.

Mr. Boys,—The fines had better be returned under the item of dray, &c., in schedule.—J.D.

Department of Public Works, Roads, Bridges, and Sewerage Branch,  
North Sydney, 19 December, 1893.

J. Davis, Esq., Supervising Engineer, Sewerage Contract,—

Dear Sir,

Am I to place the account cartage to Bondi, in Messrs. Carter & Co.'s account, to contract 79, or make a separate voucher for it?

I am, &amp;c.,

J. W. F. BOYS.

In contract No. 79 voucher.—J.D., 20/12/93. Mr. Boys.

Sewerage Branch, Public Works Department.

Dr. to Carter &amp; Co.

		£	s.	d.
1893.				
December 5—To Mechanic cutting pipe, No. 11 shaft, $\frac{2}{3}$ day, at 12s.	...	0	4	6
December 12—do do No. 4 shaft, $\frac{1}{4}$ day, at 12s.	...	0	3	0
		£0 7 6		

## No. 78.

## Messrs. Carter &amp; Co. to The Engineer-in-Chief for Sewerage.

Sir,

North Sydney, 28 December, 1893.

Our tender for contract No. 69, Western Suburbs Sewerage, having been accepted with the provision that payment shall be made for the same in funded stock, a condition to which we have agreed, we have to ask you to be good enough to assist us in our financial arrangements by paying the retention money (£2,000) held on contract No. 79, North Sydney Sewerage, on our next progress certificate for the same.

The balance of the work to be completed on this contract will not exceed £4,000, against which you have our fixed deposit for £2,000 as security.

We find that some trouble will be experienced in making satisfactory arrangements for the disposal of the stock which will be paid to us during the first few months, and we, therefore, hope that you will be good enough to grant our request.

We are, &amp;c.,

CARTER &amp; CO.

There

There is about £4,000 worth of work yet to be done to complete the contract, and as the Department holds a fixed deposit of £2,000, in addition to £1,988 19s. 7d., retention money, and as I consider the fixed deposit is sufficient to ensure the due completion of the contract, I recommend that the retention money, amounting to £1,988 19s. 7d., be returned to the contractors.—J.D., 3/1/94. Commissioner-in-Chief for Roads, Bridges, and Sewerage.

Recommended. These contractors have taken up the eastern branch extension sewer. £46,000 payment to be made in funded stock. Every consideration, therefore, should be shown to men who thus show their willingness to meet the Department.—R.H., 4/1/94. Under Secretary.

For approval.—J.B., 4/1/94. Approved.—W.J.L., 5/1/94. Mr. Hickson,—J.B., 5/4/94. Seen.—R.H., 5/1/94. Noted.—J.D., 5/1/94. Accountant. Noted voucher to Treasury this day.—O.C. (*per* E.H.), 8/1/94.

### No. 79.

Mr. Henry Stuart, St. Leonards Labour Electoral League, to The Secretary for Public Works.

St. Leonards Labour Electoral League,  
1, Beaconsfield-terrace, Walker-street, North Sydney, 3 February, 1894.

Sir,

I have been instructed by the above branch of the Labour Electoral League to draw your attention to a system of sweating that is taking place in connection with the North Shore Sewerage Contract. It has been alleged that a number of men, although working hard, are unable to earn enough to keep their families supplied with the bare necessities of life, and complaints have appeared in the Press with regard to same.

The majority of the members of this branch of the League feel confident that if you—yourself personally—can help put a stop to such a nefarious condition you will do so. Consequently, I am directed to request you to cause inquiries to be made as to the allegations, and sincerely hope you will do so.

I have, &c.,

HENRY STUART.

Say inquiry will be at once made, then ask Mr. Hickson to look into matter without delay.—J.B., 5/2/94. Mr. H. Stuart informed, and told that on receipt of report a further communication will be made to him.—5/2/94. Mr. Hickson.—D.C.M.L. (for U.S.), B.C., 5/2/94. Report as to Messrs. Carter & Co. work herewith.—J.D., 9/2/94. Engineer-in-Chief. Mr. Davis for report. I understood the miners on 79 are making good wages, and that they informed one of our officers that they had nothing to do with this complaint, and would strongly object to being put on at day work.—R.H., 7/2/94.

### No. 80.

Supervising-Engineer Davis to The Engineer-in-Chief for Sewerage

*Minute Paper.*

*Subject:—Alleged "sweating" on North Shore Sewerage Contract.*

Department of Public Works, Roads and Bridges and Sewerage Branch,  
Sydney, 9 February, 1894.

THERE are at present two contracts in progress at North Shore,—the outfall sewer, which is being constructed by Messrs. Carter & Co., and the reticulation of M. Holterman and Berry's Estates, which is being done by Messrs. Butcher Bros.

So far, I have concluded my inquiries on Messrs. Carter & Co.'s works. As these gentlemen expressed their willingness to allow their books and pay-sheets to be examined by an officer of this Department, I deputed Mr. Weedon to do this work. The result of his investigations I attach.

The miners at present employed are earning 15s. per day (see R. Stevens' statement), and the rate of wages, extending over a period of twelve months, have ranged from 8s. to 15s. per day, according to the nature of the work and class of workman.

I am satisfied, as far as Messrs. Carter & Co.'s workmen are concerned, that they have been very justly, and even liberally, dealt with, and that there has been no "system of sweating."

I have not concluded my inquiries as to Messrs. Butcher Bros. contract, but hope to do so in a few days.

J. DAVIS,

Supervising Engineer for Sewerage.

Submitted for the information of the Minister. As Messrs. Carter & Co. are looked upon as the *North Shore Sewerage Contractors*, they would be glad if the result of this inquiry, as far as they are concerned, was made public. A further report will be submitted as to the Messrs. Butcher & Co.'s contract, which, from all I know, will not be of such a favourable character.—R.H., 10/2/94. Seen by Minister.—J.B., 19/2/94.

STATEMENT made by R. Stevens (miner), who had just come to the surface after firing:—

I made an average of about 15s. a day whilst working in No. 4 drive—(memo. this work is that given under "Curnow and mates," and this statement agrees with the average there obtained).

I have been working for the last three months in Ernest-street, and our party have made an average of £3 to £3 5s. per week per man.

I also worked in No. 5 shaft last year, and averaged about 10s. per day whilst there.

R. STEVENS.

Witness—S. H. WEEDON, 8th February, 1894.

With reference to the wages paid by Messrs. Carter & Co., I find upon examining their wage sheets that no man has been paid under 8s. per day. The ruling rates per day being:—

For Boys.....	6s. to 7s.	For Plasterers.....	11s.
Ordinary labourers .....	8s. to 9s.	Engine-drivers .....	10s.
Concrete mixers.....	9s.	Minors.....	9s.
Smiths and carpenters .....	11s.	Foreman.....	12s. to 15s.
Bricklayers.....	13s.		

S.H.W., 8/2/94.

Extracts

## Extracts from Messrs. Carter &amp; Co.'s Pay-sheets.

Humphries and mates (six)—shaft sinking—		£	s.	d.
For fortnight ending	26 May, 1892 .....	29	11	9
"	" 9 April, 1892 .....	38	17	0
"	" 23 April, 1892 .....	30	17	0
"	" 7 May, 1892 .....	43	19	9
"	" 21 May, 1892 .....	47	18	0
"	" 4 June, 1892 .....	42	10	0
"	" 18 June, 1892 .....	52	7	0
"	" 2 July, 1892—shaft bottomed (194 feet) .....	31	12	0

576—£317 12 6

Assuming that all the men worked full time—rate per day per man=11s.

Curnow and mates (six)—shaft sinking—		£	s.	d.
For fortnight ending	9 April, 1892 .....	36	5	0
"	" 23 April, 1892 .....	46	9	3
"	" 7 May, 1892 .....	49	1	6
"	" 21 May, 1892 .....	43	12	6
"	" 4 June, 1892 .....	38	5	6
"	" 18 June, 1892 (part retention money returned) .....	82	1	6
"	" 2 July, 1892 .....	24	3	3
"	" 15 July, 1892 .....	37	11	6
Bonus given by contractors	.....	30	0	0

576—£387 10 0

Assuming that all the men worked full time—daily rate=13'45s.

Croncy and mates (six)—shaft sinking—		£	s.	d.
For fortnight ending	21 May, 1892 .....	27	4	3
"	" 4 June, 1892 .....	22	17	0
"	" 18 June, 1892 .....	31	13	3

216—£81 14 6

Assuming full time—daily rate = 7'57s.

Mallach and mates (four)—tunnel driving—		£	s.	d.
For fortnight ending	28 October, 1892 (broken time) .....	9	1	6
"	" 10 November, 1892 .....	14	11	9
"	" 24 November, 1892 .....	18	17	0
"	" 8 December, 1892 .....	17	19	1
"	" 22 December, 1892 .....	20	15	6
"	" 5 January, 1893 (holidays) ..	11	5	4
"	" 19 January, 1893 ..	22	5	2
"	" 2 February, 1893 .....	22	13	0
"	" 16 February, 1893 .....	20	9	9
"	" 2 March, 1893 .....	18	9	11
"	" 16 March, 1893 .....	21	8	7
"	" 29 March, 1893 .....	19	15	9
"	" 13 April, 1893 .....	17	3	6
"	" 27 April, 1893 .....	22	12	8
"	" 11 May, 1893 ..	19	17	8
"	" 25 May, 1893 ..	23	19	0
"	" 8 June, 1893 ..	33	16	7
"	" 22 June, 1893 ..	20	7	1
"	" 6 July, 1893 ..	22	9	11
"	" 20 July, 1893 ..	23	0	1
"	" 3 August, 1893 ..	23	0	2
"	" 17 August, 1893 ..	22	18	2
"	" 31 August, 1893 ..	18	3	4
"	" 14 September, 1893 (chiefly retention money) .....	18	19	9
"	" 28 September, 1893 (balance of retention money) .....	88	16	0

1,200—£572 16 3

Assuming full time—the daily rate averages = 9'555s.

Curnow and mates (four)—tunnel-driving—		£	s.	d.
For fortnight ending	30 September, 1892 .....	27	0	4
"	" 14 October, 1892 .....	18	18	5
"	" 28 October, 1892 .....	30	8	3
"	" 10 November, 1892 .....	32	7	3
"	" 24 November, 1892 .....	35	13	7
"	" 8 December, 1892 ..	38	13	0
"	" 22 December, 1892 ..	33	1	0
"	" 5 January, 1893 (including holidays) .....	15	7	0
"	" 10 January, 1893 .....	33	1	7
"	" 2 February, 1893 .....	36	1	6
"	" 16 February, 1893 .....	42	8	11
"	" 2 March, 1893 ..	48	8	2
"	" 16 March, 1893 ..	48	0	7
"	" 29 March, 1893 ..	43	11	1
"	" 13 April, 1893 ..	34	15	9
"	" 30 April, 1893 ..	51	19	6
"	" 11 May, 1893 ..	21	9	5
"	" 25 May, 1893 ..	18	12	10
"	" 8 June, 1893 ..	17	4	6
"	" 22 June, 1893 ..	19	12	9
"	" 6 July, 1893 (retention money on previous payments, scabbling completed this fortnight) ...	113	6	0

1,008—£760 1 5

Assuming full time—daily rate, 15s.

NOTE.—Gangs whose pay can be shown to obtain an average are necessarily formed of men who understand work and work well at the special work shown. The numerous instances where men have started and thrown up the work through not being able to make wages at the same rate of pay as those that are shown cannot be illustrated here.—S.H.W., 8/2/94.

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No. 81.

Inspector Fowle to Engineer Weedon.

Contract 79, North Sydney,  
19 February, 1894.

Sir,

I beg to report that on several occasions I have had to complain about the time the sandstone concrete is mixed for packing brickwork in shafts. To-day two 20-foot mixings were made up at 2 p.m. at No. 5 shaft. This concrete will not be put down shaft for use till 5.30 p.m. I have instructed Connors (foreman), who has charge of this work, not to have the concrete mixed so long before being used. He states to me that he has to take his instructions from the firm. I saw Mr. Snodgrass last Friday and complained to him about this matter, when he promised it should not be mixed until one hour before it is required to be used. I spoke to Reid (contractors' representative) to-day, and he states that they shall mix the concrete when convenient for themselves.

Inspector Reid informs me that on Saturday last, 17th February, about 1 p.m., at No. 6 shaft, it required half mixing 10 feet of sandstone concrete to finish brickwork packing in shaft. Henderson, bricklayer working in shaft, was on mixing board, and started to assist labourer gauge the stone. Inspector Reid instructed Henderson to use the fork in place of shovel in filling gauge-box, as the stone, which is broken close to the mixing-board, is not free from refuse. Inspector Reid asked Henderson the second time to use fork. Henderson replied that it did not want forking. Connor's foreman came on the scene and said to Henderson, "Go on; do not take any notice of him, he's only a damned big buck navy."

I have, &amp;c.,

G. A. FOWLE,

Inspector.

Correct.—R. G. REID.

When I first observed mixed concrete on the board at mouth of shaft No. 5, and found from Inspector Reid that it would not be used before evening, I pointed out to him that this was too long for it to stand, for though mixed dry, the stone had been soaked with water and the sand wetted by the rain. He told me the matter had been inquired into and settled by yourself and the contractors. I am still of opinion that it is detrimental to the strength of the concrete for the cement to be mixed for hours with the other wetted materials before going into the work. I beg to point out that such friction, as is evident by this report, between our inspector and the contractors' men should be put a stop to at once by removing the offending party from the works, as no satisfactory work can be done under the strained conditions obtaining at present.—S.H.W., 20/2/94. Mr. Davis.

Ask Carter &amp; Co. to see me.—R.H., 31/2/94.

The Engineer-in-Chief decided that Connor was to be removed from the North Shore contract, and that Reid was to leave when the work in contract No. 79 was finished. Inspector Reid is also to go from contract No. 79. I have already instructed Mr. Weedon to let Inspector Reid change places with Inspector Eyre.—J.D., 22/2/94. Mr. Weedon.

Accordingly.—S.H.W., 23/2/94. File.—J.D., 26/2/94.

No. 82.

The Chief Clerk to The Commissioner for Roads.

Main Outfall Sewer, North Sydney—Carter &amp; Co., Contractors.

Public Works Department, Sydney, 24 February, 1894.

The bank fixed deposit receipt for £2,000, held in respect of the above contract, will mature on the 10th proximo.

Should the deposit be renewed, and if the security is to be returned, should it be handed to Messrs. Carter & Co.?

D.C.M'L. (*pro* U.S.)

24/2/94. Mr. Davis.—R.H., 27/2/94.

It will probably be two months before the whole of the work on this contract will be finished, after which there will be the three months maintenance. The contractors might be asked if they wish to renew the deposit (say) for another three months.—J.D., 28/2/94. Engineer-in-Chief.

Deposit should be renewed for three months.—R.H., 28/2/94. Under Secretary. Mr. Mitchell, 28/2/94.

No. 83.

The Under Secretary for Public Works to Messrs. Carter &amp; Co.

Gentlemen,

Department of Public Works, Sydney, 1 March, 1894.

As the bank fixed deposit receipt for £2,000 lodged as security for the due performance of your contract for the main outfall sewer, North Sydney, will mature on the 10th instant, I am directed by the Secretary for Public Works to ask that you will be good enough to inform me whether you wish the deposit renewed; and, if so, for what period?

I am also to request that instructions may be given as to the disposal of the interest which will accrue under the present deposit.

I have, &amp;c.,

J. BURLING,

Under Secretary

(*Per* D.C.M'L.)

No. 84.

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No. 84.

The Under Secretary for Public Works to Messrs. Carter &amp; Co.

Sir,

Box No. 10, North Sydney, 9 March, 1894.

Fixed Deposit—Contract No. 79, North Sydney Sewerage.

In reply to your letter *re* above, we have to ask you to be good enough to renew the same for three months with the Bank of New Zealand, Pitt-street, city, and to pay the accrued interest to the credit of "Carter & Co., North Shore Contract," at the same Bank.

We are, &c.,  
CARTER & CO.

Mr. Mitchell.—D.C.M'L., 10/3/94. Bank receipt for renewal to Bank of New Zealand, 12/3/94.

No. 85.

The Manager, Bank of New Zealand, to The Under Secretary for Public Works.

Bank of New Zealand, Sydney, 13 March, 1894.

WE have much pleasure in handing you herewith our fixed deposit receipt No. 252,579 for £2,000, issued in terms of your requisition of 12th instant.

Yours, &c.,  
R. B. RIGG,  
Manager.

Mr. Mitchell.—D.C.M'L. (*pro* U.S.), 15/3/94. Document placed in safe; receipt acknowledged.—  
, 15/3/94. Mr. Davies to note.—F.C.P., 16/3/94. Noted.—J.D., 16/3/94.

No. 86.

Supervising-Engineer Davis to Resident-Engineer Boys.

*Minute Paper.**Subject* :—Contract No. 79.—Extension Shaft at Whaling Road.

Department of Public Works, Roads and Bridges and Sewerage Branch,

Sydney, 24 April, 1894.

MR. CLARK, M.P., called and asked if the shaft at Whaling Road could not be moved a few feet towards Milson's Point, as it would greatly inconvenience a butcher and others if it were sunk where shown on the drawing. Upon inquiries I find there are no inlets in that shaft, so that it can be moved without any difficulty to 1 m. 32 chains. I understand the contractors were seen by Mr. Clark, and they were agreeable to this alteration. Will Mr. Boys please make the alteration?

J.D.

This shaft has now been set out in new position.—J.W.T. BOYS, 27/4/94. File.—J.D., 28/4/94.

No. 87.

Messrs. Carter &amp; Co. to The Engineer-in-Chief for Sewerage.

Contract No. 79—North Sydney Sewerage.

Sir,

North Sydney, 1 May, 1894.

Some additional work (Ernest-street branch) in connection with the above having been added to the original contract, we have found it impossible to complete the same within the specified time, *viz.*, 10th March, 1894.

We have therefore to ask you to be good enough to extend the date of completion for a period of four months—that is, to the 10th July, 1894.

We are, &c.  
CARTER & CO.

Recommended. It was, of course, never intended to increase the work and not extend the time for completion.—R.H., 2/5/94. Under Secretary. List.—J.B., 3/5/94. Approved by Minister, W.J.L.; order No. 1,826.—D.C.M'L., 7/5/94. J.B. Mr. Hickson, B.C., 8/5/94. Seen. Inform.—R.H., 9/5/94. Mr. Davis.—F.C.P., 10/5/94. Messrs. Carter & Co., 14/5/94. Mr. Boys to note.—J.D., 15/5/94. Noted.—J. W. T. Boys, 16/5/94. File.—J.D. 16/5/94.

No. 88.

The Engineer-in-Chief for Sewerage to Messrs. Carter &amp; Co.

Gentlemen,

Public Works Department, Sewerage Branch, 11 May, 1894.

I have to acknowledge the receipt of your letter of the 1st inst., asking for an extension of four months to enable you to complete your contract No. 79, North Shore Sewerage, and in reply I have the honor to inform you that the Hon. the Minister for Public Works has approved of the extension asked for being granted.

I have, &amp;c.

ROBERT HICKSON,  
Commissioner and Engineer-in-Chief for Roads, Bridges, and Sewerage.

No. 89.

Resident-Engineer Boys to Supervising-Engineer Davis.

Contract No. 79—Ernest-street Sub-main.  
 Department of Public Works, Roads, Bridges, and Sewerage Branch,  
 North Sydney, 9 May, 1894.

The following shows the difference in cost of concrete in Ernest-street sub-main :—

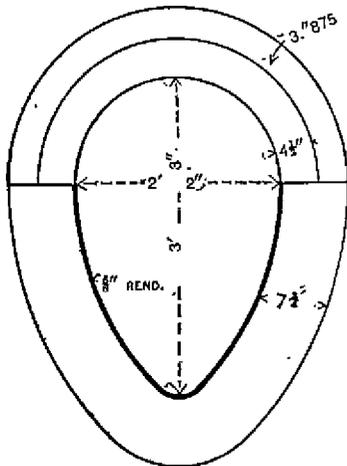
Length of sewer, 590'44 sq. feet.					
(1.) Concrete as per original agreement :—		£	s. d.	£	s. d.
Sandstone concrete, 35'97 cub. yd., 37s. 6d. ... ..		67	8 11		
Bluestone " 88'57 " 56s. ... ..		247	19 11		
				315	8 10
(2.) Concrete as per actual section :—					
Sandstone concrete, 69'54 cub. yd., 37s. 6d. ... ..		130	7 9		
Bluestone " 108'47 " 56s. ... ..		303	14 4		
				434	2 1
(3.) Total difference between agreement and actual section ...				£118	13 3
(4.) Difference between sandstone concrete in (1) and (2) :—					
(2.) Actual section ... ..		130	7 9		
(1.) Agreement ... ..		67	8 11		
Difference ... ..				£62	18 10
(5.) Difference between bluestone concrete in (1) and (2) :—					
(2.) Actual section ... ..		303	14 4		
(1.) Agreement ... ..		247	19 11		
				£55	14 5

J. W. T. BOYS.

The Ernest-street branch sewer was taken by the contractors as an extension to the original contract after the agreement was made relative to the margin to be allowed for lining over the cross-section of tunnel ordered. The difference of the cost of the lining, if it is paid on the basis of the agreement referred to (see 93/1,074), and the actual lining put in is £118 13s. 3d. Will the Engineer-in-Chief please say if the Ernest-street branch is to be paid on the same basis as the main sewer, or treated differently and the actual lining paid for? I consider it would hardly be fair to expect the contractors to take out the small cross-section in Ernest-street with the same margin as the larger cross-section in the main sewer, although I think the margin in very high, viz., an average in the former of 6 inches over what was ordered.—J.D., 9/5/94. Engineer-in-Chief.

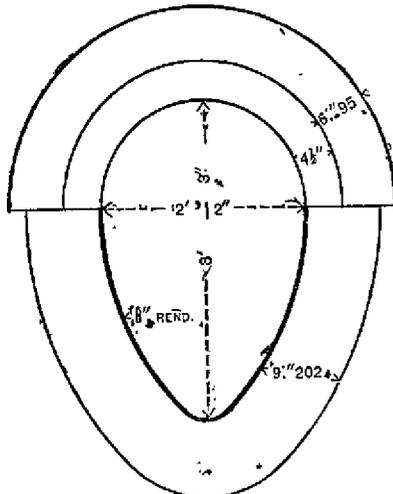
Appd.—R.H., 11/5/94. Mr. Boys to note.—J.D., 11/5/94. Noted.—J. W. T. BOYS, 14/5/94. File.—J.D., 16/5/94.

CONTRACT 79.—ERNEST-STREET SUB-MAIN.



Section as per agreement.

Sandstone concrete .....	1'64 sq. feet.
Bluestone ,, .....	4'05 ,,



Actual section.

Sandstone concrete.....	3'18 sq. feet.
Bluestone ,, .....	4'06 ,,

Length of sewer, 590'44 feet.

## No. 90.

Messrs. Carter, Gummow, &amp; Co. to The Under Secretary for Public Works.

Sir,

Box No. 10, North Sydney, 21 May, 1894.

Having been informed that future payments for work done on contract No. 79, Sydney Sewerage, will be made in cash in lieu of funded stock as heretofore, we have to ask you to be good enough to arrange that we may receive payment in the said funded stock to the amount of £9,000, in addition to that already paid us, we having sold this value of stock in advance, under the impression that our payments in the same would continue.

We are, &amp;c.,

CARTER, GUMMOW, &amp; CO.

Can this be done.—J.B., 23/5/94. Mr. Kirkpatrick. Submitted.—F.K., 23/5/94. The Under Secretary for Public Works.—F.K., 23/5/94. The sale having been absolutely stopped, it cannot be reserved except by Executive authority.—J.S., 23/5/94. Mr. Norrie to see U. Sec. I understand that this matter has been settled.—H.M., 29/5/94. The Under Secretary.—How?—D.C.M'L., 30/5/94. I am told by contractors that special arrangements have been made to let them have the stock applied for.—W.M., 3/7/94. Mr. McLachlan. R.Y.

## No. 91.

Extracts from Votes and Proceedings of the Legislative Assembly.

Votes and Proceedings of the Legislative Assembly, No. 55, dated 30th May, 1894.

- (6.) Sewerage Contract at North Sydney:—Mr. Black asked the Secretary for Public Works,—
- (1.) Is it a fact that the sewerage contract on North Shore is let to Carter and Gummow at schedule price, or about £3 15s. a cubic yard for sinking?
  - (2.) Is it a fact that their employees are paid 10s. per cubic yard for the first 20 feet of sinking and 15s. per cubic yard after that depth is reached?
  - (3.) Is it also a fact that these miners have also to find powder, fuse, candles, &c., while 6d. per week insurance money is deducted and 10 per cent. held back until the completion of the work?

Mr. Lyne answered,—

(1.) The original contract was at a schedule rate; an extension thereof was given at a lump sum, based on the schedule rates of the original contract. There is no item in the schedule exactly corresponding to the amount named by the Honorable Member. The prices, however, range from £3 3s. to £3 18s. per cubic yard, according to the nature of the ground dealt with.

(2 and 3.) I am unable to give any further information on this subject than that contained in my answer to a somewhat similar question asked by the Honorable Member on the 23rd instant.

Votes and Proceedings of the Legislative Assembly, No. 53, dated 23rd May, 1894.

- (9.) Sewerage Contracts at St. Leonards:—Mr. Black asked the Secretary for Public Works,—
- (1.) Is Carter and Gummow's sewerage contract at St. Leonards executed by day-work or sublet?
  - (2.) If the latter, what is the contract price per cubic yard?

Mr. Lyne answered,—I am informed that some portions of Messrs. Carter & Co.'s contracts are sublet, but at what rate I do not know.

## No. 92.

The Chief Clerk to The Commissioner for Roads.

Main Outfall Sewer, North Sydney—Carter &amp; Co., Contractors.

Public Works Department, Sydney, 9 June, 1894.

The Bank fixed deposit receipt for £2,000 held in respect of the above contract will mature on the 10th instant.

Should the deposit be renewed, and if the security is returnable, should it be handed to Carter & Co.?  
D.C.M'L. (*pro U.S.*), 9/6/94.

Mr. Davis.—R.H., 12/6/94. This deposit might be returned conditionally on Carter & Co. making a deposit of £650 on the extension of this contract.—R.H., 13/6/94. Under Secretary. List to return on the conditions named.—J.B., 15/6/94. Approved by Minister, W.J.L.; order No. 2,097.—D.C.M'L., 16/6/94. J.B. Write, 18/6/94. Messrs. Carter & Co., 19/6/94. F.D.R. £2,000 handed to Carter & Co., as per receipt No. A 286,882, 20/6/94; F.D.R. £650 has been received.—W.F.M., 21/6/94.

## No. 93.

The Under Secretary for Public Works to Messrs. Carter &amp; Co.

Gentlemen,

Department of Public Works, Sydney, 19 June, 1894.

I am directed to inform you that the Secretary for Public Works has approved of the return to you of the Bank fixed deposit receipt for £2,000, held as security for the due performance of your contract for the construction of the main outfall sewer, north Sydney, on condition that you lodge security to the extent of £650, in respect of the works in extension of the contract referred to.

I have, &amp;c.,

J. BARLING

(Per D.C.M'L.),

Under Secretary.

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No. 94.

Inspector Fowle to Supervising-Engineer Davis.

Contract No. 79.

Sir,

North Sydney, 19/6/94.

I beg to report that I have made inspection of main outfall sewer from outlet No. 1 shaft to end of contract No. 12 shaft, and find the following items in connection with the works require attention :—

- Small hollow patch about midway between Nos. 4 and 5 shafts.
- Weep-holes in bottom of all shafts left running.
- Bolts to fasten ladders to holdfasts in Nos. 8 and 12 shafts.
- Flaps to be hung on gas-check at No. 10 shaft.
- Spindle at penstock chamber, bottom of No. 12 shaft works stiff.
- Repairs to asphalt around No. 11 shaft surface.
- Plastering in No. 4 shaft and Ernest-street in progress.

G. A. FOWLE,  
Inspector.

For the information of Mr. Boys. Will he please see that the matters herein mentioned are attended to.—J.D., 20/6/94. Mr. Boys. Noted.—J. W. T. Boys, 20/6/94. Filed.—J.D., 22/6/94.

Contract No. 79.

North Sydney, 10 March, 1894.

## LIST OF WORKS REQUIRED TO BE DONE.

*Bluestone concreting.*

- Inlet chamber from Ernest-street, and top dome at No. 4 shaft.
- Top dome at No. 5 shaft.
- Ernest-street extension.

*Brickwork.*

- From vertical outlet, 9-inch pipe at inlet from Ernest-street to top dome No. 4 shaft.
- Ernest-street extension.

*Rendering.*

- Drop-water cushion chamber, side-walls, out-let at bottoms, concrete column, three intermediate water-cushions, inlet chamber from Ernest-street, and top dome at No. 4 shaft.
- Side-walls, bottoms, and top dome, at No. 5 shaft.
- Bottom and top dome at No. 6 shaft.
- Inlet chamber at No. 9 shaft in progress.
- Dirt-box at top of ventilating pipe, No. 11 shaft.
- Ernest-street extension.

I have tested rendering from No. 1 shaft to down-stream side of No. 4 shaft, and from up-stream side of No. 6 shaft to end of contract No. 12 shaft, three small hollow places, which I cut out between Nos. 1 and 4 shafts.

The bottoms I could not examine, as the sewer has not been properly cleaned out yet, in places where I could examine I found in good condition.

Weep-holes at bottom of all shafts remain running.

Black spots in places will require to be picked out, and plastering repaired.

*Excavation.*

- Between No. 4 shaft and working shaft, Ernest-street, about 45 feet to drive.
- Between working shaft and No. 4A shaft about 8 feet to drive.
- Surfaces around Nos. 2, 3, 4, 5, 6, 7, 8, and 9 shafts require to be levelled off.
- The bolts to fasten holdfasts and ladders at Nos. 4, 8, and 12 shafts will require to be seen to.

G. A. FOWLE,  
Inspector.

I omitted to send this report to Mr. Boys. It was made at the time Mr. Fowle was transferred to Camden-street. Mr. Boys will please see that the matters referred to herein are attended to.—J.D., 15/6/94. Mr. Boys.

Noted.—J. W. T. Boys, 20/6/94. File.—J.D., 22/6/94.

No. 95.

The Council Clerk, North Sydney, to Supervising-Engineer Davis.

Sir,

Borough of North Sydney, Town Hall, 31 July, 1894.

Referring to the conversation between yourself and the Mayor yesterday with respect to the removal of ballast from the sewer shafts at North Sydney, I am directed to request that instructions may be given to the contractor to remove this surplus ballast to such places in the borough as may be pointed out by the Council. This ballast is extremely valuable to the borough, and for some time past the Council has been removing and using it for municipal purposes. This has been done by arrangement with the contractor, the Council being unaware that, in terms of his contract, the contractor had to remove it where directed; and the rates paid by the Council for such removal have been 7½d., 10d., and 1s. 3d. per load.

The Mayor understood, during his conversation with you yesterday, that your department had also paid the contractor for removing it, and if such be the case it would appear reasonable that the Council should be refunded the amount of £123 9s. 4d. which it has also paid for the work.

258—2 T

This

This, however, is not put forward as a claim, but the Mayor will be glad if you can inquire into the matter, and if, upon consideration, you think it a fair suggestion, that you will allow the amount to be refunded to the Council.

Having now ascertained the exact position of the contractor in this matter, the Mayor has directed that no more material be removed at the cost of the Council, and he will feel obliged if instructions can be given to the contractor to remove all such surplus material to places to be pointed out by the Council, and which will be within reasonable distance of the works.

I have, &c.,  
W. BARNETT SMITH,  
Town Clerk.

Register.—J.D., 3/8/94.

On the 30th ultimo the Mayor and another gentleman called upon Mr. Bagge with reference to this question of the spoil, and I was asked to see them. I told them that in accordance with the terms of the contract the contractors (Messrs. Carter & Co.) had to remove the surplus material from the shafts to such places as they were ordered, and that they were paid at the rate of 1s. per cubic yard. I do not see what we have to do with any private arrangement which the contractors may make for its removal. We do not require the spoil, and Carter & Co. have disposed of it as they have thought proper, and I was not, therefore, aware that they were receiving payment from the local Council. The question that now arises is whether the request of the Council can be complied with. We have full power under the contract to ask the contractors to deliver to such places as the Council may point out to us from time to time, and it would not entail any extra cost to us, provided the tip was within half-a-mile of the shaft or open cutting, as the case might be. It will give a little trouble, but I am inclined to think that the Council's request should be acceded to.—J.D., 6/8/94. Commissioner and Engineer-in-Chief for Roads, Bridges, and Sewerage.

The Mayor of North Sydney did call here respecting this matter, when I called Mr. Davis in, and his suggestions I beg now to recommend to the consideration of the Engineer-in-Chief.—C. H. OHLFSEN BAGGE, 6/8/94. Engineer-in-Chief.

#### No. 96.

The Engineer-in-Chief for Sewerage to Supervising-Engineer Davis.

*Minute Paper.*

*Subject* :—Council Clerk, North Sydney—Application for Surplus Material.

Department of Public Works, Roads and Bridges and Sewerage Branch,

Sydney, 7 August, 1894.

INFORM Council as no application was made for the surplus material, and as it was not required by the Department, contractors were allowed, as is usual in similar cases, to dispose of it as they thought proper, no questions, of course, being asked as to payments for same.

Before contractors can be instructed as to placing material in situations suggested by the Council it will be necessary for the Council to specify the exact spots where the material is required, as the Department will not pay a greater distance than the minimum specified, viz.,  $\frac{1}{2}$  mile.

R.II., 8/8/94.

Contractors and Council Clerk informed, 8/8/94. Mr. Weedon to see.—J.D., 9/8/94. Seen.—S.H.W., 11/8/94. File.—J.D., 11/8/94.

#### No. 97.

The Council Clerk, North Sydney, to The Engineer-in-Chief for Sewerage.

Sir,

Borough of North Sydney, Town Hall, 10 August, 1894.

I am directed to acknowledge the receipt of your letter, dated 8th instant, on the subject of ballast from sewer shafts, North Sydney, and to inform you that a further communication will shortly be made to you, this being merely an intimation that your letter has been received.

I have, &c.,  
W. BARNETT SMITH,  
Town Clerk.

#### No. 98.

The Council Clerk, North Sydney, to The Engineer-in-Chief for Sewerage.

Sir,

Borough of North Sydney, Town Hall, 14 August, 1894.

In reply to your letter, dated 8th instant, with reference to the surplus material from sewer contract in this borough, I am directed by the Mayor to thank you for your attention to the matter, and to request that the material may be deposited at the junction of Arthur-street and Lavender-street, or in Miller-street, opposite St. Peter's Presbyterian Church, subject to the conditions mentioned in your letter.

With reference to the suggested refund of £123 9s. 4d, I am directed to point out that this money was not paid to the contractors, as you seem to consider, but to men specially employed by the Council.

The Mayor will feel obliged if you can, therefore, see your way clear to refund to the Council the amount in question.

I have, &c.,  
W. BARNETT SMITH,  
Town Clerk.

Arthur and Lavender Streets would be within half-a-mile of all the shafts, and Miller-street, opposite St. Peter's Presbyterian Church, also, excepting the shaft in Campbell-street, the material from which could be taken to Arthur and Lavender Streets. The contractors might be instructed to deliver the

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the surplus material to these places. The Council appear to have made special arrangement with Messrs. Carter & Co., draymen, to deliver the surplus material where they required it. I cannot see what power we have to call upon these men to repay the money to the Council, even supposing it would be advisable to do so, which I very much question.—J.D., 17/8/94. Engineer-in-Chief.

Approved.—R.H., 17/8/94. Mr. Weedon to see that the surplus material is delivered to the places named.—J.D., 21/8/94. Mr. Weedon.

The contractors are stacking the balance of the spoil from tunnel for purposes of refilling. It is doubtful whether there will be any more surplus material on this contract.—S.H.W., 22/8/94. Mr. Davis.

Seen. File.—J.D., 24/8/94.

No. 99.

Resident-Engineer Boys to Supervising-Engineer Davis.

Department of Public Works, Roads, Bridges, and Sewerage Branch,

Dear Sir,

Sydney, 10 August, 1893.

The contractors are ready to concrete chamber at shaft No. 12, 1 m. 2,520 lks. It will be necessary to put in a length of concrete and brickwork up stream from this shaft for the 3 ft. 3 in. by 2 ft. 2 in. section. I propose to put in a 10-foot length on the bottom and step-back, so that the future extension can be properly connected to it. Please say if this is correct.

I am, &amp;c.,

J. W. T. BOYS.

Is the sewer on the up-stream side of this shaft to be altered to a 3 ft. 3 in. by 2 ft. 2 in.? Will Mr. Bagge please say?—J.D., 11/8/93. Mr. Bagge. Yes; 3 ft. 3 in. by 2 ft. 2 in. will be commenced from that shaft.—C.H.O.B., 11/8/93. The proposal will do very well.—J.D., 11/8/93. Mr. Boys. Noted.—J.W.T.B., 31/8/94.

No. 100.

Messrs. Carter &amp; Co. to Supervising-Engineer Davis.

We wired to Hoskins for a 4-ft. by 2-ft. 8-in. gas-check for shaft No. 4, North Shore contract, yesterday and he replies saying it has not been ordered. Would you mind looking into this, as we are practically at a stand-still in that shaft.

J. CARTER.

Leave this gas-check out, and build chamber without it.—J.D., 22/8/93. Mr. Boys. Noted.—J.W.T.B., 31/8/94.

No. 101.

Supervising-Engineer Davis to Resident-Engineer Boys.

Contract No. 79.—Plates required for Shaft No. 8.

Department of Public Works, Roads, Bridges, and Sewerage Branch,

Sydney, 27 September, 1893.

As these two plates shown on drawing No. 10 are all that is required in the way of ironwork, perhaps the best way would be for Messrs. Carter & Co. to provide them, and we will pay through them for them. The weight of the plates will be about 1½ cwt. Will Mr. Boys please arrange and report.

J.D.

Noted. Carter & Co. will supply.—J.W.T.B., -/10/93. 3/8/94.

No. 102.

Resident-Engineer Boys to Supervising-Engineer Davis.

*Minute Paper.**Subject:—Contract 79.*

Department of Public Works, Roads and Bridges and Sewerage Branch,

Sydney, 31 August, 1894.

PLEASE register papers and return to Mr. Davis.

J. W. T. BOYS.

Mr. Adams will require these papers when he is checking the quantities for this contract.—J.D., 1/9/94. Mr. Adams.

The quantities have now been checked, and prove to be substantially correct. There is, however, a slight error in excavation in road surfaces at shaft No. 9, which reduces the quantity by 892 cubic yards (see measurement book, page 94). The results of the check calculations will be found entered in the proper column in the measurement book.—W. E. ADAMS, Quantity Surveyor, 13/11/94. Mr. Davis.

Will Mr. Boys please let me have report of present conditions of the work, and generally as to the way the work has been executed, and at the same time a certificate from Council as to road surfaces?—J.D., 20/11/94. Report and paper attached.—J.W.T.B., 20/11/94.

No. 103.

## No. 103.

The Borough Engineer, North Sydney, to The Sewerage Department of Public Works.

North Sydney, 24 November, 1894.

THIS is to certify that the streets along which contract No. 79 has been constructed are in good order and repair.

JNO. HENDERSON,  
Ac. Borough Engineer.

Register and return.—J.D., 24/11/94.

## No. 104.

Resident-Engineer Boys to Supervising-Engineer Davis.

*Minute Paper.**Subject:—State of Contract 79.*

Department of Public Works, Roads and Bridges and Sewerage Branch,

North Sydney, 29 November, 1894.

I BEG to report that this contract is complete, with the exception of two sets of bluestone pitchers—one set for shaft No. 4, Ernest-street; one set for shaft No. 4A, Ernest-street. These two sets were ordered, but were delivered on the Marrickville contract in error.

Two off-let valves were on, but as the valves are made of timber, they swelled, and I had them taken off to be cased and the worm gear cleaned.

The contractors are replacing these to-day, and I will inspect this work when finished.

I think it would have been better for the Department to have put this gear back when the sewer is in use, as I am certain that it will get very rusted if left unused for long.

A little rock excavation has to be done at the outlet at Long Bay. The contractors are doing this.

The work in this contract generally has been faithfully carried out, and is, I think, a credit to everyone concerned.

Attached is the certificate of the satisfactory condition of the streets, from the Borough Council, North Sydney.

The maintenance time for this work expires 10th October, 1894.

J. W. T. BOYS.

I beg to submit statement of final settlement for this contract. The work has been satisfactorily performed. Two manhole covers require to be pitched, but I do not think the final certificate need be kept back for this —J.D., 7/12/94. Approved.—R.H., 7/12/94. Mr. Davis. Accountant.—J.D., 9/12/94. Voucher for £531 10s. 6d. to Treasury this day. Papers may now be filed.—O.C. (*per E.H.*), 13/12/94.

## No. 105.

## Statement of Accounts.

PUBLIC WORKS DEPARTMENT, SEWERAGE BRANCH—DR. TO CARTER &amp; CO.

No of Item.	Description of Works.	Unit.	Quantity.	Rate.	Amount.
1	Excavation tunnel, gadding .....	cubic yard	21-22	63/-	£ 66 16 10
3	"    "    4-inch pow. ....	"    "	3,707-52	60/-	11,122 11 2
4	"    shaft, soft .....	"    "	544-65	78/-	2,124 2 8
7	"    "    rock .....	"    "	3,273-20	78/-	12,765 9 7
8	Filling .....	"    "	412-76	1/-	20 8 6
17	Sandstone concrete .....	"    "	1,873-85	37/6	3,513 9 4
18	Bluestone .....	"    "	1,564-00	56/-	4,379 14 0
19	Brickwork .....	"    "	521-77	50/-	1,304 8 6
21	Rendering in tunnel .....	square yard	8,781-07	2/-	878 2 0
22	Bluestone concrete in shafts .....	cubic yard	161-97	60/-	485 18 2
23	Brickwork in shafts .....	"    "	863-00	65/-	2,804 15 0
24	Rendering .....	square yard	255-08	2/-	25 10 0
25	Sandstone ashlar .....	cubic foot	170-97	6/-	51 6 0
26	Bluestone pitcher .....	square yard	16-77	30/-	25 3 1
27	18-inch pipes .....	lineal foot	3-00	10/-	1 10 0
28	9-inch .....	"    "	31-00	2/-	3 2 0
29	Surplus soil .....	cubic yard	7,033-83	1/-	351 14 0
31	Fixing iron .....	ton	29-15	60/-	87 9 0
32	Closing branches .....	each	7	10/-	3 10 0
33	Flap traps .....	"    "	4	5/-	1 0 0
43	Cement .....	cask	7	16/-	5 12 0
44	Mechanic .....	day	3½	12/-	2 6 6
46	Labourer .....	"    "	13	10/-	6 10 0
47	Single team .....	"    "	8	20/-	8 0 0
48	Extra horse .....	"    "	3½	10/-	1 15 0
49	Maintenance .....	"    "	.....	.....	21 18 2
...	Items not in Schedule—	.....	.....	.....	.....
...	Galvanised iron .....	.....	.....	.....	0 6 0
...	Castings .....	.....	.....	.....	1 11 3
...	6-inch pipes .....	.....	44	1/-	2 4 0
	Total .....	.....	.....	.....	40,066 2 9
	Former payments .....	.....	.....	.....	39,491 19 9
	Total .....	.....	.....	.....	£574 3 0

CARTER &amp; CO.

No. 106.

No. 106.  
Final Statement.  
FINAL STATEMENT.—CONTRACT No. 79.

Item.	Description of Work.	Unit.	Schedule Quantity.	Rate.	Amount.	Quantities		Office Quantities	Quantities agreed upon.	Unit.	Rate.	Amount.
						by Resident Engineer.	by Contractor.					
1	Excavation in hard rock—gadding	c. yard	500	63/-	2,520 0 0	21-22	21-22	21-22	21-22	c. yard	63/-	£ s. d. 66 16 10
2	" " —2" powder	"	885	61/-	2,544 15 0					"		
3	" " —4" " "	"	3,000	60/-	9,000 0 0	3,707-520	3,707-52	3,707-520	3,707-52	c. yard	60/-	11,122 11 2
4	Excavation in shafts—road surface	"	75	78/-	292 10 0	541-773	544-65	532-950	541-77	"	78/-	2,112 18 1
5	" " —gadding	"	301	83/-	1,483 3 0					"		
6	" " —2" powder	"	500	79/-	1,975 0 0					"		
7	" " —4" " "	"	2,500	78/-	9,750 0 0	3,267-970	3,273-20	3,267-970	3,267-97	c. yard	78/-	12,745 1 8
8	Filling in	"	120	1/-	6 0 0	431-800	432-76	431-800	431-80	"	1/-	21 11 10
9	Timber left in	"	500	-1/-	2 1 8					"		
10	Subducts	sq. yard	250	-1/-	1 0 10					"		
11	" 6" E. W. pipes	"	100	-1/-	0 8 4					"		
12	" 8" " "	"	100	-1/-	0 8 4					"		
13	" 10" " "	"	160	-1/-	0 8 4					"		
14	" 12" " "	"	100	-1/-	0 8 4					"		
15	" 10" " "	"	100	-1/-	0 8 4					"		
16	Hand-packed filling	c. yard	300	-1/-	1 5 0					"		
17	Sandstone concrete	"	1,020	37/6	1,912 10 0	1,872-170	1,873-85	1,872-170	1,872-17	c. yard	37/6	8,510 6 4
18	Bluestone	"	1,350	56/-	3,892 0 0	1,562-515	1,564-00	1,562-520	1,562-52	"	56/-	4,375 1 1
19	Brickwork	"	520	50/-	1,300 0 0	521-810	521-77	521-810	521-81	"	50/-	1,304 10 6
20	"	"	180	20/-	180 0 0					"		
21	Cement facing	sq. yard	8,900	2/-	830 0 0	8,779-129	8,781-07	8,779-129	8,779-12	sq. yard	2/-	877 18 3
22	Bluestone concrete	c. yard	160	60/-	450 0 0	161-000	161-07	161-000	161-00	c. yard	60/-	483 0 0
23	Brickwork	"	870	65/-	2,827 10 0	862-900	862-00	862-900	862-00	"	65/-	2,804 14 4
24	Cement facing	sq. yard	290	2/-	29 0 0	255-004	255-08	255-000	255-00	sq. yard	2/-	25 10 1
25	Sandstone ashlar	c. yard	185	6/-	55 10 0	170-979	170-97	170-979	170-97	c. yard	6/-	51 5 10
26	Bluestone pitchers	sq. yard	20	30/-	30 0 0	18-770	18-77	18-770	18-77	sq. yard	30/-	25 3 1
27	18" E. W. pipes	sq. foot	2	10/-	1 0 0	3-000	3-00	3-000	3-00	sq. foot	10/-	1 10 0
28	9" " "	"	60	2/-	6 0 0	31-000	31-00	31-000	31-00	"	2/-	3 2 0
29	Surplus material—1/2 mile	c. yard	7,960	1/-	398 0 0	7,006-680	7,004-83	7,006-680	7,006-68	c. yard	1/-	350 6 8
30	" " —1/2 " "	"	15,920	-1/-	66 6 8					"		
31	Fixing ironwork	ton	40	60/-	120 0 0	29-157	29-15	29-157	29-16	ton	60/-	87 9 7
32	Closing branch sewers	each	39	10/-	15 0 0	7-000	7-00	7-000	7-00	each	10/-	3 10 0
33	Trapped junction blocks	"	10	5/-	2 10 0	4-000	4-00	4-000	4-00	"	5/-	1 0 0
34	Permanent puddle	c. yard	20	2/-	2 0 0					"		
35	Special bluestone concrete	"	10	6/-	3 0 0					"		
36	Bluestone metal, 14" gauge	"	10	15/-	7 10 0					"		
37	Sandstone metal, 24" gauge	"	10	2-6	1 5 0					"		
38	Bluestone metal, 2 1/2" gauge	"	10	15/-	7 10 0					"		
39	Clean sand	"	10	5/-	2 10 0					"		
40	Sawn hardwood planks	c. foot	50	2/-	5 0 0					"		
41	Oregon timber	"	60	2-6	6 6 0					"		
42	Wrought-iron in bolts	cwt.	3	55/-	8 8 0					"		
43	Portland cement	cask	10	16/-	8 0 0	7-000	7-00	7-000	7-00	cask	16/-	5 12 0
44	Mechanic	day	15	12/-	9 0 0	3 1/2	3 1/2	3 1/2	3 1/2	day	12/-	2 6 6
45	Skilled labourer	"	15	10/-	7 10 0					"		
46	Ordinary labourer	"	30	20/-	15 0 0	13-000	13-00	13-000	13-00	day	10/-	6 10 0
47	Cart, horse, and driver	"	10	10/-	10 0 0	8-000	8-00	8-000	8-00	"	20/-	8 0 0
48	One additional horse	"	10	10/-	5 0 0	3 1/2	8 1/2	3 1/2	3 1/2	"	10/-	1 15 0
49	Three months' maintenance	lump sum			21 18 2							21 18 2
...	Galvanised sheet iron	sheet				1-000	1-00		1	sheet	6/-	0 6 0
...	Castings	cwt.				1c. 1 qr.	1c. 1 qr.		1 1/4	cwt.	25/-	1 11 3
...	6" vent pipes	l. foot				44-000	44-00		44-00	l. foot	1/-	2 4 0
					£39,890 0 0	Total in settlement of all claims on this account.....						£ 40,033 10 3

CARTER & CO.

No. 107.  
Final Certificate.

CONTRACT No. 79.—Final Return showing quantity and value of Work executed or fixed on the 10th day of October, 1894.

Schedule Rate No.	Description.	Unit.	Quantity.	Rate.	Amount.	Total.
1	Excavation in tunnels, gadding	cubic yard	21-22	63/-	£ s. d. 66 16 10	£ s. d.
3	" " 2 in. powder	"	3,707-52	60/-	11,122 11 2	
4	" " 4 in. " "	"	541-77	78/-	2,112 18 1	
7	" " shafts, 4 in. " "	"	3,267-97	78/-	12,745 1 8	
8	Filling in	"	431-80	1/-	21 11 10	
17	Sandstone concrete	"	1,872-17	37/6	3,510 6 4	
18	Bluestone	"	1,562-52	56/-	4,375 1 1	
19	Brickwork	"	521-81	50/-	1,304 10 6	
21	Cement facing	square yard	8,779-12	2/-	877 18 3	
22	Bluestone concrete	cubic yard	161-00	60/-	483 0 0	
23	Brickwork	"	862-99	65/-	2,804 14 4	
24	Cement facing	square yard	255-06	2/-	25 10 1	
25	Sandstone ashlar	cubic foot	170-97	6/-	51 5 10	
26	Bluestone pitchers	square yard	18-77	30/-	25 3 1	
27	18-in. E. W. pipes	lineal foot	3-00	10/-	1 10 0	
28	9-in. " "	"	31-00	2/-	3 2 0	
29	Surplus material	cubic yard	7,006-68	1/-	350 6 8	
31	Fixing ironwork	ton	29-16	60/-	87 9 7	
32	Closing branch sewers	each	7	10/-	3 10 0	
33	Trapped junction blocks	"	4	5/-	1 0 0	
43	Portland cement	cask	7	16/-	5 12 0	
44	Mechanic	day	3 1/2	12/-	2 6 6	
46	Ordinary labourer	"	13	10/-	6 10 0	
47	Cart, horse, and driver	"	8	20/-	8 0 0	
48	Additional horse	"	3 1/2	10/-	1 15 0	
49	Three months' maintenance	lump sum			21 18 2	
...	Galvanised sheet iron	sheet	1	6/-	0 6 0	
...	Castings	cwt.	1 1/4	25/-	1 11 3	
...	6-in. vent pipes	lineal foot	44-00	1/-	2 4 0	
						40,023 10 3

Recapitulation	Amount	Total.
Value of work executed.....	£ s. d. 40,023 10 3	£ s. d. 40,023 10 3
<i>Deductions to be made.</i>		
Amount of progress payments already made .....	39,491 19 9	39,491 19 9
Amount of final payment now recommended.....	.....	531 10 6
Estimated amount of contract.....	£39,890 0 0	
Actual amount of payments, including final payments.....	£40,023 10 3	

I hereby certify that the above return is a fair and correct statement of the contract to which it refers, and that the above measurements were made by the Resident Engineer with Mr. Carter.

J. W. T. BOYS,  
Resident Engineer.

J. DAVIS,  
Supervising Engineer.

I hereby certify that I examined the work generally and found it in accordance with specification, and have checked the quantities with the plans, and that they generally agree with same, and that rates are correct.

C.H.O.-B.  
Principal Assistant Engineer.

I certify that the amount charged in this voucher, as to computations, castings, and rates is correct, that the service has been faithfully performed, and that the expenditure is duly authorised in terms of the Audit Act.

R.H.,  
Head of the Department.

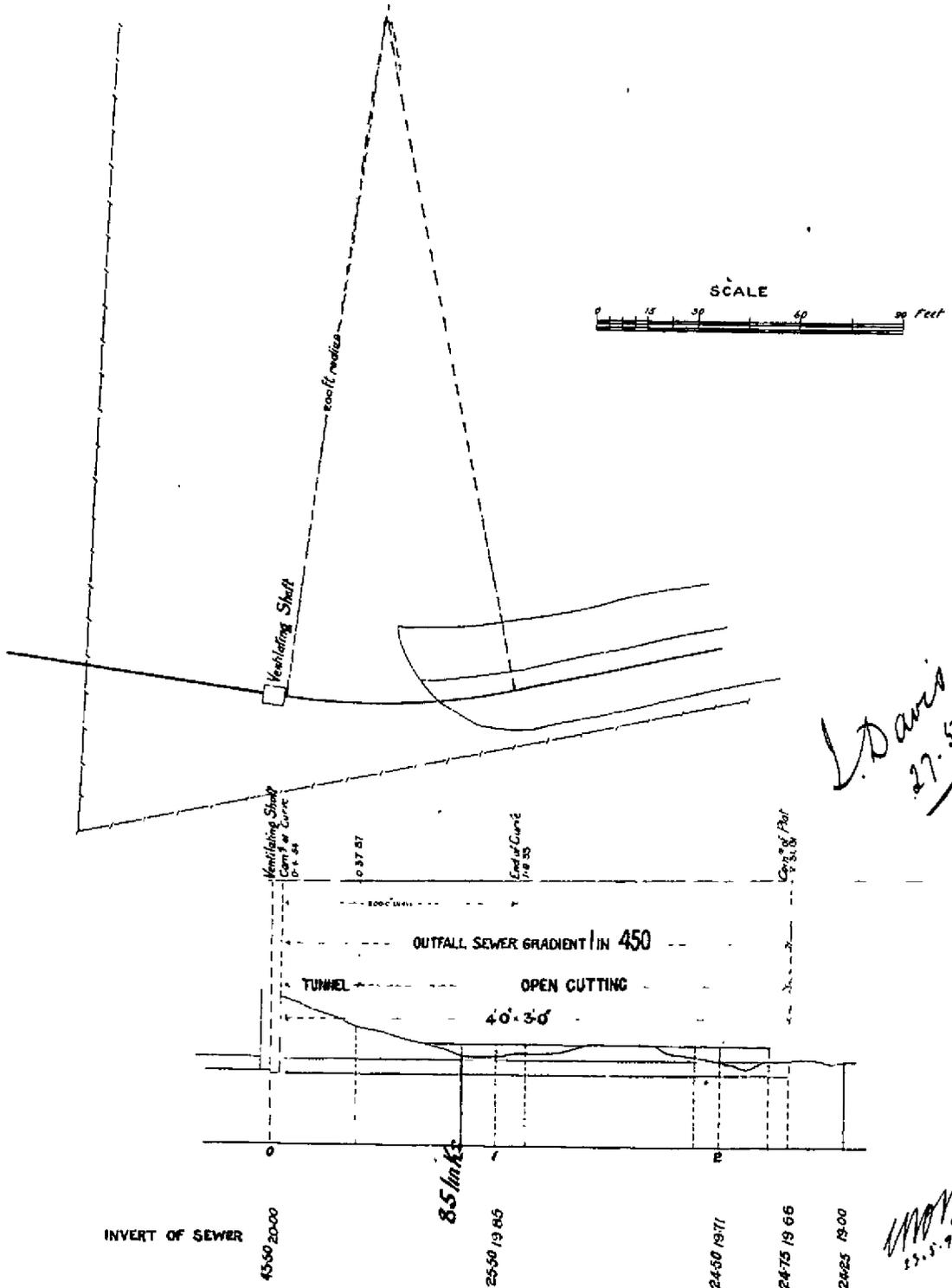
The Treasury will not allow alterations in these progress returns, and they are especially particular about final payments. One clean copy of this is now required; the other I have kept for checking.—  
E.H., 11/12/94. Mr. Davis.

[Plans.]

CONTRACT NO 79.

# NORTH SHORE SEWERAGE

## SEWER FROM TERMINAL SHAFT TO OUTLET WORKS



*L. Davis*  
27.5.92

*M.P.S.*  
25.5.92

(Sig 258 -)

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,  
SYDNEY, NEW SOUTH WALES.

*H.P. L.*  
*Geo. T. B.*  
27.5.92

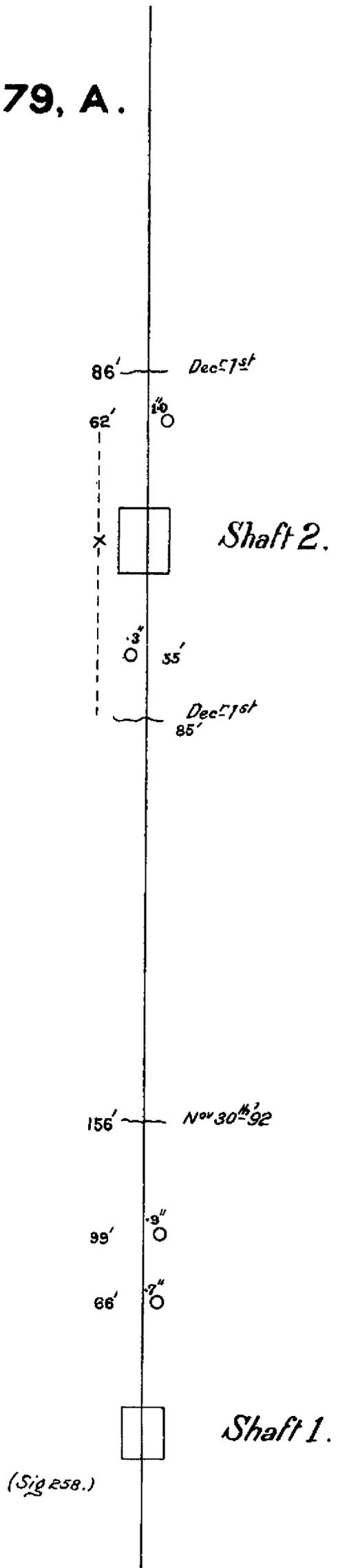
*#*  
23.5.92

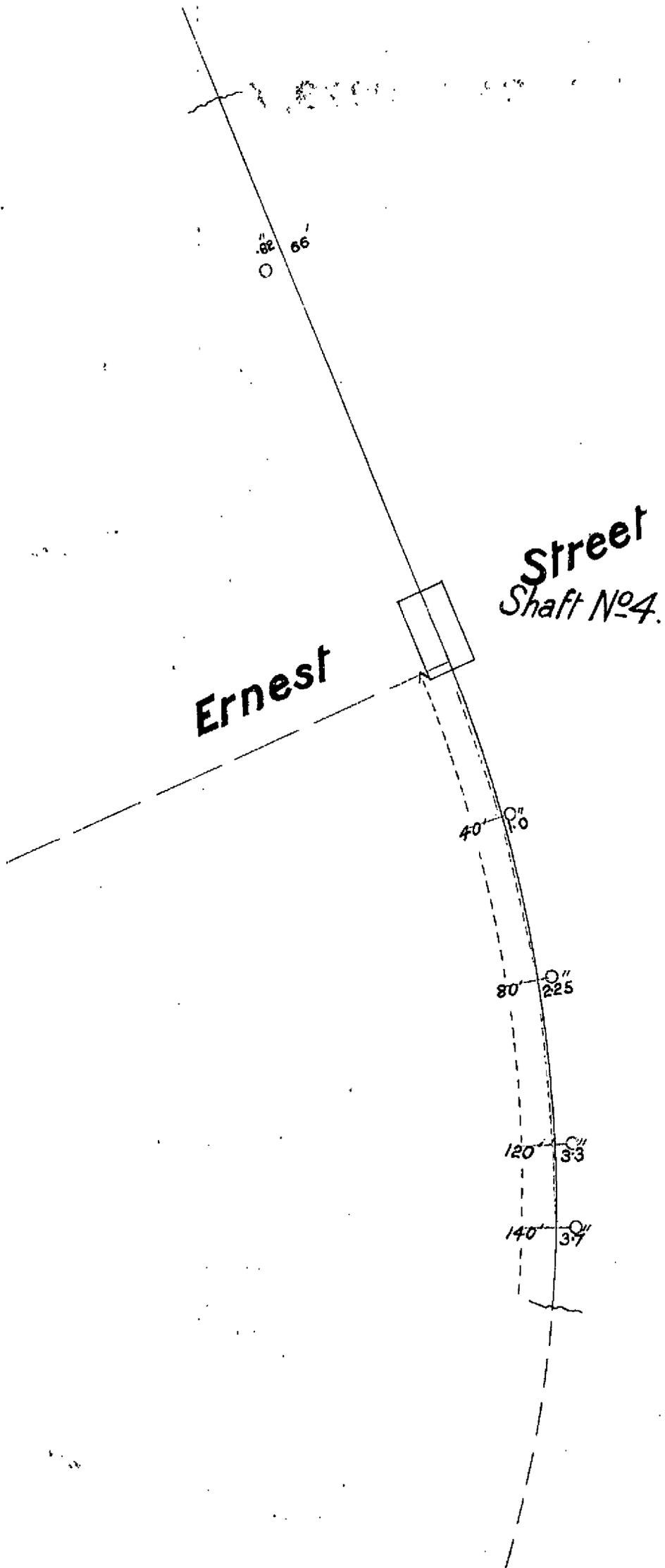




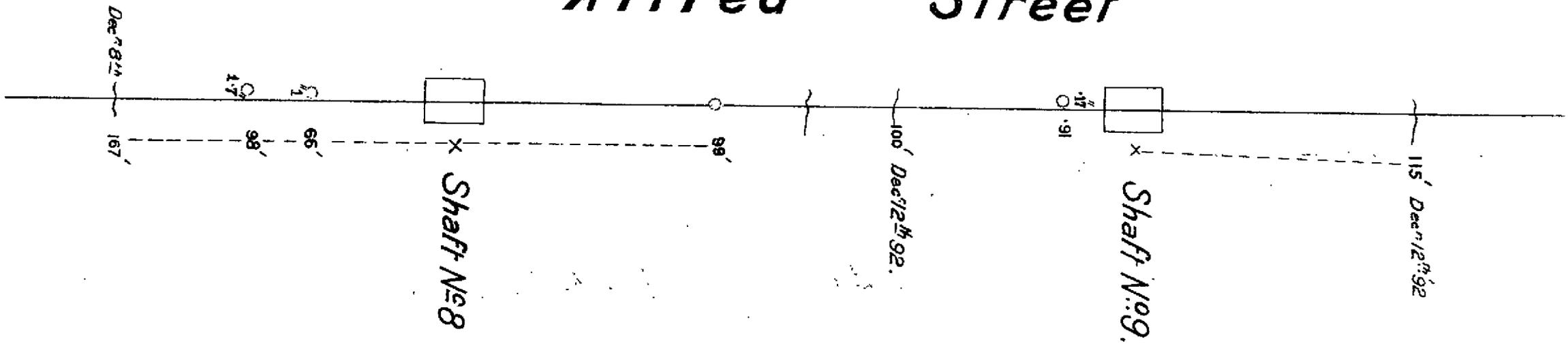
# CONTRACT N<sup>o</sup>79, A.

*Alignment plugs by M<sup>r</sup>. Boys shewn  
in blue colour.*





# Alfred Street



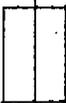
*Alfred Street*



" 85



67'



*Shaft 10.*

65'

" 85



65'

*Dec 8th 92.*

155'

# SYDNEY AND SUBURBS SEWERAGE

## NORTH SHORE DRAINAGE

### ERNEST ST SUBMAIN

#### DRAINAGE AREA

Scale, 8 Chains to an Inch



(Sig. 258-)

## Contract No. 79A.

### No. 1.

E. M. Clark, Esq., M.P., to The Under Secretary for Public Works.

Sir,

Legislative Assembly, New South Wales, Sydney, 6 March, 1894.

As the portion of the North Shore sewerage works contained in Messrs. Carter & Co.'s contract is now nearly completed, I desire to bring under the notice of the Minister for Works that this work will be perfectly useless until that portion connecting Milson's Point at Jeffrey-street is completed, and to urge upon him the necessity for at once carrying out this part of the work. I may point out that it will serve a very large population, besides assisting to get rid of the offensive matter now finding its way into the harbour through the storm-water sewer at Careening Cove and other places becoming more offensive every day, and a source of very numerous complaints. I understand that Messrs. Carter & Co. having the plant would be able to carry out this work on very advantageous terms, to provide work for a large number of men now employed on their present works, who will otherwise be thrown on an overcrowded labour market by the completion of their present contract. As this work is absolutely necessary to the completion of the North Shore sewerage scheme, I would urge it put in hand at once.

Yours, &c.,

EDWARD M. CLARK.

Commissioner for Roads.—D. C. M'L. (*pro*. U.S.), B.C., 7/3/94.  
Report herewith.—C. H. OHLFSEN-BAGGE, 15/3/94.

For report.—R.H., 9/3/94.

### No. 2.

The Principal Assistant Engineer for Sewerage to The Engineer-in-Chief for Sewerage.

NECESSITY for doing that portion of the North Shore Sewerage Works which connects Milson's Point at Jeffrey-street.

THE present contract, No. 79, comprising a length of 1 mile 25·3 chains, of the main North Shore outfall sewer from Willoughby Bay to junction of Alfred and Mount streets, is the first section of the North Shore sewerage works.

The second section should be "the outlet works," and the third section, which might be proceeded with simultaneously with the outlet works, would be the extension of the main outfall sewer now asked for, from junction of Alfred and Mount streets southward to the junction of Campbell and Jeffrey streets, being (including some minor branches) a total length of about 76·90 chains.

By way of comparison, I have prepared an office estimate of the cost of this extension, according to present prices, amounting, as per detail statement attached, approximately, to £12,831 19s. 6d., and an estimate of the same work in accordance with contract prices of Contract No. 79 of the main outfall sewer in progress, which, as per detail statement attached, amounts, approximately, to £16,307 17s. 8d.

The detail plans of the outlet works are unavoidably very intricate, and it will take at least another month (if no other works come between) to complete the quantities.

The designs of the main outfall sewer extension, between Mount and Jeffrey streets, excepting general plan and section, have not yet been commenced.

C. H. OHLFSEN-BAGGE, 15/3/94.

There is no reason why this extension should not be gone on with at once. I cannot, however, see my way to recommend that it be carried out as an extension of the existing contract, which, at schedule rates, would amount to £16,307 17s. 8d., whereas the office estimate is £12,831 19s. 6d. The greater part of this difference lies in one item, "Excavation in shafts," which, in present contract, owing to their great depth, carries a very high price, viz., 78s. per cubic yard. This Messrs. Carter and Co. are prepared to reduce to 40s. per cubic yard, which would reduce the total cost to £13,700, or about £1,000 above the office estimate. I believe, however, if tenders were invited we could get the work done under the office estimate.—R.H., 22/3/94. Under Secretary. Submitted.—J.B., 28/3/94.

Referring to the Minister's intimation this morning, that he was prepared to let Messrs. Carter and Co. carry out this work as an extension of their present contract, provided they agreed to do so for the departmental estimate of £12,831 19s. 6d., no claims whatsoever to be made for extras, and all payments to be made at the allowed schedule rates. I have had an interview with Mr. Carter, who is prepared, on the part of his firm, to comply with the Minister's decision. Submitted for formal approval.—R.H., 29/3/94.

For approval.—J.B., 30/3/94. Approved.—W.J.L., 30/3/94. Accept.—J.B., 30/3/94.

### No. 3.

The Under Secretary for Public Works to Messrs. Carter & Co.

Sirs,

Department of Public Works, Sydney, 16 June, 1894.

I have the honor, by direction of the Secretary for Public Works, to inform you that your tender, dated this day, is accepted for contract No. 79A Sydney Sewerage Works, at the sum of twelve thousand eight hundred and thirty-one pounds nineteen shillings and sixpence (£12,831 19s. 6d.), subject to the following special condition, viz.:—If it shall be represented to the Secretary for Public Works at any time during the progress of this contract, that an undue number of men are being employed thereon, who have not been domiciled in this Colony for six months previously to such employment, and such allegation be proved to his satisfaction, the Minister shall have the power to call upon you to discharge

any

any or all such men, and on such direction being conveyed to you under the hand of the Under Secretary for Public Works, you shall discharge such men forthwith; and in the event of your non-compliance with any such direction, the Minister shall have the power to declare this contract to be cancelled as if this stipulation had been expressly set out in the cancellation clause of the general conditions relating to this contract.

The work is to be carried out in strict accordance with the several contract exhibits relating to this contract, and to be completed within sixteen months from this date.

The security required on this contract will be a fixed deposit receipt, in favour of the Secretary for Public Works, for the sum of £650.

I have to refer you to the Commissioner and Engineer-in-Chief for Roads, Bridges, and Sewerage, for further information, and to request that you will call upon the Officer-in-charge of Bonds and Contracts at this office, for the purpose of executing the necessary documents for the due observance of your contract.

I am, &c.,

J. BARLING,

Under Secretary.

#### No. 4.

#### Departmental Estimate for Contract No. 79A.

CONTRACT No. 79A.—Extension from Mount-street to Junction of Campbell and Jeffrey Streets, with Branches.

SCHEDULE of Prices referred to on which Progress Payment will be made.

No. of Item.	Description of Works.	Unit.	Rate.
1	Excavation in tunnels, in hard rock, for sewer, branches, pipe sewers, junctions, curves, &c., as specified in clauses 38, 42, 45, 48, to 68, including sub-ducts, timbering, unwatering, and removing the excavated materials beyond actual site of works, as viz. :—	cubic yard	72/-
2	Excavation in hard rock where gadding only is permitted.....	"	63/-
3	Excavation in hard rock, where charges of powder 2 inches in length by 1½ inch in diameter, and such depth of bore-holes as shall be directed, only are permitted .....	"	55/-
4	Excavation in hard rock, where charges of powder 4 inches in length by 1½ inch in diameter, and such depth of bore-holes as shall be directed, only are permitted .....	"	6/-
5	Excavation in shafts, shaft chambers, and sumps, as specified in clauses 39, 52, 53, 71, and 72, including timbering, unwatering, and removing the excavated materials beyond actual site of the works, as viz. :—	"	40/-
6	Excavation in road surfaces, sand, soil, clay, pipeclay, shale, and soft rock only .....	"	34/6
7	Excavation in hard rock, where gadding only is permitted.....	"	30/-
8	Excavation in hard rock, where charges of powder 2 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed, only are permitted .....	"	1/3
9	Excavation in hard rock, where charges of powder 4 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed, only are permitted .....	"	2/-
10	Filling in round brick and concrete work of ventilating and intercepting shafts and chambers, man-holes, and into all shafts as specified in clauses 40, 41, 42, 43, 71, and 72, including withdrawing of timber, depositing in layers, replacing road and other surfaces, ramming, &c. ....	lineal yard	3/6
11	Timber ordered in writing to be left in tunnels, shafts, as specified in clauses 36 and 37, including all iron used in fixing same .....	cubic yard	4/-
12	Sub-duct in hard rock, with tile covers, as specified in clauses 76 and 77 .....	"	30/-
13	Hand-packed stone filling, 4-inch gauge, as specified in clauses 17, 69, 76 to 78, over sub-ducts, and when ordered, round sewers and pipe sewers, in tunnels including depositing, packing, and ramming.....	"	50/-
14	Sandstone concrete, any shape, form, and thickness, in shafts, tunnels, sumps, round stoneware pipes and where ordered in any situation in the construction of these works, as specified, clauses 26, 27, 93 to 109, including washing dry surfaces, wetting and grouting complete.....	"	60/-
15	Bluestone concrete, any shape, form, thickness, arched, circular, or otherwise, in sewer, curved junctions, arches, manholes, &c., as specified in clauses 24, 27, 93 to 109, including washing dry surfaces, wetting and grouting complete.....	squareyard	2/6
16	Brickwork in cement in sewer, shaft junctions, chambers, circular, curved, arched, or otherwise, any shape or form or thickness, as specified in clauses 110 to 113, including wetting, flushing, grouting, collar joints, pointing where ordered, &c. :—	cubic yard	50/-
17	Of one ring or portion of ring .....	"	60/-
18	Cement facing in two thicknesses, ½ inch thick, when finished, as specified in clause 114, to all internal (and external, where ordered) surfaces of sewer, junctions, shaft chambers, culverts, manholes, and where ordered in any situation in the construction of these works .....	squareyard	2/6
19	Bluestone concrete, any shape, form, or thickness, arched, circular, or otherwise, in shafts, over shaft-chambers, as specified in clauses 93 to 109, including washing dry surfaces, wetting and grouting complete.....	"	60/-
20	Brickwork in cement, circular, arched, curved, or otherwise, any shape, form, or thickness, as specified in clauses 110 to 113, in shafts, over shaft chambers, including wetting, flushing, grouting, pointing (where ordered), collar joints, &c., complete .....	squareyard	2/6
21	Cement facing in two thickness, ½ inch thick when finished, to all internal and external surfaces of shafts where ordered, as specified in clause 114.....	"	60/-
22	Providing, laying, and jointing glazed stoneware plain pipes, in trenches and where ordered, including fixing discs as specified, and including bed joints in mortar where required :—	lineal foot	3/-
	12 inch diameter .....	"	2/-
	9 inch .....	"	2/-
SURPLUS MATERIALS.			
21	Removal of surplus materials from the various excavations throughout this contract as tunnels and open trenches, including sub-ducts, shafts sumps, &c., as specified in clauses 40, 42, 43, and 45, as viz. :—	cubic yard	1/-
GOVERNMENT PROPERTY.			
22	Placing, building-in, fixing, and jointing only, any metal work, as cast-iron oval and circular pipes, junctions, branches, flanged and with spigot and faucet ends, gas checks, ventilating grates, lamphole boxes, manhole covers, staples, step-irons, earthenware covers, &c., supplied by the Government, including carriage, as specified in clauses 91, 121, 131 to 133 complete .....	ton	60/-

## AT MESSRS. CARTER AND CO'S. PRICES.

Proposed Contract No. 79, extension from Mount-street to Junction of Campbell and Jeffrey Streets, with branches.

SCHEDULE of quantities and prices for constructing and completing 76.90 chains, more or less, of the main outfall sewer extension, North Shore, branch and pipe sewers, shafts, junctions, &c., subject to omissions, extras, extensions, additions, enlargements, deviations, or alterations, as provided by the conditions of contract at contract No. 79 prices.

The quantities in this schedule are not guaranteed as correct, but are merely given for the guidance of intending contractors, this being a schedule of Prices Contract.

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate.	Amount.
	Excavation in tunnels, in hard rock, for sewer, branches, pipe-sewers, junctions, curves, &c., as specified in clauses 33, 42, 45, 48 to 63, including sub-ducts, timbering, unwatering, and removing the excavated materials beyond actual site of works, as viz. :-				£ s. d.
1	Excavation in hard rock, where gadding only is permitted .....	cubic yard	305	63/-	960 15 0
2	Excavation in hard rock, where charges of powder 2 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	305	61/-	930 5 0
3	Excavation in hard rock, where charges of powder 4 inches in length by 1½ inch in diameter, and such depth of bore-holes as shall be directed only are permitted .....	"	1,220	60/-	3,660 0 0
	Excavation in shafts, shaft chambers, and sumps, as specified in clauses 39, 52, 53, 71, and 72, including timbering, unwatering, and removing the excavated materials beyond actual site of works, as viz. :-				
4	Excavation in road surfaces, sand, soil, clay, pipeclay, shale, and soft rock only .....	"	50	78/-	195 0 0
5	Excavation in hard rock, where gadding only is permitted .....	"	160	83/-	664 0 0
6	Excavation in hard rock, where charges of powder 2 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	200	79/-	790 0 0
7	Excavation in hard rock, where charges of powder 4 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	940	78/-	3,668 0 0
8	Filling in round brick and concrete work of ventilating and intercepting shafts and chambers, manholes, and into all shafts, as specified in clauses 40, 41, 42, 43, 71, and 72, including withdrawing of timber, depositing in layers, replacing road and other surfaces ramming, &c. ....	"	750	1/-	89 0 0
9	Timber ordered in writing to be left in tunnels, shafts, as specified in clauses 36 and 37 including all iron used in fixing same .....	cubic foot	700	-/1	2 18 4
10	Sub-duct in hard rock, with tile covers, as specified in clauses 76 and 77	lineal yard	67	-/1	0 5 7
	Sub-duct, as specified in clauses 76 and 78, in more or less hard material, including dry or cement jointing for stoneware pipes, &c. :-				
11	Of 6-inch internal diameter .....	"	.....	.....	.....
12	Of 9-inch internal diameter .....	"	.....	.....	.....
	Sub-duct in water-charged loose ground, as specified in clause 76, including hardwood boxes with packing in same, and dry or cement jointing for pipes of :-				
13	6-inch internal diameter .....	"	.....	.....	.....
14	9-inch internal diameter .....	"	.....	.....	.....
15	10-inch internal diameter .....	"	.....	.....	.....
16	Hand-packed stone-filling, 4-inch gauge, as specified in clauses 17, 69, 76 to 78, over sub-ducts, and when ordered, round sewers and pipe-sewers in tunnels, including depositing, packing, and ramming .....	cubic yard	405	-/1	1 13 9
17	Sandstone concrete, any shape, form, or thickness, in shafts, tunnels, sumps, round stoneware pipes, and where ordered in any situation in the construction of these works, as specified in clauses 26, 27, 93 to 109, including washing dry surfaces, wetting, and grouting, complete .....	"	340	37/6	637 10 0
18	Bluestone concrete, any shape, form, thickness, arched, circular or otherwise, in sewer, curved junctions, arches, manholes, &c., as specified in clauses 24, 27, 93 to 109, including washing dry surfaces, wetting, and grouting, complete .....	"	900	56/-	2,520 0 0
	Brickwork in cement in sewer junctions, shaft-chambers, circular, curved, arched, or otherwise, any shape or form or thickness, as specified in clauses 110 to 113, including wetting, flushing, grouting, collar-joints, pointing, where ordered, &c. :-				
19	Of one ring or portion of ring .....	"	260	50/-	650 0 0
20	Of two or more rings, straight, arched, &c. ....	"	.....	.....	.....
21	Cement facing in two thicknesses, ¾ inch thick when finished, as specified in clause 114, to all internal (and external, where ordered) surfaces of sewer, junctions, shaft-chambers, culverts, manholes, and where ordered in any situation in the construction of these works .....	square yard	3,000	2/-	300 0 0
22	Bluestone concrete, any shape, form, or thickness, arched, circular, or otherwise, in shafts, over shaft-chambers, as specified in clauses 93 to 109, including washing dry surfaces, wetting, and grouting, complete .....	cubic yard	40	60/-	120 0 0
23	Brickwork in cement, circular, arched, curved, or otherwise, any shape, form, or thickness, as specified in clauses 110 to 113, in shafts, over shaft-chambers, including wetting, flushing, grouting, pointing, where ordered, collar-joints, &c., complete .....	"	280	65/-	910 0 0
24	Cement facing in two thicknesses, ¾ inch thick when finished, to all internal and external surfaces of shafts, where ordered, as specified in clause 114 .....	square yard	50	2/-	5 0 0

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate.	Amount.
25	Pyrmont sandstone, ashlar, set in cement, on top of ventilating shafts, and where ordered, as specified in clauses 16 and 116, complete ...	cubic foot	.....	...	£ s. d.
26	Squared bluestone pitchers, 9 inches deep, set in sand, round cast-iron ventilating grates of shafts, where ordered, as specified in clause 116, complete .....	square yard	.....	...	.....
	Providing, laying, and jointing glazed stoneware, plain pipes, in trenches, and where ordered, including fixing discs, as specified, and including bed joints, in mortar, where required:—				
27	12-inch diameter .....	lineal foot	450	3/-	67 10 0
28	9-inch diameter .....	"	350	2/-	35 0 0
<b>SURPLUS MATERIALS.</b>					
	Removal of surplus materials from the various excavations throughout this Contract, as tunnels and open trenches, including sub-ducts, shafts, sumps, &c., as specified in clauses 40, 42, 43, and 45, as viz.:—				
29	For the first half mile of lead .....	cubic yard	2,400	1/-	120 0 0
30	For every further quarter of a mile of lead .....	"	.....	...	.....
<b>GOVERNMENT PROPERTY.</b>					
31	Placing, building in, fixing, and jointing only, any metal work, as cast-iron oval and circular pipes, junctions, branches, flanged, and with spigot and faucet ends, gas-checks, ventilating grates, lamp-hole boxes, manhole covers, staples, step-irons, earthenware covers, &c., supplied by the Government, including carriage, as specified in clauses 91, 121, 131 to 133 complete .....	ton	11	60/-	33 0 0
32	Closing of branch sewers and intercepting pipes with earthenware or cast-iron covers, set in cement, labour only, as specified in clause 131, complete .....	each	.....	.....	.....
33	Trapped junction blocks, taking delivery of, and building in .....	"	.....	.....	.....
<b>GENERAL.</b>					
34	Permanent puddle where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 29, including spreading in 9-inch layers, and ramming, complete .....	cubic yard	.....	.....	.....
35	Special bluestone concrete, as specified in clause 25, where ordered in any situation, in the construction of the works .....	"	.....	.....	.....
36	Bluestone metal (clause 18), 1½-inch gauge, stacked .....	"	.....	.....	.....
37	Sandstone metal (clause 26), 2½-inch gauge, stacked .....	"	.....	.....	.....
38	Bluestone metal (clause 32), 2½-inch gauge, stacked .....	"	.....	.....	.....
39	Sharp, clean-washed sand (clause 19) stacked .....	"	.....	.....	.....
40	Sawn hardwood, in scantlings or planks (clause 30) .....	cubic foot	.....	.....	.....
41	Oregon timber, in scantlings or planks .....	"	.....	.....	.....
42	Wrought-iron in bolts, galvanised step-irons, screws, nails, spikes, straps, &c. (clause 31) .....	cwt.	.....	.....	.....
43	Portland cement .....	chsk	.....	.....	.....
44	Artisan or mechanic, supplied by Contractor .....	day	.....	.....	.....
45	Quarryman or other skilled labourer, supplied by contractor .....	"	.....	.....	.....
46	Ordinary labourer, supplied by Contractor .....	"	.....	.....	.....
47	Cart, with one horse and driver, supplied by Contractor .....	"	.....	.....	.....
48	One additional horse, supplied by Contractor .....	"	.....	.....	.....
<b>MAINTENANCE.</b>					
49	Three months' maintenance after formal delivery of works .....	lump sum	.....	.....	.....
	Total .....	.....	.....	.....	16,307 17 8

**NOTES.**

1. All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in strict accordance with the specification

2. The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

3. Items Nos. 31, 32, and 33 to include the cost of conveying the Government property from the Contractor's Store or Field Office to the various sites of works along line of Main and Branch Sowers, at manholes, gas check, and shaft chamber, &c.

4. Prices for items Nos. 36, 37, 38, 39, 40, 41, 42, and 43 are to be for materials in strict accordance with specification, delivered on the works ready for use, and only the actual net quantities ordered and approved of shall be paid for. In case Contractor's prices are considered too high by the Engineer at the time such materials may be required, or if the Contractor fail to deliver such materials at the time required and ordered, then the Engineer shall have the power to supply the same from any other source, and the Contractor shall have no claim for loss or compensation on account of the exercise of such power by the Engineer.

5. Prices for items Nos. 44, 45, 46, 47, and 48 are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work

6. The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, dams, fluming, temporary bridges, roads, pumping, gaskot filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads crossing over main and pipe-sewers, reinstating all road and other surfaces, &c., or any other thing necessary in executing and completing each respective item, in strict accordance with plans and specifications.

## OFFICE ESTIMATE.

Proposed Contract No. 79, extension from Mount-street to Junction of Campbell and Jeffrey Streets, with branches.

SCHEDULE of quantities and prices for constructing and completing 76-90 chains, more or less, of the main outfall sewer extension, North Shore, branch and pipe sewers, shafts, junctions, &c., subject to omissions, extras, extensions, additions, enlargements, deviations, or alterations, as provided by the conditions of contract.

The quantities in this schedule are not guaranteed as correct, but are merely given for the guidance of intending contractors, this being a schedule of Prices Contract.

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate.	Amount.
	Excavation in tunnels, in hard rock, for sewer, branches, pipe-sewers, junctions, curves, &c., as specified in clauses 38, 42, 46, 48 to 68, including sub-ducts, timbering, unwatering, and removing the excavated materials beyond actual site of works, as viz:—				£ s. d.
1	Excavation in hard rock, where gadding only is permitted .....	cubic yard	305	72/-	1,098 0 0
2	Excavation in hard rock, where charges of powder 2 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	305	63/-	960 15 0
3	Excavation in hard rock, where charges of powder 4 inches in length by 1½ inch in diameter, and such depth of bore-holes as shall be directed only are permitted .....	"	1,220	65/-	3,355 0 0
	Excavation in shafts, shaft chambers, and sumps, as specified in clauses 39, 52, 53, 71, and 72, including timbering, unwatering, and removing the excavated materials beyond actual site of works, as viz:—				
4	Excavation in road surfaces, sand, soil, clay, pipeclay, shale, and soft rock only .....	"	50	6/-	15 0 0
5	Excavation in hard rock, where gadding only is permitted .....	"	160	40/-	320 0 0
6	Excavation in hard rock, where charges of powder 2 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	200	34/6	345 0 0
7	Excavation in hard rock, where charges of powder 4 inches in length by 1½ inch in diameter, and such depths of bore-holes as shall be directed only are permitted .....	"	940	30/-	1,410 0 0
8	Filling in round brick and concrete work of ventilating and intercepting shafts and chambers, manholes, and into all shafts, as specified in clauses 40, 41, 42, 43, 71, and 72, including withdrawing of timber, depositing in layers, replacing road and other surfaces ramming, &c. ....	"	7 0	1/3	48 15 0
9	Timber ordered in writing to be left in tunnels, shafts, as specified in clauses 36 and 37 including all iron used in fixing same .....	cubic foot	700	2/-	70 0 0
10	Sub-duct in hard rock, with tile covers, as specified in clauses 76 and 77	lineal yard	67	3/6	11 14 6
	Sub-duct, as specified in clauses 76 and 78, in more or less hard material, including dry or cement jointing for stoneware pipes, &c. :—				
11	Of 6-inch internal diameter .....	"	.....	.....	.....
12	Of 9-inch internal diameter .....	"	.....	.....	.....
	Sub-duct in water-charged loose ground, as specified in clause 70 including hardwood boxes with packing in same, and dry or cement jointing for pipes of :—				
13	6-inch internal diameter .....	"	.....	.....	.....
14	9-inch internal diameter .....	"	.....	.....	.....
15	10-inch internal diameter .....	"	.....	.....	.....
16	Hand-packed stone-filling, 4-inch gauge, as specified in clauses 17, 69, 76 to 78, over sub-ducts, and when ordered, round sewers and pipe-sewers in tunnels, including depositing, packing, and ramming .....	cubic yard	405	4/-	81 0 0
17	Sandstone concrete, any shape, form, or thickness, in shafts, tunnels, sumps, round stoneware pipes, and where ordered in any situation in the construction of these works, as specified in clauses 26, 27, 93 to 109, including washing dry surfaces, wetting, and grouting, complete .....	"	405	30/-	510 0 0
18	Bluestone concrete, any shape, form, thickness, arched, circular or otherwise, in sewer, curved junctions, arches, manholes, &c., as specified in clauses 24, 27, 93 to 109, including washing dry surfaces, wetting, and grouting, complete .....	"	900	60/-	2,250 0 0
	Brickwork in cement in sewer, junctions, shaft-chambers, circular, curved, arched, or otherwise, any shape or form or thickness, as specified in clauses 110 to 113, including wetting, flushing, grouting, collar-joints, pointing, where ordered, &c. :—				
19	Of one ring or portion of ring .....	"	260	60/-	780 0 0
20	Of two or more rings, straight, arched, &c. ....	"	.....	.....	.....
21	Cement facing in two thicknesses, ½ inch thick when finished, as specified in clause 114, to all internal (and external, where ordered) surfaces of sewer, junctions, shaft-chambers, culverts, manholes, and where ordered in any situation in the construction of these works .....	square yard	3,000	2/6	375 0 0
22	Bluestone concrete, any shape, form, or thickness, arched, circular, or otherwise, in shafts, over shaft chambers, as specified in clauses 93 to 109, including washing dry surfaces, wetting, and grouting, complete .....	cubic yard	40	50/-	100 0 0
23	Brickwork in cement, circular, arched, curved, or otherwise, any shape, form, or thickness, as specified in clauses 110 to 113, in shafts, over shaft-chambers, including wetting, flushing, grouting, pointing, where ordered, collar-joints, &c., complete .....	"	280	60/-	840 0 0
24	Cement facing in two thicknesses, ¾ inch thick when finished, to all internal and external surfaces of shafts, where ordered, as specified in clause 114 .....	square yard	50	2/6	6 5 0

No. of Item.	Description of Works.	Unit.	Probable Quantity.	Rate.	Amount.
25	Plymouth sandstone, ashlar, set in cement, on top of ventilating shafts, and where ordered, as specified in clauses 16 and 115, complete ...	cubic foot	.....	...	£ s. d.
26	Squared bluestone pitchers, 9 inches deep, set in sand, round cast-iron ventilating grates of shafts, where ordered, as specified in clause 116, complete .....	square yard	.....	...	.....
27	Providing, laying, and jointing glazed stoneware, plain pipes, in trenches, and where ordered, including fixing discs, as specified, and including bed joints, in mortar, where required:— 12-inch diameter .....	lineal foot	450	3/-	67 10 0
28	9-inch diameter .....	"	850	2/-	35 0 0
<b>SURPLUS MATERIALS.</b>					
Removal of surplus materials from the various excavations throughout this Contract, as tunnels and open trenches, including sub-ducts, shafts, sumps, &c., as specified in clauses 40, 42, 43, and 45, as viz:—					
29	For the first half mile of lead .....	cubic yard	2,400	1/-	120 0 0
30	For every further quarter of a mile of lead .....	"	.....	...	.....
<b>GOVERNMENT PROPERTY.</b>					
31	Placing, building in, fixing, and jointing only, any metal work, as cast-iron oval and circular pipes, junctions, branches, flanged, and with spigot and faucet ends, gas-checks, ventilating grates, lamp-hole boxes, manhole covers, staples, step-irons, earthenware covers, &c., supplied by the Government, including carriage, as specified in clauses 91, 121, 131 to 133 complete .....	ton	11	60/-	33 0 0
32	Closing of branch sewers and intercepting pipes with earthenware or cast-iron covers, set in cement, labour only, as specified in clause 131, complete .....	each	.....	...	.....
33	Trapped junction blocks, taking delivery of, and building in .....	"	.....	...	.....
<b>GENERAL.</b>					
34	Permanent puddle where ordered in any situation in the construction of these works (temporary puddle ordered for purposes of execution of work not to be paid for), as specified in clause 29, including spreading in 9-inch layers, and ramming, complete .....	cubic yard	.....	...	.....
35	Special bluestone concrete, as specified in clause 25, where ordered in any situation, in the construction of the works .....	"	.....	...	.....
36	Bluestone metal (clause 18), 1½-inch gauge, stacked .....	"	.....	...	.....
37	Sandstone metal (clause 26), 2½-inch gauge, stacked .....	"	.....	...	.....
38	Bluestone metal (clause 32), 2½-inch gauge, stacked .....	"	.....	...	.....
39	Sharp, clean-washed sand (clause 19) stacked .....	"	.....	...	.....
40	Sawn hardwood, in scantlings or planks (clause 30) .....	cubic foot	.....	...	.....
41	Oregon timber, in scantlings or planks .....	"	.....	...	.....
42	Wrought-iron in bolts, galvanized step-irons, screws, nails, spikes, straps, &c. (clause 31) .....	cwt	.....	...	.....
43	Portland cement .....	cask	.....	...	.....
44	Artisan or mechanic, supplied by Contractor .....	day	.....	...	.....
45	Quarryman or other skilled labourer, supplied by contractor .....	"	.....	...	.....
46	Ordinary labourer, supplied by Contractor .....	"	.....	...	.....
47	Cart, with one horse and driver, supplied by Contractor .....	"	.....	...	.....
48	One additional horse, supplied by Contractor .....	"	.....	...	.....
<b>MAINTENANCE.</b>					
49	Three months' maintenance after formal delivery of works .....	lump sum	.....	...	.....
Total .....					12,831 19 6

## NOTES.

1. All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in strict accordance with the specification.

2. The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

3. Items Nos. 31, 32, and 33 to include the cost of conveying the Government property from the Contractor's Store or Field Office to the various sites of works along line of Main and Branch Sewers, at manholes, gas check, and shaft chamber, &c.

4. Prices for items Nos. 36, 37, 38, 39, 40, 41, 42, and 43 are to be for materials in strict accordance with specification, delivered on the works ready for use, and only the actual net quantities ordered and approved of shall be paid for. In case Contractor's prices are considered too high by the Engineer at the time such materials may be required, or if the Contractor fail to deliver such materials at the time required and ordered, then the Engineer shall have the power to supply the same from any other source, and the Contractor shall have no claim for loss or compensation on account of the exercise of such power by the Engineer.

5. Prices for items Nos. 44, 45, 46, 47, and 48 are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

6. The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads crossing over main and pipe-sewers, reinstating all road and other surfaces, &c., or any other thing necessary in executing and completing each respective item, in strict accordance with plans and specifications.

## No. 5.

## Agreement executed by Messrs. Carter &amp; Co., with Annexures.

*Minute Paper.*

*Subject* :—Contract No. 79A, Sydney Sewerage Works.

Department of Public Works, Bonds and Contract Branch, Sydney, 22 June, 1894.

The agreement herein duly prepared has been executed by the contractors, Messrs. Carter & Co., and stamped, and might now be forwarded to the Engineer-in-Chief for Sewerage. The tender and all other papers herein are sent herewith.

The Under Secretary.

HAROLD F. NORRIE,

Officer-in-charge.

Mr. Hickson.—D.C.M.L. (for U.S.), B.C., 22/6/94. Messrs. Bagge and Davis to note and return.—F.C.P., 22/6/94. C.H.O.B., 23/6/94. Prepare copies of schedule and three specifications.—J.D., 23/6/94. Mr. Bowes. Bond forwarded to Acc. Roads, 8/8/94.

AGREEMENT made this 20th day of June, in the year of our Lord 1894, between John Carter and David Graham Snodgrass, of North Sydney, in the Colony of New South Wales, contractors, carrying on business together under the name, style, or firm of "Carter & Co." (hereinafter styled or referred to as "the contractors"), of the one part, and Her Most Gracious Majesty Queen Victoria of the other part.

WHEREAS the contractors made the tender hereunto annexed, marked "E," to construct, completely finish, and maintain the various works for Contract No. 79A, Sydney Sewerage Works, in accordance with the supplementary specification, specification, special conditions, and general conditions hereunto annexed and marked respectively "A," "B," "C," and "D," and with the six several drawings relating thereto now in the office of the Engineer-in-Chief for Sewerage. And at or for the price or sum, and within the time in the said tender mentioned. And whereas the said tender was accepted by the said Minister, and such acceptance was duly notified to the contractors on the 16th day of June, 1894 (a copy whereof is hereunto annexed and marked "F"). And whereas the contractors have deposited the sum of £650 in the Bank of New Zealand, Sydney, in the said Colony, in the name of the Under Secretary for Public Works, at interest upon fixed deposit No. A22097, dated the 19th day of June, 1894, for twelve months, and has handed the receipt for same to the said Minister, to be held by him as such Minister, or the Minister for Public Works for the time being of the said Colony, on behalf of Her Majesty, as security for the due performance of this contract, and all other matters and things herein contained, and which, on the part of the contractors, are to be done and performed: Now this agreement witnesseth that, in consideration of the premises, the contractors do hereby, for themselves, their heirs, executors, and administrators, covenant with and to Her said Majesty the Queen, her heirs and successors, that they, the contractors, shall and will perform the various works required in and about the full and proper construction, erection, and completion of the said sewerage works in accordance in all things with the said supplementary specification, specification, special conditions, general conditions, and drawings within the time and at or for the price or sum in the said tender mentioned. And it is hereby agreed and declared between and by the said parties hereto that the said supplementary specification, specification, special conditions, general conditions, tender, and copy acceptance of tender, marked as aforesaid, all being hereunto annexed as aforesaid, shall be read as incorporated in, and forming part and parcel of, these presents in like manner as if the same had been herein written and set forth at length, and that the said supplementary specification, specification, special conditions, general conditions, tender, copy acceptance of tender, and the said drawings, and these presents shall together be taken to be the contract between the said parties in respect of the said works, amplified in manner following—that is to say, that the said general conditions shall at all times be read and construed as if the stipulation contained in the said acceptance of tender as to the discharge of men (not domiciled in this Colony for six months previously to their employment on the said works) employed on the said works when called upon to do so, and the penalty for non-compliance therewith had been expressly set out in the said general conditions. And that the progress payments shall be made at the rates set out in the schedule of prices annexed hereto and marked "G," but that such schedule of prices shall not further or otherwise relate to this contract or the works to be done thereunder.

In witness whereof the said parties to these presents have hereunto set their hands and seals, the day and year first before written.

Signed, sealed, and delivered by the said John }  
Carter, in the presence of,— } JOHNS CARTER.  
HAROLD F. NORRIE, J.P.

Signed, sealed, and delivered by the said }  
David Graham Snodgrass, in the pre- } D. G. SNODGRASS.  
sence of,— }  
HAROLD F. NORRIE.

## "A."

## CONTRACT No. 79A.—SUPPLEMENTARY SPECIFICATION.

The printed specification attached to this supplementary specification shall be held binding in all matters relating to this contract as far as the Engineer-in-Chief may deem the same applicable.

*Description of Contract.*

The description of contract and clauses 1, 2, and 2A of the specification do not apply, and are to be treated as surplusage.

This contract comprises the provision by the contractor of all labour, machinery, tools, plant, and everything that may be necessary for the construction of the Main Outfall Sewer Extension, from Mount-street to junction of Campbell and Jeffrey Streets, with a branch 33 feet long (excavation only) at Junction-street,

Junction-street, a branch along M'Dougall-street to Brisbane-street, a branch along Willoughby-street to Carabella-street, and a branch to Glen-street, as described in detail in the specification, supplementary specification, special and general conditions, and as shown on the following drawings:—

- No. 1.—General plan and longitudinal sections.  
 „ 2.—Details of shafts and junctions.  
 „ 3.— „ „  
 „ 4.— „ „  
 „ 5.— „ „  
 „ 6.—Details of shafts, junctions, and cross-sections of sewers.

*Working Faces.*

Clause 127 of the specification does not apply, and is to be treated as surplusage.

The working faces available in this contract for excavating and constructing the main sewer and branches, consist in twelve working shafts with two faces each, and four working shafts with one face each.

*Surplus Materials and Surplusage.*

The second paragraph of clause 42 of the specification, and the whole of clauses 4, 47, 76, 77, and 78 do not apply, and are to be treated as surplusage, unless where otherwise directed, and clause 9 of the special conditions and clause 4 of the general conditions shall also be treated as surplusage.

*Dimensions of Shafts.*

Under item 71 of the specification, the 24-ft. x 17-ft. sectional area of shafts does not apply, and is to be treated as surplusage. All shafts to be sunk of the full dimensions and cross-sections shown on drawings and as shall be ordered.

*Numbers of Shafts, Chambers, Junctions, &c.*

Under clause 88 of the specification the numbers of gas-check, inlet, shaft, and junction chambers, shafts, &c., does not apply, and is to be treated as surplusage.

Sixteen ventilating shafts with chambers, three junction chambers, seven inlet chambers at heads of drop-pipes, &c., to be built as shown on longitudinal sections, general plan, and detail drawings, and as shall be directed.

*Symbols.*

The symbols No. 2 in clause 34, No. 7 in clause 49, No. 7 in clause 57, Nos. 1 and 2 in clause 71, of the specification, do not apply, and are to be treated as surplusage.

*Completion of Contract.*

The time allowed for completion in clause 1 of the special conditions shall be read sixteen months.

*Deposit.*

The deposit in clause 6 of the special conditions shall be read as £650 sterling.

This is the supplementary specification marked "A," referred to in our annexed agreement with Her Majesty the Queen, dated the 20th day of June, A.D. 1894.

Witness,—HAROLD F. NORRIS, J.P.

JOHN CARTER.  
D. G. SNODGRASS.

"B."

SYDNEY SEWERAGE, CONTRACT NO. 79A, MAIN OUTFALL SEWER, NORTH SHORE.

SPECIFICATION of the several works required in the construction of the Main Outfall Sewer, North Shore commencing at 0 chains near Long Bay, and extending under private land to Grassmere-street, near the eastern boundary of Cammeray Park, under Cammeray Park to corner of Alfred and Ernest Streets, and along Alfred-street to Mount-street, where it terminates, being a total distance of about 1 mile 25·3 chains; together with shafts, branches, &c., connected therewith, in accordance with the accompanying drawings, with such extensions or omissions at both ends and throughout the length of the contract as may be ordered in writing, viz.:—

*1. Description of Drawings.*

1. Drawing No. 1.—General plan.  
 „ No. 2.—Longitudinal section.  
 „ No. 3.—Details of shafts at Falcon-street.  
 „ No. 4.—Detail of shafts.  
 „ No. 5.— „ „  
 „ No. 6.— „ „  
 „ No. 7.—Cross-sections of sewer, &c.

*2. Extent of Contract.*

2. The works comprised in this contract consist in the necessary amount of earth and rock excavation, puddling, shoring, timbering, under-pinning, centering, scaffolding, unwatering, concrete, brickwork, pipe-laying, carpenter's work, ironwork (with exception of the materials supplied by Government, as set forth in clause 131), pitching, paving, ballasting, metalling, masonry, leading surplus materials to spoil, embankment, &c., required in the construction of the Main Outfall Sewer, North Shore, in tunnels through rock, as shown on longitudinal section, and as shall be directed, with all gas-checks, penstocks, junctions, curves, shafts, inlet chambers, pipe-sewers, ventilating shafts, sub-ducts, road-making, &c., and all other works in connection with those herein enumerated, and the maintenance of the whole of these works for a period of three months after they have been formally taken over by the Engineer.

2A. The contractor must include in his Schedule, rates for excavation, the cost of clearing and forming a temporary roadway from Ernest-street to shaft at 27.5 chains in Cammeray Park; and also the cost of providing a tramway or roadway from the shaft at 0 chains to Long Bay, for conveying the surplus materials from this shaft to the Long Bay.

### 3. Site.

3. Access to the site of the works to be had along its centre lines where such are shown to be along lines of streets, and along all public roads which cross the centre lines of the Main Outfall Sewer, North Shore.

4. Access to shaft in Cammeray Park will be given along a strip of land from Ernest-street, and access to shaft at 0 chains from the Long Bay will also be provided along a strip of land 66 feet wide.

5. For the purpose of sinking, working, and building shafts on lines of streets, and on private ground, when ordered, the contractor to have temporary possession of an area of 24 ft. by 17 ft. over the mouth of each shaft, unless otherwise directed.

6. All areas of strips of land round mouths of shafts hereinbefore referred to, to be set out by the Engineer, to whom written application for their temporary possession must be made by the contractor two weeks prior to the time the said land is required by him.

Such possession, however, not to be exclusive, but subject to the right of entry of the Engineer, his officers, and other persons, carts and horses, &c., required for any purposes of the Government at any time.

7. Any other lands required by the contractor for temporarily depositing materials, erecting winding engines, or for any other purposes in connection with the contract, he will have to procure at his own cost, in strict accordance with clause 6 of the conditions of contract.

8. The contractor shall provide and erect all necessary fences, temporary bridges underneath foot-paths and streets, hoarding-barriers, &c., wherever directed to do so, and all fences, walls, railings, walks, or streets, metalled, grassed, paved, pitched, or asphalted surfaces, to be left by the contractor at the completion of the works in the same order as they were before the commencement of the works, at his sole cost, in strict accordance with the various stipulations and terms contained in clause 41 of this specification, and clause 2 of the conditions of contract, to the entire satisfaction of the city municipal authorities and of the Engineer-in-Chief.

### 4. Lines, Levels, and Setting-out Work.

9. The centre line of sewer is shown on general plan, drawing No. 1, by a full line, which will be marked on the surface of the ground, the same as on plan, as the works proceed.

After setting-out, the centre line of the works is to be preserved solely by reference to the iron nails, pegs, and other marks and signals which may be placed, fixed, and erected for the purpose of these works along its centre line.

The gradients and levels of the works are to be preserved by reference to any bench-marks which the Engineer may deem necessary to establish along the lines of works during the progress of the contract, subject to check and adjustment, as shall be directed, from other bench-marks established beyond the site of the works.

### 5. Materials.

10. All materials, as brick, stone, cement, timber, iron, sand, stoneware pipes, clay, lead, &c., which are to be supplied by the contractor, are to be of the best quality and description of their respective kinds. Samples of each kind to be submitted for the approval of the Engineer, and retained in office; and on approval having been obtained, they are to be delivered on the works ready for use, as per sample.

11. The contractor shall inform the Engineer of the sources whence the various materials are supplied, or of the places of their manufacture, and afford him every facility to inspect their supply or manufacture at any stage of the same.

12. The contractor to make and provide proper and approved gauges or scales for measuring or weighing all materials supplied, whether specified to be broken or delivered to special sizes and mixed together in stated proportions or not.

13. Bricks to be of well-mixed material of approved quality and uniform fineness; to be new, sound, hard, well-burnt kiln bricks, free from cracks and all other defects, truly rectangular, with sharp arrises, of approved dimensions and form; to be specially moulded where required for arching inner and outer rings of sewers and circular or segmental shafts, and equal to sample brick to be seen at the Engineer's office, and which must be sealed by the contractor and acknowledged as a sample of the bricks to be used throughout the works. Bricks used in these works will be subjected to the following tests, viz. :—

- (a) *Tensile strength*.—The tensile strength to be tested, in the departmental testing machine, by laying the brick horizontally on its base of 3 inches, between supports 7 inches apart, and the strain applied across the centre of the brick and distributed over a width of  $1\frac{1}{2}$  inch. An average breaking strain of twelve bricks to be taken, which must not be less than 8,000 lb.
- (b) *Porosity*.—Bricks immersed in water for twenty-four hours must not increase in weight more than 3 per cent.

Should the twelve bricks fracture under the foregoing average strain, or prove more impervious to water than 3 per cent., then the Engineer may reject the whole stack of bricks from which the twelve bricks were taken. The whole of the expense incurred in testing the bricks shall be borne solely by the contractor.

14. In the event of the contractor delivering quantities of bricks on the site of the works for the contract of a mixed description and quality, the officer in charge shall have the power to require of the contractor to have those bricks which in his opinion are suitable for the works picked out and stacked where directed, and those defective or unsuitable removed from the site of the contract; and in the event of the contractor refusing or failing to comply with such request within twelve hours from the time it has been made, then in all such cases the superintending officer shall have the power of rejecting the whole of the bricks so delivered by the contractor.

15. Stoneware pipes to be of well ground and mixed material, of tough, tenacious, impervious quality, well burnt, sound, hard, uniform in thickness, true in section, straight longitudinally, uniformly glazed both inside and outside, free from fire or other cracks, flaws, and ash-holes, the collar perfectly joined

joined to the barrel, and in every way equal to sample pipe to be seen at the Engineer's Office. Paving tiles to be of the same materials as the stoneware pipes, to be uniformly glazed on all sides and of approved size and form.

Pipes to be of the following thicknesses and depth of collar, namely:—

Pipes, inside diameter, 9 in. ; thickness, $\frac{1}{2}$ in. ; depth of collar, 2 in.						
Do	do	12 in. ;	do	1 in. ;	do	2 in.
Do	do	15 in. ;	do	$1\frac{1}{4}$ in. ;	do	$2\frac{1}{4}$ in.
Do	do	16 in. ;	do	$1\frac{3}{8}$ in. ;	do	$2\frac{1}{2}$ in.
Do	do	18 in. ;	do	$1\frac{1}{2}$ in. ;	do	$2\frac{1}{2}$ in.
Do	do	21 in. ;	do	$1\frac{3}{4}$ in. ;	do	$2\frac{3}{4}$ in.
Do	do	24 in. ;	do	$1\frac{3}{4}$ in. ;	do	$2\frac{3}{4}$ in.

All parcels of pipes used in these works will be tested in the departmental testing machine, and submitted to the following crushing strains applied in the centre of the pipe:—

24 inches diameter pipe at 110 lb. per square inch of bearing surface.					
18	"	"	100	"	"
16	"	"	100	"	"
12	"	"	100	"	"
9	"	"	100	"	"

If the Engineer deems it necessary, the pipes will also be tested for porosity. Should the pipes fracture under the foregoing strains, or not prove impervious to water, then the Engineer may reject the whole of parcel from which the pipes were taken. The whole of the expense incurred in testing the pipes shall be borne solely by the contractor, and all pipes injured or broken by the testing shall be immediately replaced by sound pipes, subject to the foregoing tests, at contractor's cost.

16. *Stone*.—All stone used in the construction of these works for pitchers, or masonry, unless where otherwise specified, to be sound, solid, hard sandstone of the best description, free from all defects, and as per sample approved.

17. Broken stone for ballast to be sound, solid stone, as specified in clause 18 ; to be broken to a size to pass freely with its largest dimensions through a ring of  $\frac{1}{4}$  inches in diameter. Broken stone for packing round sewer lining, above drains, &c., to be sound and solid, and obtained from rock excavation, and broken to the same size as ballast.

18. Broken stone for bluestone concrete to be of basalt or other similar hard stone of approved quality ; to be broken by hand or crushing machine, of a size to pass freely with its largest dimensions through a ring of  $1\frac{1}{2}$  inch in diameter ; the whole of the metal to be free from dirt, quarry refuse, &c. ; to be screened through a sieve of meshes  $\frac{1}{4}$  inch apart, and then to be washed with fresh water until approved, before it shall be deemed fit and suitable for these works.

19. Sand to be sharp quartz sand, of approved quality, free from all earthy, loamy, clayey matter, &c., and washed perfectly clean whenever the Engineer deems it necessary.

20. *Cement*.—The cement to be used throughout these works to be well packed in strongly-made casks, to be the best Portland cement, of approved brands and manufacture, delivered in thoroughly sound condition, fit for immediate use, and without requiring seasoning or air-slacking, to be free from any symptoms of staleness, caking, damage to the packing, hard or set lumps ; and no barrel or portion of same to be used until it has been examined and approved by the Engineer. Samples taken from various casks (not exceeding six in number), and mixed together from each parcel brought on the works, to be submitted for testing:—The weight per struck bushel not to be less than 100 lb., and each cask shall contain not less than 387 lb. weight of cement, exclusive of weight of cask and packing. The specific gravity not to be less than 3.10. The cement, when passed through a wire sieve of 2,500 meshes per square inch, to leave a residue of not more than 10 per cent. ; through a sieve of 5,800 meshes, not more than 25 per cent. ; and through a sieve of 14,400 meshes, not more than 40 per cent. The cement when mixed neat with water, to give a tensile strength of not less than 250 lb. per square inch after three days' setting in water, 450 lb. after seven days, and 550 lb. after twenty-eight days. The cement is to be "slow-setting," and when gauged with water to a stiff paste must set in a damp atmosphere of between 60° and 90° F., in from one and a half to six and a half hours. Neat cement of the consistency above mentioned to be made into pats kept in moist air until set, and then immersed in water at a temperature of between 60° and 80° F., and also placed in Faija's moist-heat and warm-bath apparatus at a temperature of 90° F., as to symptoms of blowing, or any alteration or variation of form or volume. The cement when mixed in the proportion of one of cement to three of standard sand (washed, dried, and sifted through a sieve of 400, and retained upon one of 900 meshes per square inch), and about 10.0 per cent. of the total weight of water, to give a tensile strength of not less than 150 lb. per square inch at seven days, and 230 lb. at twenty-eight days, the briquettes having been kept in a damp atmosphere, put in water twenty-four hours after they were made, and left in water at a temperature of between 60° and 80° F. The tensile strength will be ascertained in the departmental testing machine, with the load increasing at the rate of 200 lb. per minute, and the average breaking weight of six briquettes will be taken for each test. Should the sample fail in any or all of these tests, or not show a proper progressive increase in strength with age of briquette, then the Engineer may reject the whole parcel from which the sample was taken, and the contractor shall at once remove the said parcel of cement from the site of the works at his own expense ; failing which, the Engineer may have it removed at the contractor's cost without further notice. Empty casks to be destroyed, as provided in clause 14 of the general conditions. To facilitate the gauging of cement throughout the contract, cement casks will be taken as equal to holding  $\frac{1}{4}$  cubic feet, otherwise the contractor to provide and make approved gauge-boxes, holding exactly  $\frac{1}{4}$  cubic feet, for measuring cement. Cement of a lighter weight than herein stipulated, but otherwise equal to the specified test, may be permitted to be used in the works, subject to the decision of the Engineer-in-Chief, and provided that the deficiency in weight is made up in quantity.

21. *Mortar*.—The mortar to be used in these works to be composed of one part of Portland cement and of two parts of clean washed sharp sand, as described in clauses 19 and 20, the proportion of each to be correctly ascertained by measurement, the whole to be mixed with fresh water, as may be directed, to be well incorporated, and to be used fresh. Any mortar which has become hard or set to be at once rejected. All mortar to be mixed upon approved sawn timber platforms close to where it is required.

22. Special mortar, composed of one part of cement and one part of sand, and prepared as before described, to be provided and used in all portions of the work where especially specified and directed.

23. *Grout*.—The grout to be made of mortar as described in clause 21, to be mixed fluid in tubs close to where it is required, and to be used fresh.

24. *Bluestone Concrete*.—The concrete to be used in these works to be composed of one part of Portland cement, two parts of sand, and four parts of bluestone metal.

25. Special concrete, if required, to be composed of two parts of Portland cement, three parts of sand, and seven parts of bluestone metal.

26. Sandstone concrete, where ordered to be used in these works, to be composed of one part of Portland cement, two parts of sand, and five parts of sandstone (as specified under clause 16) metal, free from dirt, quarry refuse, sieved (as specified in clause 18), washed, and of a size to pass with its largest dimensions through a ring of 2 inches in diameter. All materials to be mixed in the same manner as hereinafter specified for concrete.

27. All concrete to be prepared close to where it is required on a sawn timber plank platform; all proportions to be correctly ascertained by measurement; the metal to be well washed when put on the platform and levelled at top, the sand to be placed in a level layer above the metal, and the cement to be placed upon the sand, after which all materials to be carefully mixed and turned twice over, and then the whole to be mixed with fresh clean water, and thoroughly turned over twice, and oftener if required, until, in the opinion of the Engineer, it shall be well incorporated and fit for the work before it leaves the platform; it shall then be at once conveyed to the works as shall be directed, and to be used fresh.

28. If the concrete is made by machinery, all materials to be prepared as previously described, then to be mixed dry, and afterwards with fresh clean water, as may be directed and as shall be approved of; to be used fresh.

29. Puddle to consist of the best clay to be obtained in the district within a radius of 5 miles; to be carefully turned over and mixed with fresh clean water, as shall be directed, until the clay, in the opinion of the Engineer, has become of one even and uniform colour and plasticity.

30. Hardwood timber to be ironbark, blue or red gum, box, or other approved colonial hardwood, of the best description, sound, straight, free from sap, wanes, shakes, gum veins, cores, or other defects; to have clean sharp arrises, and to be of the fullest dimensions shown or specified; in round timber the diameter given is to be measured at the smallest end, exclusive of bark.

31. *Wrought-iron*.—All wrought-iron work to be of the best description, quality, and workmanship, with square arrises, and of the exact dimensions and forms shown on drawings. All wrought-iron to be double H or BB Crown brand, and all ironwork, when finished, to be heated and then dipped in or coated with gas tar.

32. *Bluestone road-metal*.—The stone used for metalling to be basalt or other similar hard stone of approved quality; to be broken to angular fragments of a size to pass freely with their largest dimensions through a ring  $2\frac{1}{2}$  inches in diameter, and to be free from dirt, quarry refuse, &c.

33. *Bluestone*.—All bluestone used in the construction of these works for pitchers or masonry to be of the best description of basaltic bluestone obtainable, free from honeycomb and all defects, and as per sample approved.

#### 6. General.

34. Earth-borings have been taken along or close to the main line of sewer, the results of which are described on drawing No. 2; but no guarantee is given that the ground to be excavated will be free from subsoil water, or that the proportion of materials will correspond with that shown on longitudinal section.

35. *Diverting surface water and unwatering*.—The prices set forth in schedule accompanying tender for the works comprised in this contract to cover and include the cost of all materials and labour, and everything that is necessary for executing the works of every description required for the proper and effectual deviation of all surface and subsoil drainage from the sites of the works; in constructing temporary coffer or other dams across the low-lying ground above and below the site of the works, in diverting said subsoil and surface water, from time to time, as the progress of the contract may require; in providing and constructing adequate and secure fluming for conducting undisturbedly all freshets across the site of the works on or near lines of lowest ground; in providing and finding all necessary pumping apparatus; in keeping all trenches and excavations constantly unwatered, and in preventing any injury to the same by floods or any other cause.

36. *Shoring, Timbering, and Temporary Bridges*.—During the excavation for sewers, headings, branch sewers, and pipe-sewers, in tunnels, for shafts, junctions, gas-check chambers, curves, crossings over or underneath existing gas, water and sewer pipes, and oval or circular brick sewers, &c., the contractor to adopt every precaution and provide all materials, as planking, strutting, shoring, timbering, &c., and labour, and carefully execute and construct, at his own cost, wherever considered necessary by the Engineer, and to his entire satisfaction, temporary bridges, underneath lines of streets or footpaths, so as to ensure during the period of the contract, the undisturbed traffic along said streets, &c.; and execute approved strong and secure shoring and strutting and underpinning where the sewer passes underneath buildings existing pipes and brick sewers, and in sandy or loose soil close timbering, or any other work that may be required to prevent any buildings over and adjacent to the line of sewer, and all other super-structures, road-surfaces, earth, rock, or other materials at top and sides of excavations from settling, cracking, being shaken, slipping, or falling in.

37. As the works proceed, all shoring, timbering, temporary bridges, &c., shall be withdrawn, except in cases where, in the opinion of the Engineer, the withdrawing of the same is impracticable, or would endanger the safety of the works and buildings, existing pipes, sewers, &c., streets, and other surfaces, over and adjacent to same, when the contractor must obtain an order, signed by the Engineer-in-Chief, to the effect that shoring, timbering, &c., may be covered up, with a statement of the quantities, which shall be measured before being covered up, and paid for at schedule rates.

38. The different materials met with in excavating main outfall sewer and branches, junctions, sub-ducts, &c., in tunnel, as hard sandstone or other rock, to be measured and paid for under items Nos. 1, 2, or 3 of the schedule as "Tunnel excavation in solid rock," subject to the conditions contained in clauses 52 and 53.

39. The different materials met with in excavating shafts and sumps, as road-metal, wood-paving, made ground, sand, shale, ironstone, clay, watercharged in places, pipeclay, soft sandstone (water-charged more or less), sound hard rock, &c., to be measured and paid for under items Nos. 4, 5, 6, or 7 of the schedule as "excavation in shafts and sumps," subject to the conditions contained in clauses 52 and 53.

40. *Removal of road-metal, pitching, and wood-paving, &c.*—Prior to commencing any excavation for shaft, junctions, branch sewer, &c., in open cutting (in accordance with the various stipulations and conditions contained in this specification, and in clauses 6 and 11 of the conditions of contract), the sites for each work to be prepared by the removal of all road-metal, ballast, pitching, wood-paving, concrete, asphalt, flagging, turving, &c., where such occurs, as shall be directed. The materials so removed in the first instance to be laid and stacked aside, as the Engineer may direct, in different spoil-banks; and as the works proceed, the said materials, if approved of, to be used in reinstating the metalled, pitched, and paved road or other surfaces, as the case may be, and those not approved of to be carted away to such places as shall be ordered, and to be paid for as lead.

41. All sods, road-metal, pitching, ballast, wood-paving, concrete, &c., removed under the conditions of the two foregoing clauses, and damaged, injured, or otherwise not approved of as fit for relaying, placing, setting, and fixing in the reformation and reinstatement of the various road and other surfaces, to be replaced by contractor with new, sound, and approved materials of their respective kinds, and therewith to reinstate and maintain, during continuance of contract, the various road and other surfaces, at his sole cost, as provided in clause 8, in a sound and satisfactory manner, in accordance with clause 11 of the general conditions of contract and to the entire satisfaction of the municipal authorities and of the Engineer-in-Chief.

If required by the Engineer the contractor shall, at the termination of the period of maintenance, procure certificates from the municipal authorities concerned, that the roads, &c., in their respective districts are in a satisfactory condition.

42. *All soft or loose soil, clay, soft and hard rock, and other materials* obtained from tunnels, subducts, sumps, shafts, &c., if approved of shall, in the first instance, be put aside in separate spoil-banks beyond the site of the works, subsequently to be used in refilling round and over pipes, and all concrete, masonry and brickwork, and into all excavations, as hereinafter specified, and as shall be directed at the time; and the surplus not so required shall be cleared away and removed by the contractor from the sites of all the works, and from the surfaces, streets, channels, and footpaths surrounding the same, and disposed of by the contractor, or carted to such places as shall be ordered, and paid for as lead.

The surplus material from shaft at 0 chains is to be conveyed to the Long Bay, and deposited and spread below high-water mark, as shall be directed, and paid for under Schedule Item No. 29.

43. *Areas at mouth of shafts.*—It is to be distinctly understood that when sinking shafts on lines of streets, and, when ordered, on private ground, &c., the materials excavated and raised, on their arrival at level of staging above mouth of shaft, are to be at once removed from off the streets or other surfaces, as the case may be; and when building material, &c., are to be conveyed through shafts to the tunnel works, that all such materials on arrival at mouth of shafts must be at once conveyed to the works underground, as permission cannot be given to contractor to disturb and impede the usual traffic in the streets, or the usual occupation of the ground by the owners, as the case may be, beyond the possession for the time of an area not exceeding 24 ft. x 17 ft., or less if ordered, over the mouth of each shaft, unless where otherwise determined and directed by the Engineer-in-Chief during the progress of the contract.

44. *Diversion of sewage of existing sewers during the construction of the works.*—During the construction of the works in general, and of all points of intersection of existing and new sewers, and until completion of all works connected therewith, the contractor to provide all materials and labour and everything that may be necessary; and execute all the works of every description required to prevent (and be solely responsible for) all damage and injury which may occur to private property or to the existing or new works by floods, flooding with sewage, choking and bursting of sewers in consequence of insufficient and inadequate pumping apparatus, tanks, dams, fluming, &c., or any other cause; and erect and construct suitable tanks, pumps, watertight temporary dams across existing sewers, above and below points of intersection, and watertight, adequate, and secure fluming, for the purpose of conveying constantly the whole of the sewage which may flow in said sewers at any time across said points of intersection, at his sole cost, to the entire satisfaction of the Engineer-in-Chief.

45. *Measurement of excavation, refilling, and spoil.*—The excavation throughout these works to be measured the net dimensions only of the various cross-sections shown on drawings, or determined at the time by the Engineer, and, where timbering has been ordered, the net dimensions only to the outside of said timbering. All refilling of above described excavations to be measured the net dimensions of same, less the actual net displacement of the permanent works. The whole of the surplus materials to be measured the actual net excavation less the actual net refilling as ascertained in accordance with the foregoing stipulations.

#### 7. *Main Outfall Sewer, North Shore, in Tunnels, through Rock, &c.*

46. The works comprised under the main outfall sewer, North Shore, in tunnels, through rock, &c., consist in the whole of the works of this contract as enumerated in clause 2, and as shown on drawings, and any details which the Engineer may provide during the progress of the contract.

47. The internal dimensions of the main outfall sewer are—

From 0 chains to 50 chains	...	...	4 ft. x 3 ft.
" 50 " to 1 mile 25-20 chains	...	...	4 ft. x 2 ft. 8 in.

48. The excavation in tunnels, requiring shoring, timbering, and close timbering, the same is to be executed as specified in clause 36, and the unwatering is to be executed as specified in clauses 35, 44, and 60.

49. The cross-sections of sewer in tunnels to be as shown on drawings No. 7, to vary in the quantities and thicknesses of brick and concrete work according to the depths, nature, and solidity of the ground, and position under streets, &c., as shall be directed during the progress of the works.

50. The excavations for the works enumerated in clause 46, to be executed to the various depths, level, or inclined planes, gradients, steps, widths, batters, slopes, curves, longitudinal and cross-sections, &c., as shown on drawings, and any details which the Engineer may provide during the progress of the contract, and to such lesser or greater depths and widths as the Engineer-in-Chief shall direct and approve of from time to time during the progress of the works.

51. Wherever the solidity of the ground permits it, the excavation to be taken out with vertical or curved sides, as the case may be, the net dimensions only of the various cross-sections of the works, as shown on drawings and ordered.

52. *Precaution.*—In all cases at excavations of open trench, and shafts, where rock occurs, and blasting may facilitate such excavations, and in tunnels through rock, the contractor to use every precaution and carry on such operations with such limited charges of powder only, or other approved explosives, as will loosen the rock without shattering the same, and to employ all necessary means, as temporary bridges, staging, chains, rope-nets, fagots, or mats, &c., to prevent effectually and thoroughly all stones and fragments of same, or other materials from being shot or thrown out of said trench, tunnel, and shaft excavations, as he shall be held solely responsible for any accident, damage, and injury resulting from such blasting to any persons, works, or buildings, over the line of sewer or in the neighbourhood of same, &c., and as provided in clause 11 of the conditions of contract under the heading "Liability for Accidents, &c." Blasting will not in any case be allowed between the hours of 10 p.m. and 6 a.m., nor after 1 p.m. on Saturdays, except by the written authority of the Engineer; every hole drilled for blasting purposes will be measured by an inspector, and charged under his supervision, and the work shall be carried on under such further regulations, in conformity with paragraph 7 of clause 14 of the general conditions, as the Engineer may make and shall consider necessary as the contract proceeds.

53. As regards the charges of powder required on the various portions of this contract to loosen the rock without shattering the same, and in order to minimise as much as possible the risk of injuring or damaging buildings over or in the neighbourhood of the line of sewer; it is to be distinctly understood that only powder, or other explosives, of approved quality shall be used, and, when ordered in writing, by the Engineer, in charges of powder not exceeding 2 inches in length by  $1\frac{3}{8}$  inch in diameter, and not exceeding 4 inches in length by  $1\frac{1}{2}$  inch in diameter respectively. If other explosives are permitted to be used, the quantity and weight of such explosives relatively to powder to be carefully ascertained by the Engineer, and the respective charges made equivalent to those used in the case of powder.

54. The schedule of quantities and prices provides for the excavation of this contract being executed as follows, viz.:—

"Tunnel excavation in solid rock," subdivided under items—"Hard rock excavation, where gadding only is permitted." "Hard rock excavation, where blasting is permitted with charges of powder not exceeding 2 inches in length and  $1\frac{3}{8}$  inch in diameter." "Hard rock excavation, where blasting is permitted, with charges of powder not exceeding 4 inches in length, and  $1\frac{3}{8}$  inch in diameter."

Excavation in shafts and sumps, subdivided under items—"Hard rock excavation, where gadding only is permitted." "Hard rock excavation, where blasting is permitted, with charges of powder not exceeding 2 inches in length, and  $1\frac{3}{8}$  inch in diameter." "Hard rock excavation, where blasting is permitted with charges of powder not exceeding 4 inches in length and  $1\frac{3}{8}$  inch in diameter," and "excavation in road surfaces, sand, soil, pipe-clay, soft rock only."

55. No guarantee is given as to the relative quantities of excavation which may be found under the abovenamed items of the schedule in the execution of the work, and they shall be paid for as they occur. The contractor shall not be entitled to claim any compensation for loss or damage in consequence of any alteration, change, increase, decrease, or omission, as the Engineer may order in writing, of any of the respective quantities under the abovenamed items beyond the actual respective rates per cubic yard named in the schedule of quantities and prices for such excavation "in solid rock," with 2 in. or 4 in. charges of powder or no explosives respectively.

56. The excavations for sewer, branches, &c., as before described, may therefore vary from those shown on drawings, but the exact cross-sections will be determined by the Engineer as the works proceed.

57. *A heading of 4 ft. x 3 ft., exclusive of timbering,* to be driven for all lines of pipes. The timbering to be executed as specified in clause 36. In good bearing material, all pipes to be laid on solid ground, as hereinafter specified, after which the open trench or heading, as the case may be, to be filled in with approved earth, as specified in clause 69. In less solid soil, where ordered, the pipes are to be laid and jointed on a layer of concrete 9 inches thick, and then to be surrounded with a concrete relieving arch 9 inches thick, as shown on general cross-section, drawing No. 7.

58. The excavation for tunnels is assumed to be sandstone rock, varying in hardness and solidity, and less compact material. In strong compact rock,  $4\frac{1}{2}$  inches concrete and brick lining will be requisite, and, as the materials occur less compact, two or three rings of brickwork or brick and concrete lining, as shall be determined by the Engineer as the heading proceeds, may be required.

59. The excavations for the tunnels in rock, to be taken out to the exact form of the tunnel, leaving just room for the lining ordered. Great care to be taken in gadding or in blasting the rock, so that no portion of the sides, soffit, or invert of tunnel be removed beyond the exact dimensions determined on. In no case shall the excavation be taken out in advance of the brick and concrete lining in excess of internal dimensions of sewer, until the thickness of the lining of the succeeding length has been determined by the Engineer.

60. All water which, during the progress of the work, may accumulate in these excavations to be properly, effectually, and continually pumped out, and the whole to be kept dry until after the completion, setting, and hardening of all brick and concrete work; and the greatest care to be taken to prevent running water passing over any of the brick, concrete, and pipe-work until it has set perfectly hard; any concrete, mortar, and cement jointing exposed to wash of water must be taken up at once, and replaced by fresh concrete, mortar, and jointing at contractor's expense.

61. Great care to be taken while timbering that no portion of end faces, sides, floor, roof, or front faces of excavation in tunnel, or open trench, as the case may be, be removed, or fall in, beyond the exact dimensions determined on; and the contractor to provide and execute at his own cost whatever may be required to prevent such removal or falling in of the excavation, and the wet or dry material surrounding the timbering from being shaken, running, or forced through the joints of the poling-boards and open spaces between the wedges which keep the poling-boards in position; and to provide and have constantly in readiness, close to where they are required, all appliances and materials such as straw, bags, asphalted felt, tarred gasket, puddle, &c., and with the same carefully and securely close up and pack against the outside of the timbering, all such joints and open spaces wherever they occur; and caulk open joints if so directed; and attend to, execute, and maintain the said timbering till completion of the sewer works to the entire satisfaction of the Engineer-in-Chief.

62. In advancing the end faces of excavation in tunnel, particular precaution to be taken by the contractor that such advance is made in a careful, secure, and safe manner, by means of shoring, planking, poling-boards, props, and wedges, together with all packing and caulking materials.

63. In withdrawing timbering from shafts, the same shall be commenced from bottom of excavation, or as the Engineer may direct, from lowest practicable portion of same, and continued upwards; the contractor to exercise every precaution by means of intermediate shoring, planking, props, &c., and the filling in around and above sewer to be carried on simultaneously with the withdrawing of the timbering.

64. Throughout the excavation and timbering of tunnels and shafts, the contractor to take all due precaution against accidents, &c., during the progress of the works, whether arising from insufficient strength of timbering, bad workmanship, breakage of machinery, and plant, inefficient caulking or packing of open joints and spaces, flood, or any cause whatsoever, as he shall be held solely responsible for all damage, injury, or loss that may be occasioned during the progress of the works to the buildings, bridges, railways, tramways, streets, and other surfaces, above and adjacent to the excavations, to persons employed by the contractor, by Government, or otherwise, and to his own or other works; and the cost of all such damage, injury, and loss, shall be valued at the time by the Engineer-in-Chief (whose decision shall be held final and binding on the contractor), and shall be deducted from any money or security held by the Government, and due to the contractor on account of his contract.

65. If the contractor has exceeded the sectional area of excavation as ordered, in consequence of injudicious timbering, gadding, blasting, slips, falling in of sides of excavation, or any other cause, which in the opinion of the Engineer should have been prevented by careful gadding, blasting, timbering, pumping out water, diversion of water, or by any other means, then the contractor shall remove such extra excavation, and make good and fill in same with concrete described in clause 26, at his sole cost, the actual cubic contents only of the excavation and of the concrete work or brickwork shown on drawings, and ordered for each special length of sewer, shall be paid for.

66. If, under the written authority of the Engineer, any portion of the excavation in tunnel has been enlarged or widened out for timbering or other purposes named in such instructions, then the contractor shall fill in such excess of excavation with concrete or brickwork in the manner herein described, and the extra excavations, concrete, or brickwork so built in, shall be paid for at schedule rates.

67. In all cases where a greater thickness of lining, or a greater cross-section area of tunnel is ordered to be executed, from whatever cause, after the length of tunnel in question has been excavated to the profile ordered in the first instance, the excess of excavation so ordered shall be paid for at schedule rate. If such extra excavation, in the opinion of the Engineer, shall require special timbering and shoring, the same shall be dealt with in strict accordance with clause 36.

68. No concrete or brickwork shall be commenced until the portion of sewer excavation in tunnel to be operated upon has been cleaned and levelled, and until the Engineer has examined and approved of same.

69. *Filling.*—The materials obtained from all excavations to be dealt with as specified in clause 43. The most approved materials, as shall be directed, to be used in filling in the spaces between sides of concrete work of sewer, brick, and pipe-shafts, &c., in level layers, spread 6 inches thick, each layer to be rammed and watered, if directed, until approved of, before the succeeding layer is put on. This filling to be carried up to a height of not less than 5 feet above top of sewer; and the filling from this level round ventilating shafts up to surface of ground, to be carried up in level layers, spread 9 inches in thickness, each layer to be rammed and watered, when directed, until approved, before the succeeding layer is put on. The spaces between the excavation (poling-boards) and the brickwork or concrete of sewer in tunnels, to be filled in, unless where this is directed to be done with concrete, with hand-packed broken stone, as specified in clause 17, or other approved materials, in 6-inch layers, each layer to be well rammed until approved, before the next layer is put on. The filling and packing to be carried on simultaneously with, and as the construction of sewer, brick, and pipe-shaft, &c., proceeds, and as the Engineer may direct at the time. Only iron-shod rammers of not less than 10 lb. weight, of approved pattern, to be used, and one man to be employed in ramming to each man to be employed in filling.

70. *Maintenance of Streets.*—The contractor shall maintain the surface of the roads, streets, &c., where the streets, roads, &c., have been broken up or injured during the progress of the work, during the period of the contract time, and afterwards during the period of maintenance, and shall from time to time make good any sinkings in the surface, and shall provide any additional metal, ballast, or other material that may be necessary during these periods, in accordance with clauses 8 and 41.

71. *Shafts.*—Shafts are to be sunk at the various sites shown on longitudinal section and on general plan, drawings Nos. 1 and 2, or, in lieu of those shown on plan, at such other sites as the Engineer from time to time may determine. Wherever shafts are ordered, they are to be sunk truly plumb, and of the full dimensions, 24 ft. x 17 ft. sectional area (or of such other sizes as may be ordered at the time), clear of timbering; the latter to be provided and fixed wherever considered necessary by the Engineer, in strict accordance with clause 36. On completion of concrete, brickwork, &c., in shafts, the spaces between the rock, and earthsides and outer face of brickwork or concrete to be filled in in 9-inch layers, well rammed (and watered where directed) with materials provided for in clause 42, great care being taken in lowering the materials to the bottom of each respective layer, so that stones do not fall on top or against sides of pipe-shafts, brick or concrete lining, that stones are put in in alternate layers with the earth or clay, and that at least 12 inches of earth be placed nearest and round the brick or concrete lining of pipe-shafts, well rammed.

72. Shafts not required as manholes or ventilators, but ordered by the Engineer, to have, on completion of contract, or when directed, all timber withdrawn; and they are at the same time to be carefully filled in as specified in clause 69, with material provided for in clause 42, the first 5 feet over sewer with specially selected and approved materials. The sinking, filling in, &c., of such shafts to be paid for at schedule rates.

73. *Temporary Shafts.*—If the contractor desires, to suit his own convenience, to sink temporary shafts, they are to be sunk only at approved places, and on completion of work to be filled in, as specified in clause 72, to the satisfaction of the Engineer. The cost of sinking, timbering, unwatering, &c., and of filling in, withdrawing, or covering up timber of such shafts, to be defrayed entirely by the contractor.

All temporary shafts to be sunk of the dimensions specified, or directed, clear of timber.

74. All shafts, temporary, or permanent, to be provided and fitted during their construction and completion, or during the progress of the contract, if deemed necessary by the Engineer, with approved winding engines and steel-wire ropes capable of resisting a strain equal to six times that of the working maximum strain, with cages and such other winding arrangements, ladders, staging, &c., as shall be directed and approved of by the Engineer.

75. *Sumps.*—Sumps are to be sunk at the bottom of every shaft, 6 feet deep below invert of sub-ducts, and on completion of the works to be filled in with concrete, as specified in clause 26. Where shafts are ordered to be sunk, the cost of sinking sump-holes and filling same in with concrete to be paid for at schedule rates, and the removal of the excavated material to be paid for as lead.

Any other sumps which the contractor may think fit to sink on line of sewer trenches for his own convenience during the construction of these works, are to be filled in with concrete, as specified in clause 26, and the cost of sinking, timbering, unwatering, and filling in with concrete and removing the materials, &c., to be defrayed entirely by the contractor.

76. *Sub-ducts.*—Sub-ducts to be constructed, when decided on, along lines of tunnels, commencing on each length midway, or thereabouts, between the working shafts or faces, 33 inches below invert of sewer, branches, &c., or as shall be directed at the time, and having a fall towards each working shaft of such gradients as may be determined at the time, after the thickness of sewer-lining required for each length between shafts or faces has been ascertained and ordered. Sub-ducts of 9 inches, or of a greater or less internal diameter, if directed, to be laid immediately underneath the timber floor of tunnel or open trench, or at sides of sewer, in hardwood boxes varying in size and dimensions as shown on drawing No. 7. Said boxes to be laid straight and true to levels decided upon, and the pipes to be laid therein, upon, and surrounded by sandstone chippings and quarry refuse. Dry stone packing to be put over pipes, as specified in clause 17.

77. In solid compact rock, the sub-duct to be excavated true to cross-section, drawing No. 7, of not less than 9 in. x 7 in. internal dimensions, to be covered with 12 in. x 6 in. x 2 in. paving tiles, laid dry on rock faces prepared and dressed for the purpose. The filling above tiles up to concrete lining of invert of sewer to be executed with dry stones, 4-inch gauge, hand-packed, carefully rammed, and as shall be directed.

78. In disintegrated rock the excavation for sub-duct to be executed as shown on cross-sections, drawing No. 7, and as shall be directed, and the sub-duct to consist of glazed stoneware spigot and faucet pipes of 9 inches internal diameter, more or less, as the case may be. The pipes to be jointed dry, and the filling above same up to underside of sewer, to be of dry stone, hand-packed, as above described. The Engineer may also, if he deems it necessary, order the pipes to be jointed altogether, or in part with tarred gasket, 1½ inch deep, and cement mortar, 1¾ inch deep. The mortar to be prepared of one part cement to two parts of sand.

#### *Rock-boring Machines and Progress of Excavation.*

79. The excavation of the various tunnels to be commenced from not less than twenty-three different faces simultaneously within nine months, unless otherwise directed, after the date the contract has been signed, to be carried on and continued without interruption, by day and night shifts, unless otherwise directed, as specified in clause 51, and to be completed in the most careful and accurate manner. All rock in tunnels to be taken out as specified in clauses 52 and 53, and where blasting is permitted, by means of compressed air, percussive, or other rock-drill, and blowing machines with ventilating fans, &c., complete, of approved pattern and manufacture, capable of excavating at each working face not less than 12 feet length of tunnel during every working week, and of removing the foul air in one minute immediately after blasting at each working face. *If required, all charges to be fired by means of electric fuse.*

80. The excavation of shafts, where sunk in rock, to be executed in the same manner as specified for tunnels in clauses 52 and 53, and by means of the same appliances and machines as those specified to be used at the driving of the tunnels.

81. The whole of the tunnel excavation, with sub-ducts, shafts, sump-holes, &c., to be carried on as hereinbefore specified, in a manner that the total average progress made at all working faces during every day of twenty-four hours, shall not be less than 46 feet length of tunnel excavation complete.

82. *Existing Gas, Water, or Sewer Pipes, and Sewers.*—During the excavation and construction of these works, the contractor is to take every precaution to prevent damage or injury to existing gas, water, or sewer pipes, and sewers. Such pipes and sewers on being met with at sides, over, or crossing the excavations of these works, to be carefully and securely protected and supported, as the case may require, by chains, timbering, strutting, and underpinning, &c., to prevent said pipes or sewers from being shaken, bent, or broken, and the contractor to provide all materials, plant, and labour required for said timbering, strutting, and underpinning, &c., and maintain the same at his sole cost, until, in the opinion of the Engineer, the refilling of excavation and the general progress of the works render further precaution unnecessary. All damage to existing water, gas, or sewer pipes and sewers, to be repaired at once by contractor at his own cost, to the satisfaction of the Engineer.

#### *Sewer.*

83. As the cross-section area of each respective length of tunnel has been determined, excavated, cleaned, and approved, and after the cross-section and depth of trench for each respective length of sewer has been excavated, cleaned, and approved, the egg-shaped sewers, &c., of the internal dimensions specified in clause 46, to be built therein with such pipes and with such concrete and brick-lining, and backing, and walls round pipe-sewers, and of such thickness, as shown on the various drawings referring to each respective length of sewer, and as shall be determined by the Engineer whenever the excavation of sewer in tunnel has advanced sufficiently to enable him to do so.

84. In very wet ground and under buildings the lining of tunnel to be executed of an extra thickness, and in brickwork only with concrete backing where required right up to timbering or rock, as the case may be, as shall be directed.

85. In dry and compact rock excavation the concrete lining to be filled in solid between internal surfaces of sewer (less ½-inch space required for cement rendering) and of tunnel.

86. Under all shafts, when ordered, relieving arches of brick or concrete to be built of a thickness, form, and width as shall be directed at the time of occurrence. Under temporary shafts excavated by contractor for his own convenience, the extra brick and concrete work to be at the contractor's cost.

87. The thickness and description of the lining, whether concrete only, of brick and concrete, or of brick only, required for the different portions of tunnels depends upon the nature of the ground through which they are driven, and shall be determined by the Engineer as the excavation of external cross-section of sewer for each respective length of tunnel advances.

88. Three gas-check chambers, two junction chambers, eleven shaft-chambers for ventilating shafts, one shaft-chamber for ventilating pipe-shafts, eleven ventilating shafts, one ventilating pipe-shaft, six inlet chambers at head of drop pipes, where ordered, spaced as shown on longitudinal section and general plan, and as shall be directed, to be built in connection with these lengths of sewer of concrete, brickwork, freestone, bluestone, stoneware pipes, &c., of the exact sizes, heights, shapes, forms, curves, and dimensions as shown on drawings. All brick shafts to be built, unless where otherwise directed, of 9-inch and 14-inch brickwork and bluestone concrete, with four vertical or battered corners, as the case may be, and curved sides between same, with freestone caps at tops, pierced and prepared for seat of cast-iron frames of ventilating grates, &c.

89. Junctions for branch pipe-sewers, as shown on drawings, to be constructed in concrete, where ordered, to enter the sewers at such level above the invert, with such radius and longitudinal fall as shown, or as shall be determined at the time. All inlet openings of branch and intercepting sewers, unless otherwise directed, to be securely closed for the time being with earthenware, cast-iron, or other covers, set in cement mortar all round, or as shall be directed, and left water-tight.

90. Cast-iron, flanged, circular, or otherwise straight, junction, bent, plain, and faucet and spigot pipes, or other castings, sluice gates, wrought-iron ladders, gratings, &c., gas-check frames, man-hole covers, saddles, stop-board grooves, &c., to be walled and built in, as shown on drawings, at points of intersection, branch junctions, gas-check or other chambers, pipe ventilating shafts, where ordered, &c.

91. Step-irons to be built into side walls of shafts, and anchor bolts for fixing wrought-iron ladders, gratings, and cast-iron frame for gas-check, to be built in as shall be directed. Trapped junction blocks to be built in where ordered and directed. Permanent putlog holes in shapes of reveals, for temporary staging, are to be left in walls of gas-check, shaft-chambers, and shafts where directed; and, in all cases, unless otherwise ordered, the reveals are to be built round of the same thickness of brick or concrete, as shown on walls of shafts or chambers at the places referred to. Putlog holes to be included in the schedule price for brickwork. Stop-board grooves to be formed in concrete, and cement faced, as shall be directed.

92. In the event of it being deemed necessary by the Engineer during the progress of the works (see clause 10 of the Special conditions) to omit, alter, or change any of the shafts, chambers, arches, pipe shafts, and other works connected therewith, and construct and carry out other works of different design and construction instead, or fewer, or additional shafts, chambers, arches, pipe shafts, &c., where ordered in any situation in connection with these works, then the contractor shall be bound to omit or carry out, as the case may be, and execute any such works with the materials and *workmanship* so required at the various schedule rates referring to such items of works, *and as shall be directed and specified hereinafter.*

#### *Concrete Works.*

93. The concrete to be used in foundations of sewer, and in arching and building round stoneware pipes, packing over brick arch in tunnels, where ordered, and in sumps, to be of sandstone concrete of the quality specified in clause 26. The concrete to be used for all other works in sewers, junctions, chambers, shafts, manholes, &c., unless where otherwise directed, to be bluestone concrete of the quality specified in clause 24.

94. The contractor to find, provide, and make at his own cost, all concrete boxes, centres, staging, shoring, planking, &c., of the exact forms, shapes, curves, &c., required, in a proper, secure, and substantial manner, due allowance being made for  $\frac{3}{4}$ -inch thick cement facing over all internal exposed surfaces of concrete work; and great care being taken that all centering and concrete boxes can easily be withdrawn, except where otherwise directed. The designs for centering, concrete boxes, &c., are to be approved by and to the entire satisfaction of the Engineer. After completion of any portion of the concrete or brickwork, the concrete boxes and the centering, as the case may be, shall not be removed until the Engineer or his Superintending Officer has given written permission to that effect.

95. The concrete, after it has been approved of, to be conveyed to the work as may be directed, and as shall be approved of, and tipped into same and upon the surface of each layer from a height not exceeding 18 inches. Commencing at each part of the work at lowest level of excavation, the concrete to be brought up in horizontal and even layers, and on lines of sewer, branch and pipe sewers, junctions, gas-check and shaft chambers, inspecting chambers, &c., unless where otherwise directed, in even layers parallel with specified longitudinal gradients of works; each layer, when spread, to be 9 inches thick throughout before ramming, and, after spreading, to be quickly and evenly rammed all over until approved of, and then allowed time to set before the succeeding layer is put on.

96. After the concrete has been carried up to the level of springing, all concrete arches to be commenced at both walls or abutments simultaneously, and carried on towards centre line in radiating parallel strips, spread 9 inches thick, of the whole width of arch, or in lengths as specified in clause 107, as shall be directed at the time, and rammed as before described, and, where the arch is thicker than 9 inches, the lower layer to be always completed throughout, 12 inches in advance of the upper succeeding layer, and then allowed time to set and harden before the succeeding layer is put on.

97. After completion of the brick closing-arch, all bluestone concrete work above springing of same, at sides of arch, in manhole chambers, gas-check chambers, shafts, &c., to be carried up in the same manner as specified in clause 95, and of exact dimensions, curves, and thicknesses, &c., as shown on drawings.

98. No portion of the concrete work described in the previous clauses (unless otherwise directed in writing) to be covered up with earth or brickwork until it has been examined and approved of by the Engineer. Any leakage that may appear in each layer to be carefully attended to and be made good and repaired at the time, as shall be approved, before each succeeding layer is put on.

99. All end faces of layers of concrete to be stepped back at each respective length of sewer or other work, as shall be directed, to be carefully washed clean with fresh water, and then to be grouted prior to each layer of the adjoining length being commenced and joined on to the same.

100. After the lower layer has set to the satisfaction of the Engineer, its top surface to be carefully washed until approved, and then to be grouted all over prior to each succeeding layer of concrete being put on.

101. In the event of any stoppage occurring to the work, from whatever cause, or in anticipation of rainfall, the contractor, before temporarily stopping work, shall finish it off at whatever level the work may be raised at the time, by thoroughly grouting the whole of the surface with cement grout.

102. In all cases where a layer at mid-day or at evening is left incomplete, the said layer shall not be continued after any stoppage until the surface of the lower and the end of the upper layer have been washed clean and then grouted with cement grout.

103. At the sites of all gas-check and sluice-gate frames, cast-iron manhole covers over stop-boards, branch junctions, and all circular or bent pipes, covers, &c., after the concrete has been built to the exact height and gradient (leaving sufficient space for jointing), the whole of the cast-iron work, after having been washed clean with fresh water, is to be truly laid and jointed or set perfectly plumb or otherwise, as the case may be, and as shall be directed, in the exact positions, lines, and gradients, on fillets of mortar; and as the concrete rises against and around the castings, leaving a space of not less than  $\frac{1}{2}$  inch all round between the concrete and the iron, this space round the invert, or underneath bottom of plates, as the case may be, to be filled in with special grout, or mortar, as shall be directed at the time, whilst above the springing line the outer surface of the castings to be grouted with special grout, and then to be covered with a coat of special mortar,  $\frac{1}{2}$  inch thick, before the concrete is built on to and around said pipes, castings, and frames.

104. All anchor-bolts in connection with cast-iron frames to be placed in the exact positions required, to be washed clean, wetted, bedded upon, and surrounded with special mortar in each case before the concrete is built round same.

105. All stoneware pipes, where they are shown to be, or ordered to be, surrounded with concrete, to be clean washed with fresh water, to be truly laid and jointed in the exact lines and gradients on fillets of mortar, and to be grouted all round with special grout as the concrete is being built all round same.

106. On completion of concrete work, and after the boxes and centering have been removed, the outer faces shall present compact, solid, even, plain surfaces. All faulty portions, cavities, holes, or other defects shall be at once repaired by the contractor, at his own cost, with concrete or mortar, as the case may require, to the satisfaction of the Engineer. The centering shall not be removed until the Superintending Officer has given written authority to that effect.

107. The concrete and brickwork of sewer in tunnel to be commenced, in accordance with clause 79, in the different lengths of tunnels, and to be carried on in each from each end simultaneously, in not less than three continuous lengths of 16 ft. 6 in. each—that is to say, when the arching of the first 16 ft. 6 in. commences the next 16 ft. 6 in. length must be in progress from height of invert up to the springing of arch, the third 16 ft. 6 in. length must be in progress between floor of tunnel and level of invert of sewer, and in the fourth 16 ft. 6 in. length the excavation and timbering of tunnel must at this time be completed and ready to receive concrete foundation of sewer.

108. When a length of arch is completed the same must be protected from the influences of the weather and sun by bags, or other approved means, and kept constantly moist until it has been examined and ordered to be covered up.

109. The whole of the concrete work of branch, pipe-sewers, including all ventilating shafts, chambers, gas-check chambers, junctions, &c., to be completed in strict accordance with specification and drawings, and of the exact shapes, forms, and dimensions shown thereon, and as shall be directed.

#### *Brickwork.*

110. The brickwork required in lining tunnels, branch sewers, sewers in open trenches, and shafts, to consist of the materials and mortar described under clauses 13, 19, 20, and 21. All circular work and arches of shafts, or elsewhere, to be built of radiating bricks, unless otherwise directed. All bricks to be thoroughly soaked in clean fresh water for not less than five minutes, immediately before being used. All work to be built with whole bricks, and all walls in English bond, with  $\frac{1}{2}$ -inch joints, in alternate courses of headers and stretchers, each brick to break joint with the one above and underneath, and to be set full and rubbed in cement mortar. Every course to be carefully and thoroughly grouted, and well wetted before the succeeding course is put on. All work, wherever directed, to be finished on all outside and inside faces with a neatly struck joint. The brickwork of tunnel lining, branch sewers, sewers in open trenches, &c., to be of the thickness, dimensions, curves, and gradient shown on longitudinal and cross-sections, and as shall be determined and directed from time to time by the Engineer as each different portion of tunnel or open trench excavation becomes ready for concrete or brick lining. Wherever brick lining for sewer is ordered, it shall be built in radiating courses in  $4\frac{1}{2}$ -in. rings, each brick to be set full, and rubbed in cement mortar, with joints not exceeding  $\frac{1}{2}$  inch in thickness, in approved bond, the bricks of each course to break joint over the centre of those of the adjoining course. Where the brickwork consists of two or more rings, said rings to be built simultaneously, the lower ring to be always completed throughout  $4\frac{1}{2}$  inches in advance of the upper succeeding layer of each ring of brickwork, to be carefully and thoroughly wetted and grouted, and then covered with a coat of cement mortar, collar-joint  $\frac{1}{2}$  inch thick, to ensure the thorough bonding of the joints and the different rings of brickwork. At completing any length of brick lining, the courses at end of same to be stepped back as shall be directed, and the end face of each ring or course to be well wetted and then grouted prior to each ring of the succeeding length being commenced.

111. The brickwork of sewer in tunnels to be carried on in conformity with clause 107, and in such a manner that when the arching-in of one length of 16 ft. 6 in. commences the lining of invert of the next 16 ft. 6 in. length must commence at the same time, and as the arching-in of one length is completed the adjoining length must be completed up to springing of arch.

112. Wherever concrete is to be built on to and against brickwork, or brickwork on to and against concrete, the latter in each case to be well wetted and grouted, and then to be covered with a coat of cement mortar, collar joint  $\frac{1}{2}$  inch thick, before the concrete or brickwork is built against it.

113. Prior to commencing any concrete or brickwork which has to be built on to and against rock faces, all shaken and loose rock to be removed, all rock surfaces to be well cleaned, washed, and wetted, and all beds, open joints, and spaces between concrete or brickwork and rock faces to be carefully filled in with cement mortar, and flushed and grouted every course as the brickwork proceeds; and the cost of thus preparing rock faces, washing, grouting, flushing, &c., to be included in, and covered by, the Schedule price per cube yard for the concrete and brickwork herein referred to.

114. *Cement Coating*.—The whole of the internal and external surfaces of sewers, man-holes, chambers, &c., where such is shown on plans, and where directed, to be protected by a cement coating, to be put on in two thicknesses, consisting of mortar of one part of cement to two parts of clean sharp sand. The coating throughout, when finished, to be  $\frac{5}{8}$  inch in thickness.

115. *Pymont Sandstone*.—Pymont sandstone ashlar of the quality specified in clause 16 to be provided for top courses of all ventilating shafts, or where ordered in any situation in the construction of these works, to be worked, pierced, dressed, picked to the exact sizes, dimensions, forms, and shapes as shown on drawings or as may be directed, to be set full upon and in cement mortar, and to be finished, when directed, with a neatly cut and struck joint.

116. *Bluestone Ashlar*.—Bluestone ashlar, of the quality specified in clause 33, to be provided in blocks or otherwise, when ordered, in any situation in the construction of these works, to be worked, pierced, grooved, picked, axed, and dressed to the exact sizes, dimensions, forms, and shapes, as shall be shown on detail drawings, or as may be directed; to be washed clean and well wetted before setting, and to be set in the exact positions required, truly level, full upon and in cement mortar, and as may be directed at the time, after which all joints between stones, and between stones and concrete, to be filled in with grout. All joints to be  $\frac{5}{8}$  inch wide, to be carefully raked out  $\frac{1}{2}$  inch deep, and filled in solid with special mortar, neatly pointed, finished flush with exposed faces of stones.

117. *Bluestone Pitching*.—Contractor to provide and find, where ordered, squared bluestone pitchers 9 inches deep throughout, no stone to be less than 9 in. x 9 in. x 9 in., but to be larger and longer, curved and radiating, as shall be directed, to be worked, fitted, and set in sand, one ring round all man-hole covers, with  $\frac{1}{2}$ -inch joints between pitchers and cast-iron frames, as ordered.

#### *Pipe-sewers.*

118. After the foundation layer of concrete has been filled in or the ground excavated, as the case may be, to the exact depths, levels, and gradients (leaving sufficient room for jointing), glazed stoneware pipes of the quality specified in clause 15, and of the required diameter, to be laid thereon, along such lines, curves, and inclinations, as shown on general plan and longitudinal section, as may be ordered at the time, true, straight, and solid (for all vertical branch pipe-sewers and ventilating pipe-shafts, the pipes to be set true, straight, and plumb), and to be jointed, viz. :—

119. The 6-inch pipes with tarred gasket  $\frac{1}{2}$  inch deep after setting, and special cement mortar  $1\frac{1}{4}$  inch deep within socket of pipe; the 9-inch pipes with tarred gasket  $\frac{1}{2}$  inch deep after setting, and special cement mortar  $1\frac{3}{8}$  inch deep within socket of pipe; the 10-inch pipes with tarred gasket  $\frac{1}{2}$  in. deep after setting, and special cement mortar  $1\frac{3}{8}$  inch deep within socket of pipe; the 12-inch pipes with tarred gasket  $\frac{5}{8}$  inch deep after setting, and special cement mortar  $1\frac{3}{8}$  inch deep within socket of pipe; the 15-inch pipes with tarred gasket  $\frac{5}{8}$  inch deep after setting, and special cement mortar  $1\frac{3}{8}$  inch deep within socket of pipe; the 16-inch pipes with tarred gasket  $\frac{1}{2}$  inch deep after setting, and special cement mortar  $1\frac{1}{2}$  inch deep within socket of pipe; the 18-inch pipes with tarred gasket  $\frac{3}{4}$  inch deep after setting, and special cement mortar  $1\frac{1}{2}$  inch deep within socket of pipe; the 24-inch pipes with tarred gasket  $\frac{3}{4}$  inch deep after setting, and special cement mortar 2 inches deep within socket of pipe.

120. After the tarred gasket has been placed in position and set tight round the pipe, and after the joint above has been cleaned and wetted, stiff cement mortar to be packed in solid, splayed off outside and finished with a carefully struck and cut joint, after which the inner joints between two pipes to be likewise carefully filled with cement mortar all round, neatly wiped off as a finish. Each pipe length when thus finished to be carefully cleaned out before another pipe length is added.

121. All spigot and faucet vertical cast-iron 9-inch and 12-inch diameter ventilating and sewer-pipes to be jointed with well caulked  $\frac{3}{4}$ -inch diameter New Zealand flax spun-yarn and soft pig lead. The spun-yarn to be tightly laid round spigot-end, so as to fill the socket of 9-inch pipe to a depth of 3 inches, and the 12-inch pipe, to a depth of  $3\frac{1}{2}$  inches, after setting up, leaving for the lead joint a depth of  $1\frac{1}{2}$  inch all round for the 9-inch pipe, and a depth of  $1\frac{3}{4}$  inch all round for the 12-inch pipe; the lead joint to be made with one running, and when cold to be set up with proper setting irons to one smooth even plain surface all round the pipe and  $\frac{1}{2}$  inch within socket of same.

#### 8. *Power to get Bricks elsewhere, or substitute Concrete.*

122. Should the contractor, at the commencement or during the progress of the contract, at any time fail to provide the specified bricks in any or in such quantities as in the opinion of the Engineer shall be deemed necessary to ensure the progress of the works as stipulated in clauses Nos. 107, 111, and 128, then in all such cases the Engineer shall have the power to supply the same from any other sources, and all additional costs and charges thereby occasioned over and above the contract prices for brickwork shall be incurred solely by the contractor, who shall only be paid for the net quantity of brickwork actually ordered at schedule rates, less the cost of the bricks so delivered on the works by the Engineer; and the contractor shall have no claim for loss, damage, or compensation on account of the exercise of such power by the Engineer.

123. In the event of the specified bricks not being provided by the contractor, and not being procurable by the Engineer from other sources, at any time they are required in the construction of the works, then in all such cases the Engineer shall have the power, whenever he may deem it practicable and suitable to do so, to substitute concrete instead, as described in clauses Nos. 24 and 26, excepting in the case of the  $4\frac{1}{2}$ -inch brick-lining to intrados of sewer, wherever such are shown on the drawings, which must be adhered to; and the contractor shall have no claim for loss, damage, or compensation, on account of the exercise of such power by the Engineer; and he shall be only paid for the net quantity of concrete so ordered in any situation of the work at schedule rates.

#### 9. *Order of Works.*

124. The contractor shall, immediately after he gets possession of the ground or any part thereof respectively, commence the various works comprising this contract and proceed to execute the same.

125. Contractor shall provide at his own cost and charges (except where otherwise specified) all materials, labour, tools, plant, tackle, cordage, machinery, scaffolding, staging, planking, timbering, centering, concrete boxes, and everything necessary for the proper construction, erection, execution, and completion of the several works comprising this contract, all of which are to be approved before being used.

126. No excavation to be commenced on any portion of the contract, particularly in tunnels through earth, clay, &c., underneath buildings, streets, &c., until, in the opinion of the Engineer, sufficient quantities of timbering, shoring, staging, scaffolding, cement, bricks, sand, or other materials are ready for immediate use, together with the necessary appliances and plant to ensure the speedy and uninterrupted progress and continuance of the works after they once have been commenced at any locality, without any delay or stoppage. Delays and stoppages in the progress of the works, arising from disputes as to the quality of materials and insufficient supply of any materials, plant, &c., and any damage or injury caused to buildings, to the works of this contract, and adjoining or adjacent works and buildings, or streets, tramways, lands, fences, &c., in consequence of such stoppage and delay, and be entirely and solely at the risk and cost of contractor.

127. Working faces—The working faces available for excavating and constructing the main outfall sewer, North Shore, &c., unless otherwise directed during the progress of the contract, are as follows, viz.:—One working face from shaft at 0 chains; two working faces from shaft at 16·05 chains; two working faces from shaft at 27·5 chains; two working faces from shaft at 38·83 chains; two working faces from shaft at 49·88 chains; two working faces from shaft at 61·22 chains; two working faces from shaft at 72·12 chains; two working faces from shaft at 1 m. 2·63 chains; two working faces from shaft at 1 m. 8·5 chains; two working faces from shaft at 1 m. 18·9 chains; two working faces from shaft at 1 m. 19·5 chains; two working faces from shaft at 1 m. 25·2 chains. The shaft at 0 chains will not be available for constructing sewer, only for excavation.

#### *X.—General Progress of Works.*

128. The whole of the works as excavating, tunnelling, unwatering, timbering, with all sub-ducts, sumps, shafts, pipes, chambers, temporary headings, filling, concrete, brickwork, masonry, pitching, road-making, fencing, temporary bridges, carting surplus materials to spoil, &c., required in constructing of the main outfall sewer, North Shore, intercepting branches, and all other works connected therewith, shall be executed as hereinbefore specified, and carried on in a manner as viz. :—

That after the working faces are opened up, the average total progress made during one working week with the sewer in tunnel at all working faces, shall not be less than 276 ft. in length of the main outfall sewer, North Shore, complete, as above described.

#### *XI.—Power to make use of parts of Work.*

129. The Engineer-in-Chief shall have the power, at his discretion, without vacating this contract, to enter upon, by himself or his agents, and make use of any part or parts of the work comprised under this contract, and his doing so shall in no wise be held as a waiver of the responsibility of the contractor in respect to his contract, except in so far as any injury may accrue to such work so entered upon by reason of any proved carelessness of any employé of the Government, in which event the contractor shall be free from liability on account thereof, but not otherwise.

#### *XII.—Maintenance.*

130. The contractor will be bound to maintain the works for a period of three months after their final completion and use by the Government; and if any part should within that period show signs of weakness or of giving way, or should any defective workmanship or materials be detected, the contractor, when called upon to do so, shall make good same at his own cost, to the satisfaction of the Engineer-in-Chief, before the reserve balance will be paid. It is to be distinctly understood that the Government shall have the full, free, and unrestricted use of the said works, without any interference whatever on the part of the contractor, during the currency of this period of maintenance; and such use of the said works on the part of the Government shall not be held as relieving the contractor of any liabilities or obligations whatever in respect of his contract.

#### *XIII.—Government Property.*

131. All iron and other metal work in gas-checks, anchor-bolts, ladders, gratings, landings, platforms, staples, manhole covers, ventilating gratings, lamp-hole boxes, sluice-gate, oval and circular, straight and bent pipes, branches, junctions, step-irons, and all earthenware covers for branch sewer junctions, trapped junction blocks, &c., to be supplied by the Government as the works proceed and when required, and to be delivered to the contractor free of charges within the resumed land, or, if approved of, at the site set apart as the contractor's yard or store.

132. For each article so delivered the contractor shall give a written receipt, after which he shall be held solely responsible for same, and shall refund to the Government, out of any moneys that may be or may become due to him on account of this contract, the cost of anything (as ascertained and valued by the Engineer) that may be lost, stolen, damaged, or destroyed of said articles during the term of this contract and the period of maintenance.

133. All Government property which, at the completion of the contract, by direction of the Engineer, has not been built or permanently fixed in the works, shall be conveyed by the contractor, as may be directed, to the site of the Field Office, and there to be dealt with in accordance with clause 15 of the general conditions.

#### *XIV.—Notice for Inspection.*

134. The contractor shall give notice to the Engineer of the commencement or completion of the undermentioned work, and formally submit it for inspection before proceeding to place, execute, or cover it up, viz. :—

- Excavation of trenches, shafts, and tunnels in rock or earth.
- Excavation for foundations.
- Withdrawing of timber in tunnel, shafts, &c.
- Laying of foundation.
- Laying of pipes or sub-ducts.
- Placing centering in position.
- Keying of arches.
- Striking of centres.
- Shifting of concrete boxes.
- Filling in round branch and pipe-sewers into man-holes, sumps, &c.

*XV.—Conditions of Contract.*

135. The special and general conditions attached to this specification shall be held binding on all matters relating to this contract as far as the Engineer-in-Chief may deem the same applicable.

This is the specification marked "A" referred to in our annexed agreement with Her Majesty the Queen, dated the 20th day of June, A.D. 1894.

Witness—HAROLD F. NORRIS.

JOHN CARTER.  
D. G. SNODGRASS.

## "C."

## SPECIAL CONDITIONS.

*Clause 10 of General Conditions.*

1. The "date of completion of contract" shall be twenty-four months from the date of acceptance of tender—that is to say, the day of , 1893.

*Clause 10 of General Conditions.*

2. The sum to be deducted or set off as or for "liquidated damages," shall be £20 sterling a week.

*Clauses 2, 10, and 18 of General Conditions.*

3. The "period of maintenance" shall be three calendar months from the date of the certificate of the Engineer that all the works under the contract, less those of maintenance, have been fully and satisfactorily completed.

*Clause 18 of General Conditions.*

4. The "rates of progress payment" shall be 90 per cent. of the value of work actually done, performed, and delivered, as the Engineer may approve of as fit and necessary for the work.

*Clause 20 of General Conditions.*

5. The "deposit" to accompany the tender shall be as required by clause 20 of the general conditions.

6. The sum to be lodged with the Under Secretary for Public Works as security shall be a Bank deposit receipt, in the name of the Secretary for Public Works, for £2,000 sterling.

*Clause 2 of General Conditions.*

7. Even after the expiration of the period of maintenance, contractor will still be held liable for all defects in the works which were not visible, or which may have been kept secret, at the time of the works being taken over by the Engineer, since he is, and hereby distinctly agrees to be, *responsible for all faults or neglects of, or all deception practised by, his agent, overseers, or workmen, irrespective of the time at which such faults, neglects, or deceptions may be detected.*

*Clause 3 of General Conditions.*

8. Although the information in possession of the Government has been freely placed at the disposal of the tenderers, by being noted on the drawing or otherwise, the Government undertake no guarantee whatever regarding the kinds of soil that will be met with, or the firmness or stratification of the ground to be excavated, or the amount of unwatering to be done, or the strength of the timbering that may be required, or the nature and extent of other precautions which may have to be adopted.

*Clause 4 of General Conditions.*

9. Contractor shall not be entitled to claim or receive any compensation whatever over and above payment for the actual increase of quantities at schedule rates, and where there are no schedule rates, at such rates as shall be determined at the time by the Engineer-in-Chief, for any additions to, deviations from, or alterations of the various designs comprised in this contract. These conditions shall also apply to, viz., variations in manholes, junctions, flushing chambers, &c., and in consequence of meeting with any existing gas, water, or sewer pipes or sewers, as referred to and in accordance with clause 82 of the specification, the position of which it is impossible to ascertain until the ground for the construction of the works comprising this contract is opened up,—

Variations in inclination of slopes and gradients.

" depth, shape, or size of excavation for sewer, &c.

" depth, shape, or size of concrete of sewers, manholes, junctions, flushing chambers, &c.

" internal diameter of pipe sewers.

" alteration or extension of sewer lines.

Any decrease in quantities to be deducted as provided for.

*Clause 14 of General Conditions, paragraph 6.*

10. Cement is to be brought on the ground in quantities of not less than fifty barrels, provided that this quantity is sufficient for fourteen days' supply, but in no case is less than fourteen days' supply (whatever that may prove to be) to be brought on the ground in one parcel; nor is the supply stored on works to be at any time less than fourteen days' supply.

*Clause*

*Clause 8 of General Conditions.*

11. Suspension of works and non-compliance with clauses 52, 53, 79, 80, 81, 120, and 124 of the specification on the part of contractor shall constitute a wilful breach of contract.

*Clause 18 of General Conditions.*

12. The acceptance by contractor of the final payment shall be deemed equivalent to a distinct declaration on his part that he has no further demands on the Government in respect to this contract.

These are the Special Conditions marked "C," referred to in our annexed Agreement with Her Majesty the Queen, dated the 20th day of June, A.D. 1894.

Witness,—HAROLD F. NORRIS.

JOHN CARTER.  
D. G. SNODGRASS.

"D."

## GENERAL CONDITIONS.

1. *Interpretation of Terms.*

WHENEVER the terms, hereafter explained in the present clause, occur in the conditions of contract in the specification, they shall be held to mean, and shall mean as follows:—

- "Minister" shall mean the Secretary of Works of the Colony of New South Wales for the time being or any other person legally acting for him.
- "Engineer" shall mean the Engineer-in-Chief duly appointed by the Minister to have principal charge of the works.
- "Assistant Engineer" shall mean the person duly appointed by the Engineer-in-Chief to act in his behalf.
- "Superintending Officer" shall mean any person who may from time to time be notified to the contractor by the Engineer-in-Chief as being entrusted with the local superintendence of the works.
- "Overseer" shall mean any person who may from time to time be appointed by the Engineer-in-Chief, to supervise the works or any part thereof under the immediate direction of the Superintending Officer.
- "Contractor" shall mean "Contractors" when two or more persons have tendered or contracted jointly for the work.
- "Special Conditions" shall mean the "Special Conditions" hereto attached and forming part of the contract; such Special Conditions shall be deemed to be, and shall be, incorporated with the General Conditions.
- "Schedule Price" shall mean the rate which the contractor has offered and agreed to execute the kind of work under consideration.
- "Contract Sum" shall mean the sum total resulting from the finally certified quantities, ascertained in the manner provided in clause 16, and calculated at the schedule rates or arranged prices.
- "Drawings" shall mean and include any plan, section, general or detail drawing, sketch, or illustration referring to the works and explanatory of, or supplementary to, the specification.
- "Extra Work" shall mean any kind or description of work not comprised in the "Schedule of Prices," and other than those the distinct mention of which may have been inadvertently omitted in the specifications or drawings and for which provision is made in clause 3 of these conditions.
- "Labour."—All cartage and haulage and work done or to be performed by machinery shall be included in the term "Labour."
- "Plant" shall mean and include all tools, utensils, stores, sheds, timber, scaffold, centres, moulds, templates, coffer-dams, cordage, chains, tackle, boats, punts, rafts, sleepers, rails, waggons, trucks, trollies, engines, water and air pumps, boring and ventilating apparatus, signals, lights, diving bells and dresses, and every other thing necessary for the security, proper execution, completion, and specified maintenance of the several works.

2. *Extent of Contract.*

The contractor shall, except in so far as the specification may expressly state to the contrary, provide at his own cost and expense all labour, material, and plant, and everything else necessary for the proper and complete performance of the contract. Supply of labour, material, and plant.

All works described in, or implied by, the specification, or shown in any of the drawings, or set forth in any lists or tables thereon or attached thereto, as well as those expressly herein provided for under clauses 3 and 4, are to be made and executed in every detail conformably to the several drawings, already prepared, or that may be prepared hereafter for the purpose of this contract, in strict accordance with the provisions of the specification and conditions, both general and special, and to the entire satisfaction of the Engineer. Execution works.

Should any work be not so executed, it shall be at the sole risk of the contractor, and shall be immediately altered and amended at the contractor's cost and expense.

The contractor shall, at his own expense, set out accurately and to the satisfaction of the Superintending Officer, all the works comprised in this contract, in strict accordance with the drawings and specifications, and shall be solely responsible for their being so set out and executed, and that notwithstanding the Superintending Officer or Overseer may have assisted the contractor in setting out the same. Setting out Contractor

Contractor shall also at his own cost and expense at any time—by day or by night, either on working days or on Sundays or holidays—render all such assistance, and supply all such labour, plant, and lighting, as the Engineer or Superintending Officer may require to check such setting out, or to inspect any portion of the works, which must for that purpose be left clear and free from any obstruction or impediment. During and for the performance of those operations contractor shall be obliged to suspend any or all of his work, if required to do so by the Superintending Officer, and without having any claim for loss or damage on account of such temporary suspension.

Protecting and maintaining signals and marks.

All bench marks, pegs and signals on the surface, and all alignments and level marks underground, put in by the Engineer or Superintending Officer for the purpose of checking the contractor's work, will be pointed out to the contractor and confided to his care. He shall, at his own expense, take all proper and reasonable precaution and care to preserve and maintain them in their true positions; in the event, however, of their being disturbed or obliterated by accident or from any other cause whatever, they shall be replaced by the Engineer or Superintending Officer at the contractor's expense, and the cost thereof deducted from any moneys, then or thereafter due to the contractor.

Junction of different Contracts.  
Maintenance.

If two different contractors execute simultaneously two adjoining sections of the works, they shall be held jointly and severally responsible for effecting a proper junction of the sections.

During the whole time of construction and during the "period of maintenance," referred to in clauses 10 and 18 hereof and more particularly described in clause 3 of the special conditions, contractor shall keep and maintain in good and sufficient repair all the works, executed or in course of execution, and make good all injury or loss, which may happen or occur to them, or to any materials, or plant, or anything else in connection with the works under this contract.

### 3. Specification and Drawings.

Specification and Drawings to explain each other.

The specification and the drawings (if any), referred to in the specification, shall be taken to explain each other; and anything contained in the specification or in any of the drawings shall be equally binding on contractor, as if it were contained in all.

Written dimensions to be preferred to scaling.

Any dimensions, written or figured on the drawings, shall usually be taken in preference to measurements by scale; but in cases of doubt in this respect, or in case of any discrepancy between the drawings, specifications, and conditions, or any ambiguity or defective description in them, such doubt, discrepancy, ambiguity, or defective description shall not invalidate the contract, but shall be rectified by the Engineer if he deem it requisite, and the contractor shall have no claim for compensation for damages on account of such discrepancy, ambiguity, or defective description.

Omission of minor parts.

If neither specification nor drawings contain any mention of minor parts or works, which are reasonably and obviously necessary for the satisfactory completion of the works, such parts are to be provided, made, and executed by the contractor, without any extra charge, as if they were specially mentioned, and shall be deemed to be, and hereby are, included in the several schedule prices.

Errors of information at Contractor's risk.

It is hereby expressly understood, that the contractor is bound to completely and thoroughly inform himself of every circumstance connected with, or relating to, the work, and of the correctness or otherwise of any information contained in, or supplied by, the drawings or specification, as he shall have no claim on account of any errors, omissions, or inaccuracies, that may be found in those documents after the contract shall have been signed, and since he has to provide in his tender for every contingency that may arise.

Supply of Drawings and Specifications.

A copy of the conditions, specifications, and drawings will be furnished to contractor free of charge, but he must himself compare the same with the original, as no claim will be allowed for any errors therein.

All copies of drawings, &c., supplied to contractor are to be returned to the Engineer on completion of contract.

### 4. Increase or Decrease of Works.

Quality.

The contractor is to execute in like manner and with the same quality of materials, as provided for the works, expressly mentioned in specification and drawings, any extensions, additions, deviations, alterations, or extra works, which the Engineer may require by an order in writing.

Quantity.  
Prices of extra works.

The work, executed under this clause, will be measured up and paid for at schedule rates in the same manner as provided for the other works under this contract; and if it comprises any work not specified in contract and in schedule of prices, a special agreement shall be made between the Engineer and the contractor, and signed at the time of giving the order for such work.

If value cannot be agreed upon.

In case the above-named parties shall be unable to agree on the value of such extra work, the Engineer shall be at liberty and fully authorised to have it executed by whomsoever he may think fit.

No extra work, extensions, or any additions, deviations, or alterations whatever, which may be claimed by contractor, will be recognised or admitted under any circumstances, if done or executed without, or contrary to, an order in writing from the Engineer as aforesaid, and the production of such order shall be a condition precedent to contractor receiving payment for them.

Omission of portion of the work.

The Minister, or the Engineer, acting on his behalf, may from time to time by writing under his hand require the omission of any particular portion or part of the works, described in the specification or shown on drawings; and the contractor shall have no claim for loss or profit, sustained damage, or other compensation on account of any such omission.

### 5. Possession of Lands.

Lands to be provided by the Minister.

The Minister shall, within one month from the date of the signing of the contract by the contractor, put the latter in possession of such parts of the land, required for the execution of the permanent works or access to same, as in the opinion of the Engineer may be necessary for their commencement. And the Minister shall also from time to time put contractor in possession of such other parts of the land, as may, in the opinion of the Engineer, be necessary for the vigorous prosecution and timely completion of all the works.

Land to be provided by Contractor.

The contractor must, however, procure for himself all other land, which he may deem requisite for any temporary purposes or for his own convenience; but the Minister will, at the expense of the contractor and only to the extent of any legal powers possessed by the Governor or Minister, assist the contractor in procuring such land or in procuring materials, suitable for the construction of the works, from any adjoining lands.

Should

Should any delay take place in giving to the contractor possession of any land required for the construction of the works aforesaid, such delay shall not be deemed a breach of contract, or give contractor any claim for compensation, but the contractor shall be entitled to a commensurate extension of time for the completion of the whole works. Delay in getting possession.

Nothing herein contained shall at any time prevent the Minister or any person duly authorised by him from entering upon and making use of such lands or any portion thereof for any purpose whatever. Possession not exclusive.

#### 6. *Trespass.*

The contractor shall not enter upon any lands outside the limits of the lands, defined by, and held in possession by him under clause 5 hereof for the construction of the works or for any purpose whatever in connection with this contract, without the distinct consent in writing of the occupier and owner of such lands, and shall not, without the permission in writing of the Engineer or Superintending Officer, remove any trees or structures within the limits of the lands defined in said clause 5 hereof. Private lands.

Nor shall he open or throw down any part of a fence without making sufficient provision by temporary fences, gates, or other necessary accommodation, to be erected and maintained at contractor's cost, for preventing persons or animals from trespassing or straying from, or into, any enclosure, affected thereby. Cutting of trees.

Nor shall he interfere with any private or public road without making proper temporary provision for the convenience of owners or users thereof. Roads.

Any costs or damage incurred by the Government through any legal process on account of any trespass caused by the act or negligence of the contractor or his workmen, shall be considered as payment made to the contractor under this contract, and shall be deducted accordingly at the time of final payment to him. Damage caused.

Should the contractor refuse or neglect to erect and maintain, either or both, any such temporary fences or other necessary accommodation, it shall be lawful for, but not obligatory on, the Engineer, after having given to the contractor twenty-four hours' notice in writing of his intention to do so, summarily, and without further process, to cause any such temporary hoarding, fences, gates, bridges, or other accommodation to be erected and maintained, which he may deem necessary for the proper protection either of such lands or of the adjoining lands, or for the safety of the property of the owners and occupiers thereof or of the general public, and the cost of so doing shall be deducted as provided hereinabove. If not fenced by contractor, Engineer to have power to do so.

#### 7. *Sub-letting, Assigning.*

The contractor shall not sub-let any portion of the works, nor enter into any sub-contract for the execution thereof or any portion thereof, nor shall he assign all or any of the moneys payable or to become payable under the contract, or all or any part of any other benefit whatsoever arising to him or which may arise under the contract, without the consent in writing of the Minister; and no assignment without such consent shall have any effect or be in any way recognised. No sub-letting or assigning.

#### 8. *Progress of Works.*

It shall be lawful for, but not obligatory on, the Engineer or Superintending Officer to direct in writing the contractor to carry out the works in such order and in such manner as he shall deem fit; and If the contractor shall fail to make such progress with the works as the Engineer or the Superintending Officer shall deem sufficient to insure their completion within the specified time; or If he refuse or fail in the opinion of the Engineer or Superintending Officer to use due diligence in carrying out any particular part of the work, which the Engineer or Superintending Officer shall have directed him in writing to carry out forthwith; or If he shall use or employ bad or insufficient material, or shall execute any work in an imperfect manner or not to the satisfaction of the Engineer or Superintending Officer; or If he shall fail or neglect to take down or remove such work, or to rectify any such work for seven days after being required to do so in writing by the Engineer or Superintending Officer; or If he shall fail to employ what in the opinion of the Engineer or Superintending Officer is a sufficient number of men on the works; or If he shall suspend work without the Engineer's order or sanction in writing; or Work to be carried out under the direction of the Engineer.

If the contractor shall in the judgment of the Engineer commit a wilful breach of the contract; Then, and in any of such case, it shall be lawful for the Minister to do at his option any of the following things, that is to say:—

(a) The Minister or the Engineer may, on giving written notice to the contractor of his intention so to do, forthwith cause additional men to be employed and additional materials and plant to be purchased, and the cost of so doing may be deducted from any moneys, then due, or which may thereafter become due to the contractor. (a) employing additional men.

(b) Or the Minister may, by notification in writing under his hand, delivered to the contractor, absolutely determine this contract without further process; and from and after the delivery of such notice as aforesaid, the contract shall be absolutely determined, and on such determination the money, which shall have been previously paid to the contractor under the contract, shall be deemed to be the full value of the work executed, and shall be taken and accepted by the contractor in full payment and satisfaction of all claims and demands under the contract; and the balances retained, including amount deposited as security, together with all materials and plant, then being in or near or upon the works for the purpose of being used or employed in or about the same, shall remain the absolute property of Her Majesty, and may be disposed of as the Minister may think fit. (b) absolute determination of contract.

#### 9. *Bankruptcy.*

If the contractor shall become bankrupt or insolvent, or shall make an assignment of his estate for the benefit of his creditors, it shall be lawful for the Minister, on behalf of Her Majesty, by notice in writing under his hand, to determine the contract by such notice, and for Her Majesty either to carry on the works under the Engineer's direction or to recontract with another contractor to proceed with and complete Bankruptcy.

complete the same upon such terms, stipulations, and conditions as shall be deemed expedient by the Minister; and all the then remaining materials and plant may be used in and applied for the purpose of the works; and on the final completion of the works the surplus of such materials and plant shall be delivered to the contractor's assignees or trustees, but without any payment or allowance for any loss or diminution, wear, tear, or injury they may have sustained in the meantime; and any losses, damages, costs, or expenses which shall, in the opinion of the Engineer, have been sustained by Her Majesty by reason of the premises, shall be deducted from the deposit money and the balance retained after payment of the progress payment; and the residue of such deposit money and percentages (if any), or any securities in which the same may be invested (but without any interest thereon), shall belong and be paid or delivered to the said assignees or trustees; and if there should be no residue, but a deficiency, the amount of such deficiency may be proved for as a debt against the estate of the contractor.

#### 10. *Suspension and Completion.*

Completion

The whole of the works under this contract shall be completed on or before the day set forth in clause 1 of the special conditions as the "date of completion of contract," and formally delivered up to the Engineer in perfect order and repair, and to his entire satisfaction.

Extension of time.

In the event of any alterations, deviations, additions, or extra works being required to be executed by contractor, or in the event of any delay arising under this clause, or under clauses 5 and 15 hereof, the Engineer may allow such an extension of time (if any) as he shall think adequate for the proper carrying out of such alterations, deviations, additions, or extra works, or for the delay caused (if any).

Liquidated damages.

The Minister, on behalf of the Queen, shall be entitled to deduct or set off for each and every week's delay after the date mentioned as the date of completion of contract, or after the expiration of the "extension of time" (if any) allowed under this clause, as and by way of liquidated damages, the sum mentioned in clause 2 of the special conditions.

Such damages shall be deducted from the final balance and the cash security lodged by the contractor in accordance with clause 20 of these conditions and with clauses 5 and 6 of the special conditions, or at the option of the Minister, from any other moneys payable to the contractor under this contract.

Suspension.

On receiving a written notice to that effect from the Engineer, contractor shall suspend the whole or any portion of the works, as may be directed in such notice. He shall have no claim for loss or damage on this account, unless the suspension exceeds one month, and such suspension shall in no wise vitiate the contract, but a commensurate extension of time for completing the works will be granted to the contractor.

Testing.

When, in the judgment of the Engineer, the whole of the works appear to be completed, they shall be tested or examined as may be provided in the specification; if the result of the test or examination be satisfactory, they will be formally taken over by the Engineer, who will issue a certificate to that effect, whereupon the period for maintenance shall begin.

Maintenance.

#### 11. *Safety of Works and Persons.*

Reinstating defects.

Contractor shall be liable for the reinstating or making good of any thing whatsoever which may be removed, displaced, damaged, or destroyed during the performance of the works, or by reason of the same; and he shall also be solely responsible for all defects to, and failures in, the works during the whole time of construction and the period of maintenance, whether the said defects arise from insufficient foundations, defective construction, bad materials, or any other cause within the contractor's control, or from the inclemency of the weather, landsprings, or similar cause.

Hoardings, roads, &c.

Contractor shall also provide and maintain all hoarding-barriers, night-lights, and properly-ballasted temporary roads required by any municipal or other authorities having charge or control of streets or roads, or which may be required for the convenience or safety of the public; and he shall also make all arrangements by temporary roads or bridges or otherwise, which may be required by any local authorities or by the Engineer, to prevent stoppage or delay of public traffic or any avoidable inconvenience to the public.

Liability for accidents, &c.

During the whole time of construction of the works, and during the period of their maintenance, contractor shall be liable for any accident, damage, or injury whatsoever to the public or to any individual, which may be caused by his operations or his neglect, and also for the safety of any adjacent roads, streets, cellars, vaults, pavements, walls, houses, buildings, or other structures, and shall be bound to erect, fix, secure, or remove any scaffolding, timbering, &c., as occasion may require or when ordered by the Engineer to do so; and in case of emergency or probable danger to life or property the Engineer, without notice to contractor, may provide or employ, at contractor's cost, such labour, materials, and plant as may be necessary to meet the exigency, of which the Engineer himself shall be the sole judge. All such cost to be deducted from any sum then or thereafter due to the contractor under this contract.

No opening is to be made in any street until a sufficient quantity of approved material and plant are on the ground to complete the length to be opened. Should any delay or dispute arise as to the supply of any material, the Engineer shall have power to direct any opening made to be filled up and the surface restored at contractor's cost, amount to be deducted from any money due to the contractor.

#### 12. *Agency, Notice, Right of Entry.*

Agency.

When the contractor is not personally present on the works he must at all times during their progress have a responsible agent on the ground, who shall be deemed to be, and shall be, authorised to represent him for all purposes of this contract.

In case the contractor or his responsible agent shall not be immediately available at any point of the works, the instructions given by the Engineer, in writing, to any overseer, foreman, or workman employed on the works by contractor, shall have the same effect as if they were given to the contractor or his authorised agent.

Delivery of notices.

Any written instrument or notice to be given or delivered to the contractor under this contract shall be deemed to have been so given or delivered when it is given or delivered to the contractor or his representative on the works, or left at the contractor's usual or last known place of abode or business.

Entry on work.

The Engineer and any other person duly authorised by him shall have power at all times to enter upon all or any portion of the works; and to travel by any engine, lift, cage, carriage, truck, trolley, or other vehicle which the contractor may be using on, or near, or in connection with the works; and to make examination

examination of any work, fixed or unfixed, or in any state of progress, and of any materials or plant in use or intended to be used for the purposes of this contract; and the contractor shall give or afford facility for the exercise by the Engineer and other duly authorised persons of the powers given under this clause, and shall for that purpose cause the motion of any vehicle, engine, or other machinery to be arrested when requested so to do.

Due notice shall be given by contractor to the Superintending Officer or overseer before any piles are swung and commenced to be driven; on the completion of all excavations for foundations, or otherwise, and before any foundations are laid therein; when foundation rings for wells are to be laid, or cylinders to be sunk, and before the sinking commences; before the filling in of the wells, cylinders, or other structures, or of sewer or pipe trenches is proceeded with; before centres are struck; before and after tunnel soles are laid; and at such other stages of progress of the works as may be specially directed in the specification. Progress notice.

### 13. *Dismissal and Mode of Payment of Men.*

The Engineer or Superintending Officer may, for incompetency or misconduct, or inattention to orders, or other sufficient cause, require the dismissal within twenty-four hours by the contractor of any agent, overseer, foreman, workman, or other person employed by him on the works; and in the event of the contractor refusing or neglecting to comply with such requisition all further payments on account of the contract may be stopped until such dismissal is carried out. Dismissal.

The workmen, tradesmen, and labourers of every class or kind employed on the works under this contract shall be paid their wages or other earnings in full in money, current coin of the Colony, at least once in every fortnight, and no ticket or other system of payment by goods of any sort, provisions, or liquor will be allowed on any pretence whatever. Cash payment.

Nor shall the contractor or any person employed by him, or in any way connected with him, establish any shop for the supply of liquors, provisions, or goods, nor shall the contractor cause or oblige his workmen to take their necessaries or goods of any kind from any person in particular. Truck system.

The workmen or labourers of every kind or class shall be paid on the works (if it be possible) or in some building adjoining; and in no case shall they be paid at a public-house or other place where spirituous or fermented liquors or refreshments are sold.

Before the payment of any money to the contractor, the Minister may require from the contractor a statutory declaration that the tradesmen and labourers of every kind employed on the works to which these conditions refer have been paid their wages and claims of every kind in full money, the current coin of the Colony, and to the latest date to which such wages or claims are due; and the Minister may withhold the payment of any money that may be due, or may become due, to the contractor until such declaration shall have been made and delivered to him. Statutory declaration.

### 14. *Material.*

All approved materials, plant, and prepared work brought upon the ground for use in or on the works shall be considered, and shall be, the property of Her Majesty the Queen until completion of contract; and contractor shall not take away, remove, or dispose of any such material or plant or prepared work without the written authority of the Superintending Officer. Ownership.

All materials supplied by contractor for, and used in, the works shall be the best of their respective kinds, and in conformity with any further particular directions that may be contained in the specification. Quality.

Due notice shall be given by contractor to the Superintending Officer and overseer when any material is brought on the ground, all of which must be neatly stacked in regular heaps, submitted for approval, and approved of in writing by the Superintending Officer, before it may be used in the works; none but that so approved shall be used. Arrival on ground. Approval.

The contractor, if so directed, shall remove entirely off the ground any inferior or improper material, or alter or remove any improper or unworkmanlike work at his own expense within twenty-four hours after a written notice in that behalf shall have been served upon him by the Engineer or Superintending Officer. Removal.

After the expiration of the time stated in such notice, it shall be lawful for, but not obligatory upon, the Engineer or Superintending Officer at any time to remove and, if necessary, to destroy any such material, or to pull down or alter any such work, and to replace or rebuild the same. The expense of so doing shall be deducted from any moneys then due, or that may thereafter become due, to the contractor under this contract.

Cement is to be brought on the ground in quantities of not less than fifty barrels, at least ten clear days before it is intended to be used in the works, and kept in weather-tight sheds under lock and key. After having been tested and approved of, the approved barrels will be marked on the outside, and their contents may be used. After they are empty, they shall, in the presence of the Superintending Officer or any person deputed by him, be broken up, and thereupon removed off the works. Storing.

The use by the contractor on the works of blasting powder or any other explosive material shall be confined strictly to the limits, which will be set by an order in writing of the Engineer as to locality, time, quantity, particular kind of material, and precautions to be taken during its use. Explosives.

In any case no larger quantity of explosive material shall be taken underground than is likely to be used during any current shift. Quantities.

Storing of explosive material underground shall be, and hereby is, absolutely prohibited; and for its storage on the surface special directions will from time to time be issued by the Engineer in accordance with the provisions of the Act regulating storage and conveyance of explosives. Storing underground prohibited.

Should contractor exceed the limits of such order, or not strictly observe the special directions in regard to use of explosives, the Engineer shall have power to appoint, at the contractor's expense, inspectors of powder, in whose presence alone the explosives may be made use of, and who shall have entire charge of all matters connected with their storage or supply to the works. Inspectors of powder.

If the contractor shall be found to have supplied materials or executed work not in accordance with the true intent and meaning of the specification and conditions of this contract, and if the Engineer shall elect to allow such materials to be used or such executed work to remain, he shall have power to fix the price to be paid for any such material or work, and contractor shall be bound by the Engineer's valuation. Reduced prices.

15. *Government Property.*

Delivery.	Should the Minister furnish to the contractor for the purposes of this contract any materials, or plant, or other articles of value, all of which are hereafter in this clause and in the specification included under the term "Government property," the contractor shall give a detailed receipt in writing to the Superintending Officer at the time of delivery and before taking possession thereof.
Protecting.	If required to do so by the Superintending Officer, contractor shall erect, at his own expense, sheds or other covering to protect such property from the weather or from theft.
Repairs.	He shall likewise make good any loss or injury which may happen to them from any cause whatever, and shall keep them in good and sufficient repair, and renew all moving and working parts which may have become worn out, to the satisfaction of the Engineer or Superintending Officer, during the whole time they are under his care.
Returning.	On the completion of the contract, all such property shall be returned to the Engineer, unless otherwise directed in the specification; and for that purpose it shall be removed, after having been put into a thorough state of repair, to the place or places mentioned in the specification, and there neatly stacked or arranged, as the Superintending Officer may require.
Discharge.	The latter shall thereupon give a detailed receipt in writing for everything so returned, and until such receipt shall have been given the property shall be deemed to be, and shall be, under the care of the contractor.
Delay in delivery.	Should any delay occur in supplying contractor with any drawings, or specifications, or any Government property which may be specified to be supplied or delivered to contractor by the Minister, the contractor shall have no claim for compensation for any such delay other than that (if any) particularly set forth in the specification; but the contractor shall be entitled to such reasonable extension of time for the completion of the works as shall be fixed by the Engineer.

16. *Measurements, Quantities, and Accounts.*

Net measurements.	Except in cases for which the specification distinctly prescribes another method or rule of ascertaining measurements or weights, the <i>net</i> measurements, according to the actual dimensions or weights, will always be taken, notwithstanding any custom to the contrary. The surplus materials to be removed from excavations shall be calculated as equal to the space actually occupied by the permanent works.
Surplus soil. Quantity.	
Lead.	The distance of lead shall be measured from top of shaft or end of open cutting to centre of spoil-bank or other place of deposit. The schedule price for excavation shall cover all haulage in tunnels or cuttings, unless otherwise specified.
In contractor's presence.	The contractor shall be present at all measurements, and, if required, assist in making the same. If he fail to attend after twenty-four hours' notice in writing has been delivered to him of the Superintending Officer's intention to take measurements, and clearly setting forth the locality of such intended operation, the measurements made by the Superintending Officer shall be binding on the contractor.
Time.	On the satisfactory completion of any part or portion of the works, and at all other suitable times, the dimensions of such piece of work shall be measured by the Superintending Officer, recorded on drawings, kept or to be made for the purpose, and the quantities ascertained therefrom and entered into a quantity book, to serve as the basis for arriving at the cost of contract on completion of same.
Check accounts.	Within forty-eight hours of such measurements having been effected, contractor shall furnish to the Engineer an account of the work thus intended to have been finally measured up, showing in detail the dimensions, quantities, prices, and value, specifying day of measuring, in whose presence measured, and signed by contractor.
Progress measurements.	For the purpose of making progress payments, the dimensions of still unfinished portions of the work will be measured in a summary way monthly, or as near as may be, but without prejudice to the ultimate acceptance or rejection of such portions of work.
Monthly accounts.	On the day following the conclusion of such summary measurement, contractor shall furnish to the Superintending Officer an account of all completed work and of work done during the preceding month, giving detail quantities, prices, and approximate value of each.
Final account.	Any final account to be presented by the contractor must be on similar form, and under the same heads as the printed tender form, with additional items at foot of same.

17. *Jobbing.*

Jobbing.	When desired by the Superintending Officer so to do, contractor shall furnish to said officer any skilled artizans, labourers, or carts with horses and drivers, for the performance of such services as the aforesaid officer may desire to be performed in connection with, for, on, or near the works under the contract.
Paid monthly in full.	Contractor shall supply those artizans, labourers, &c., with the necessary plant and lighting, and shall be paid for all services thus rendered the full amount provided therefor in the schedule of prices, under the head of "jobbing," at the end of every month, or as nearly as may be thereafter. The accounts for this "jobbing" shall, however, be rendered by contractor to the Superintending Officer or overseer in half-weekly intervals, that is to say, during the forenoon of every Monday and Thursday, failing which he shall lose all claim to payments for the jobbing performed by him during the preceding three days.
Half-weekly accounts.	

18. *Progress and Final Payments.*

Monthly progress payments.	No payments shall be legally due to contractor until after the entire completion of the contract; but progress payments on account, subject to all deductions herein provided for, will be made monthly, or as nearly so as may be, during the continuance of the contract, on the certificate in writing of the Engineer, at rates not exceeding those stated in clause 4 of the special conditions.
Balance.	The balance of the moneys due for works executed under this contract, less 5 per cent. and less the deductions properly to be made hereunder, will be paid within thirty days, or as nearly as may be, after the Engineer shall have certified under his hand that all the works under the contract, less those of maintenance, have been fully and satisfactorily completed, and that such balance, less the 5 per cent., is due to contractor. Provided

Provided that if the amount for maintenance, as entered by contractor in his tender, shall appear to the Engineer to be insufficient, the Minister may retain, on the declaration to that effect in writing by the Engineer, either the whole or any part of the sum otherwise deemed payable to contractor, till all the works under the contract, including those of maintenance, shall have been finally and satisfactorily executed.

Insufficient balance.

The said five (5) per cent., together with the "cash security" provided for in clause 20 of these conditions, will be retained until after the expiration of the "period of maintenance" more particularly described in clause 3 of the special conditions, and shall be paid to contractor (less the costs of any repairs or defects, should the contractor fail to execute the same) on the production of a certificate from the Engineer that all the works under the contract, including those of maintenance, have been finally and satisfactorily executed.

Final payment.

No progress payments will be made after the date specified for the completion of the contract until the whole of the works shall have been properly completed to the satisfaction of the Engineer.

No progress payment after expiration of contract time.

If, in the opinion of the Engineer, further inquiry is desirable or necessary before payment is made on any certificate, the Engineer shall have power to suspend the payment of all or any part of the amount mentioned in any such certificate for a period not exceeding one month from the date at which, in the ordinary course, the money would have been paid, and no interest shall be due or accruing on any money the payment of which shall have been so suspended.

Suspension of payment.

No certificate given to the contractor for any purpose whatever during the progress of the work shall prevent the Engineer, at any time before the final payment, from rejecting any unsound material or improper workmanship which may be discovered in the work, or from requiring the contractor to remove or amend at his own cost any work which may be found not to have been performed in accordance with the contract, or from deducting from any money which may be due or become due to the contractor the whole amount which may have been paid to the contractor for such material or work.

Certificates without prejudice.

The obtaining of the Engineer's certificate that all the works under the contract, including those of maintenance, have been finally and satisfactorily executed, shall be a condition precedent to any claim or cause of action in respect of work done, as well as to the final payment to be made hereunder.

No claim without certificate.

#### 19. Arbitration Clause.

1. All questions or disputes which shall arise respecting the true construction or meaning of the drawings or specification, or the quality of the workmanship, or quantity or quality of materials necessary for the whole or any part of the contract, and all questions and disputes respecting the matters next hereinafter mentioned, when the aggregate amount claimed in respect of such last-mentioned matters shall not amount to the sum of one thousand pounds, shall be decided by the Engineer-in-Chief for Roads, Bridges, and Sewerage, whose decision shall be absolute and final.

2. But all questions as to the cancellation of the contract, as to the right of the contractor to extension of time, as to the infliction of penalties, as to the true value of any extra work that has not been previously agreed upon, or as to the value of work omitted from the works specified to be done under the contract, shall, if the aggregate amount of the claims in respect of such matters shall be one thousand pounds or upwards, upon the completion of the works under the said contract, and before payment of the retention money and the money deposited as security for the due carrying out of the contract, be fixed and determined by arbitration as hereinafter provided.

3. If the contractor or the Minister in charge of the Department under which the works in the contract have been or are being carried out considers that he has claims in respect of the several matters mentioned in paragraph 2, as those in which arbitration may be claimed, he shall furnish to the other of them full particulars in writing of such claims, breaches, doubts, disputes, and differences in respect of which he desires arbitration, giving distinct and separate items, and the amount, if any, claimed under each item; and the other party may thereupon furnish particulars of all claims he has in respect of such matters, irrespective of the aggregate amount of such claims; and the party furnishing the same shall be bound by such particulars; and no claim not included in such statement shall be taken into consideration at such arbitration, or become subject of arbitration or action; and the claim or respective claims so made as aforesaid shall be determined by arbitrators, to be appointed as hereinafter provided, that is to say—

4. If the Engineer-in-Chief for Roads, Bridges, and Sewerage and the contractor concur in the appointment of a single arbitrator, then the matter and question aforesaid shall be referred to and decided by such single arbitrator; but if the Engineer-in-Chief for Roads, Bridges, and Sewerage and the contractor cannot concur in the appointment of a single arbitrator, each party, on the request in writing of the other party, shall, by writing under his hand, nominate and appoint an arbitrator, to whom the said questions and matters shall be referred. Every such appointment shall be delivered to the arbitrator, and be deemed a submission to arbitration on the part of the party by whom the same shall have been made, and neither party shall have power to revoke the same without the consent in writing of the other, nor shall the death of either party operate as a revocation.

5. And if, for twenty-one days after the notice in writing by the contractor or by the Engineer-in-Chief for Roads, Bridges, and Sewerage, that the contractor and the Engineer-in-Chief for Roads, Bridges, and Sewerage cannot agree, shall have been served, and for seven days after a request in writing to appoint an arbitrator shall have been served by the one party on the other, such last-mentioned party fail to appoint such arbitrator, then, upon such failure, the party making the request, and having himself appointed an arbitrator, may appoint such arbitrator to act on behalf of both parties; and the arbitrator may proceed to hear and determine the matter or question between the contractor and the Engineer aforesaid, and in such case the award or determination of such single arbitrator shall be final. If, before the matter so referred shall be determined, either arbitrator shall die or become incapable, the party by whom such arbitrator was appointed may nominate and appoint some other person as arbitrator to act in his place; and if, for the space of seven days after notice in writing from the other party for that purpose, he fail to do so, the remaining or other arbitrator may proceed *ex parte*; and in case the matter in dispute shall stand referred to a sole arbitrator in default of the appointment by the other party, and such sole arbitrator shall die, the party by whom he was appointed shall appoint another sole arbitrator in his place; and every arbitrator so to be substituted in either of the cases aforesaid shall have the same powers and authorities as were vested in the former arbitrator at the time of his death or disability.

6. If more than one arbitrator shall be appointed, such arbitrators shall, before they enter into the matter or question referred to them, nominate and appoint, by writing under their hands, an umpire to decide on the matter so referred; and if such umpire shall die or become incapable of acting, they shall forthwith, after such death or incapacity, appoint another umpire in his place, and the decision of every such umpire on the matters referred to him shall be final.

7. If, in either of the cases aforesaid, the said arbitrators shall refuse, or shall, for seven days after request of either party, neglect to appoint an umpire, a Judge of the Supreme Court, upon application made to him by either party, shall appoint an umpire, whose decision shall be final.

8. If a single arbitrator shall be appointed, and he shall die or become incapable to act before he shall have made his award, the matters referred to him shall be determined by arbitrators appointed hereunder, as if the arbitrator so dying had not been appointed.

9. If more than one arbitrator be appointed, and either of them shall refuse or for seven days neglect to act, the person by whom such defaulting arbitrator was appointed shall, within seven days after notice in writing, proceed to appoint another arbitrator to act for the arbitrator so refusing or neglecting, or the other arbitrator may proceed *ex parte*; and the decision of such other arbitrator shall be as effectual as if he had been the single arbitrator appointed by both parties.

10. If more than one arbitrator shall be appointed, and neither of them shall refuse or neglect to act, as aforesaid, then if such arbitrators shall fail to make their award within thirty days after the day on which the last of such arbitrators shall have been appointed, or within such further time as may be granted by a Judge of the Supreme Court on application by either party, the matters so referred to them shall be determined by the umpire appointed as aforesaid.

11. The arbitrators, or any two of them, shall have power to hear, receive, and examine evidence; and the witnesses on any reference herein may be examined on oath or affirmation. Neither of the parties hereto shall be at liberty to appear before the arbitrator by counsel or solicitor.

12. The award of the arbitrator or arbitrators or umpire shall be in writing, ready to be delivered to either party within the time appointed for making the said award. This submission may be made a rule of the Supreme Court. The amount of costs, umpire's and arbitrators' fees, shall be decided by the arbitrators, arbitrator, or umpire; the amount of costs, including arbitrators' and umpire's fees and witnesses' expenses, the items thereof being shown in the account annexed to said award.

13. If upon an arbitration in respect of claims made by the contractor the sum awarded to the contractor shall be less than one-half of the amount of his said claim, all the costs, charges, and expenses of and incident to the said arbitration and award shall be borne and paid by the contractor; but if the amount awarded shall exceed one-half of the amount of the said claim, then each party shall pay his own costs and one-half of the arbitrator's and umpire's fees.

14. It is to be distinctly understood that all claims by the contractor or by the Minister to have any of the matters which under paragraph No. 2 may be submitted to arbitration so dealt with, must be made upon the whole of the work being completed, and before payment to the contractor of the retention money or of the money deposited as security for the due performance of the contract, and that the acceptance by the contractor of payment of the retention money in cases where a bond to secure the completion of the works has been given, and in other cases of the retention money or of any balance thereof, and of the money deposited as security for the due performance of the contract, shall be conclusive proof that the contractor has no such claim or claims.

15. The Engineer shall not be required to defend or answer, or be made a party to, any bill, claim, action, or other proceeding at law or in equity at the instance of the contractor.

16. The exercise by the Minister, Engineer, or Superintending Officer, of any of their respective powers shall not relieve the contractor from any liability to which he may be subject for any breach of the contract.

17. None of the clauses or provisions of the specification, or of these conditions, or of any other part of this contract, shall be varied, waived, discharged, or released, either at law or equity, unless by the express consent in writing of the Minister.

#### 20. Tender, Cash Security, &c.

Tenders to be sent in on a printed form, accompanied by the printed schedule of prices, with all the blanks properly filled in, enclosed in an envelope, and addressed, as directed in the advertisement, calling for tenders.

The approximate quantities only are given as a guidance to intending contractors, and the contract being at a schedule of prices, will be subject to such extensions, extras, additions, deductions, enlargements, deviations, alterations, and omissions as therein provided. The Minister will be only liable to pay for the actual measured quantity of each respective kind of work done and ordered at the rates set forth in the schedule, and if there be no rate in the schedule for any that may be ordered, then at such rate as shall be fixed by the Engineer-in-Chief, whether such measured quantities shall be less or more than the quantity stated in the schedule of quantities and prices. The approximate quantities, as given of each item in the schedule, must be worked out, and a total sum shown in the tender.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz.:—For amounts up to £500, £5; for amounts exceeding £500 and not exceeding £1,000, £10; for all sums over £1,000, 1 per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the manager of the bank upon which it is drawn, or a bank draft. Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

All deposits, with the exception of that of the successful tenderer shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Within seven days from the date of notification in writing to any tenderer of the acceptance of his tender by the Minister, the successful tenderer must lodge with the Under Secretary for Public Works the sum named in clause 6 of the special conditions, which sum will be retained as security for the due performance of the contract until after the expiration of the "period of maintenance," and returned to the contractor (if at all) only on the day of final payment, and less any deductions, which hereunder may properly be made therefrom.

Within

Engineer no party to lawsuit.

Liability to remain.

Provisions not to be varied.

Form of tender.

Schedule rates of contract.

Deposit with tender.

Returning of preliminary deposit.

Cash security.

Within three days after lodging the aforesaid deposit, the successful tenderer shall attend at the office of the Crown Solicitor, and execute the contract. Signing of contract.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof, or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony. Forfeiture of cash security.

Whenever a Tenderer shall fail to proceed with a Contract as aforesaid, fresh Tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another Tender in the same series to be accepted; but the Tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President. Fresh Tenders.

In submitting a Tender the full Christian name of the Tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the Tender. The omission of this information will render the Tender liable to be declared informal. Defaulting Tenderers.

The Board shall not be bound to accept the lowest or any tender. Lowest or any tender.

The contractor shall bear and pay all duty stamps, licenses, building or surveyor's fees, or other charges or fees whatsoever, legally demanded by any municipal or other authorities, also the amount of all patent rights and royalties due to any patentee. Stamps, fees, &c.

No tenderer will be allowed to proceed with the work tendered for until he shall have signed the required contract. Commencement of work.

Public Works Department, Sewerage Branch,  
Sydney, 14th May, 1891.

ROBT. HICKSON,  
Engineer-in-Chief for Sewerage.

These are the General Conditions marked "D," referred to in our annexed Agreement with Her Majesty the Queen, dated the 20th day of June, A.D. 1891.

Witness,—HAROLD F. NORRIE.

JOHN CARTER,  
D. G. SNODGRASS.

"E."

TENDER FOR CONTRACT NO. 79a, SYDNEY SEWERAGE WORKS.

To the Honorable the Minister for Public Works, Bridge-street, Sydney, N.S.W.

We, the undersigned, do hereby offer to construct, completely finish, and maintain the various works for Contract No. 79a, Sydney Sewerage Works, in accordance with the supplementary specification, specification, special conditions, general conditions, and drawings, prepared for that purpose in your Department, for the sum of £12,831 19s. 6d. sterling, within sixteen months from the date hereof.

Should this offer be accepted, we undertake to lodge with the Under Secretary for Public Works, within seven days from the date of notification of acceptance of this tender, a bank deposit receipt, in the name of the Secretary for Public Works, for the sum of £650 sterling, as security for the due performance of the contract.

We hereby undertake to execute the required contract when called upon to do so.

JOHN CARTER.  
DAVID GRAHAM SNODGRASS.

16 June, 1891.

This is the tender marked "E," referred to in our annexed agreement with Her Majesty the Queen, dated the 20th day of June, A.D. 1891.

Witness,—HAROLD F. NORRIE.

JOHN CARTER.  
D. G. SNODGRASS.

"F."

LETTER OF ACCEPTANCE.

Sirs,

Department of Public Works, Sydney, 16 June, 1891.

I have the honor, by direction of the Secretary for Public Works, to inform you that your tender, dated this day, is accepted for Contract No. 79a, Sydney Sewerage Works, at the sum of twelve thousand eight hundred and thirty-one pounds nineteen shillings and sixpence (£12,831 19s. 6d.), subject to the following special condition, viz. :—

If it shall be represented to the Secretary for Public Works at any time during the progress of this contract that an undue number of men are being employed thereon who have not been domiciled in this Colony for six months previously to such employment, and such allegation be proved to his satisfaction, the Minister shall have the power to call upon you to discharge any or all such men, and on such direction being conveyed to you under the hand of the Under Secretary for Public Works, you shall discharge such men forthwith, and in the event of your non-compliance with any such direction the Minister shall have the power to declare this contract to be cancelled as if this stipulation had been expressly set out in the cancellation clause of the General Conditions relating to this contract.

The work is to be carried out in strict accordance with the several contract exhibits relating to this contract, and to be completed within sixteen months from this date.

The security required on this contract will be a fixed deposit receipt, in favour of the Secretary for Public Works, for the sum of £650.

I have to refer you to the Commissioner and Engineer-in-Chief for Roads, Bridges, and Sewerage for further information, and to request that you will call upon the officer-in-charge of bonds and contracts at this office, for the purpose of executing the necessary documents for the due observance of your contract.

I am, &c.,

J. BARLING,  
Under Secretary.

Messrs. Carter & Co., Contractors, North Sydney.

This is the copy acceptance marked "F," referred to in our annexed agreement with Her Majesty the Queen, dated the 20th day of June, A.D. 1891.

JOHN CARTER.  
D. G. SNODGRASS.

Witness,—HAROLD F. NORRIE.

"G."

"G."

CONTRACT No. 79A.—Extension from Mount-street to Junction of Campbell and Jeffrey Streets, with Branches.

SCHEDULE of Prices referred to on which Progress Payment will be made.

No. of Item.	Description of Work.	Unit.	Rate.
	Excavation in tunnels, in hard rock, for sewer, branches, pipe sewers, junctions, curves, &c., as specified in clauses 33, 42, 45, 48 to 68, including sub-ducts, timbering, unwatering, and removing the excavated materials beyond actual site of the works, as viz.:—		
1	Excavation in hard rock where gadding only is permitted .....	cubic yard	72/-
2	Excavation in hard rock, where charges of powder 2 inches in length by 1½ inches in diameter, and such depth of bore-holes as shall be directed only are permitted .....	"	63/-
3	Excavation in hard rock, where charges of powder 4 inches in length, by 1½ inches in diameter, and such depth of bore-holes as shall be directed only are permitted.	"	55/-
	Excavation in shafts, shaft-chambers, and sumps, as specified in clauses 39, 52, 53, 71, and 72, including timbering, unwatering, and removing the excavated materials beyond actual site of the works, as viz.:—		
4	Excavation in road surfaces, sand, soil, clay, pipeclay, shale, and soft rock only .....	"	6/-
5	Excavation in hard rock, where gadding only is permitted .....	"	40/-
6	Excavation in hard rock, where charges of powder 2 inches in length by 1½ inches in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	31/6
7	Excavation in hard rock, where charges of powder 4 inches in length by 1½ inches in diameter, and such depths of bore-holes as shall be directed only are permitted.....	"	30/-
8	Filling in round brick and concrete work of ventilating and intercepting shafts and chambers, manholes, and into all shafts, as specified in clauses 40, 41, 42, 43, 71, and 72, including withdrawing of timber, depositing in layers, replacing road and other surfaces, ramming, &c. ....	"	1/3
9	Timber ordered in writing to be left in tunnels, shafts, as specified in clauses 36 and 37, including all iron used in fixing same.....	cubic feet...	2/-
10	Sub-duct in hard rock, with tile covers, as specified in clauses 76 and 77 .....	lineal yard	3/6
11	Hand packed stone filling, 4-in. gauge, as specified in clauses 17, 69, 76 to 78, over sub-ducts and when ordered, round sewers and pipe sewers in tunnels, including depositing, packing, and ramming .....	cubic yard	4/-
12	Sandstone concrete, any shape, form, and thickness, in shafts, tunnels, sumps, round stoneware pipes, and where ordered in any situation in the construction of these works, as specified in clauses 26, 27, 93 to 109, including washing dry surfaces, wetting, and grouting complete .....	"	30/-
13	Bluestone concrete, any shape, form, thickness, arched, circular, or otherwise, in sewer, curved junctions, arches, manholes, &c., as specified in clauses 24, 27, 93 to 109, including washing dry surfaces, wetting, and grouting complete .....	"	50/-
	Brickwork in cement in sewer, junctions, shaft chambers, circular, curved, arched, or otherwise, any shape or form or thickness, as specified in clauses 110 to 113, including wetting, flushing, grouting collar joints, pointing where ordered, &c.:—		
14	Of one or more rings or portion of ring .....	"	60/-
15	Cement facing in two thicknesses, ½ inch thick when finished, as specified in clause 114, to all internal (and external where ordered) surfaces of sewer, junctions, shaft chambers, culverts, manholes, and where ordered in any situation in the construction of these works .....	square yard	2/6
16	Bluestone concrete, any shape, form, or thickness, arched, circular, or otherwise, in shafts, over shaft chambers, as specified in clauses 93 to 109, including washing dry surfaces, wetting, and grouting complete .....	cubic yard	50/-
17	Brickwork in cement, circular, arched, curved, or otherwise, any shape, form, or thickness, as specified in clauses 110 to 113, in shafts, over shaft chambers, including wetting, flushing, grouting, pointing where ordered, collar joints, &c., complete .....	"	60/-
18	Cement facing in two thicknesses, ½ in. thick when finished, to all internal and external surfaces of shafts where ordered, as specified in clause 114 .....	square yard	2/6
	Providing, laying, and jointing glazed stoneware plain pipes in trenches, and where ordered, including fixing discs as specified, and including bed-joints in mortar where required:—		
19	12 in. diameter .....	lineal foot	3 .
20	9 in. ,, .....	"	2/-

No. of Item.	Description of Work.	Unit.	Rate.
<b>SURPLUS MATERIALS.</b>			
Removal of surplus materials from the various excavations throughout this contract, as tunnels and open trenches, including sub-ducts, shafts, sumps, &c., as specified in clauses 40, 42, 43, and 45, as viz. :—			
21	For the first half-mile of lead .....	cubic yard	1/-
<b>GOVERNMENT PROPERTY.</b>			
22	Placing, building in, fixing, and jointing only, any metal work, as cast-iron oval and circular pipes, junction branches, flanged, and with spigot and faucet ends, gas checks, ventilating grates lamphole boxes, manhole covers, staples, step-irons, earthenware, covers, &c., supplied by the Government, including carriage, as specified in clauses 91, 121, 131 to 133, complete .....	ton	60/-

This is the schedule of prices marked "G," referred to in our annexed agreement with Her Majesty the Queen, dated the 20th day of June, A.D. 1894.

Witness,—HAROLD F. NORRIE.

JOHN CARTER.  
D. G. SNODGRASS.

No. 6.

Resident-Engineer Boys to Supervising-Engineer Davis.

Contract 79A.

Department of Public Works, Roads, Bridges, and Sewerage Branch,

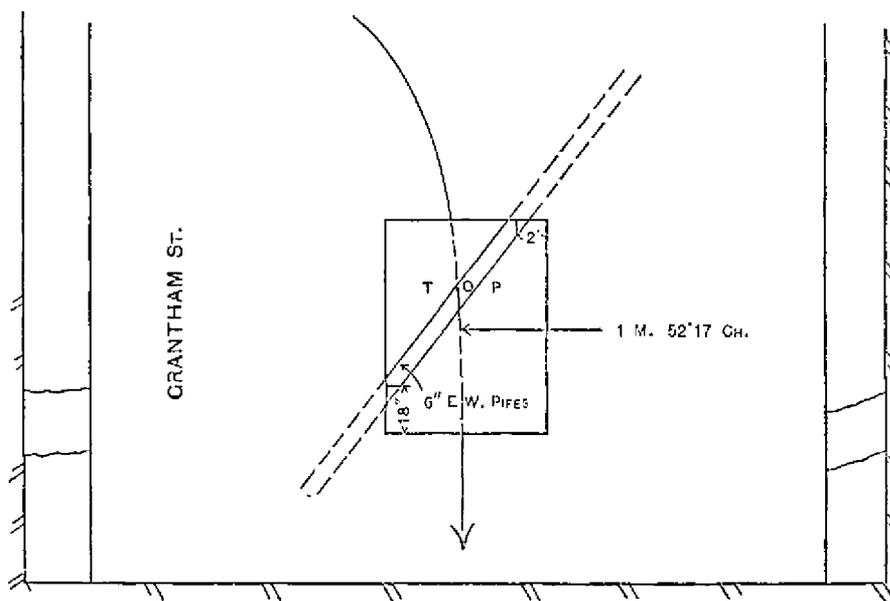
North Sydney, 4 May, 1894.

Dear Sir,

A line of 6-in. drain-pipes cross the shaft diagonally at 1 mile 52'17 chains, Grantham-street.

Will you be good enough to instruct the contractors, Messrs. Carter & Co., to shift these out of the way, as it will be more inconvenient to alter position of shaft.

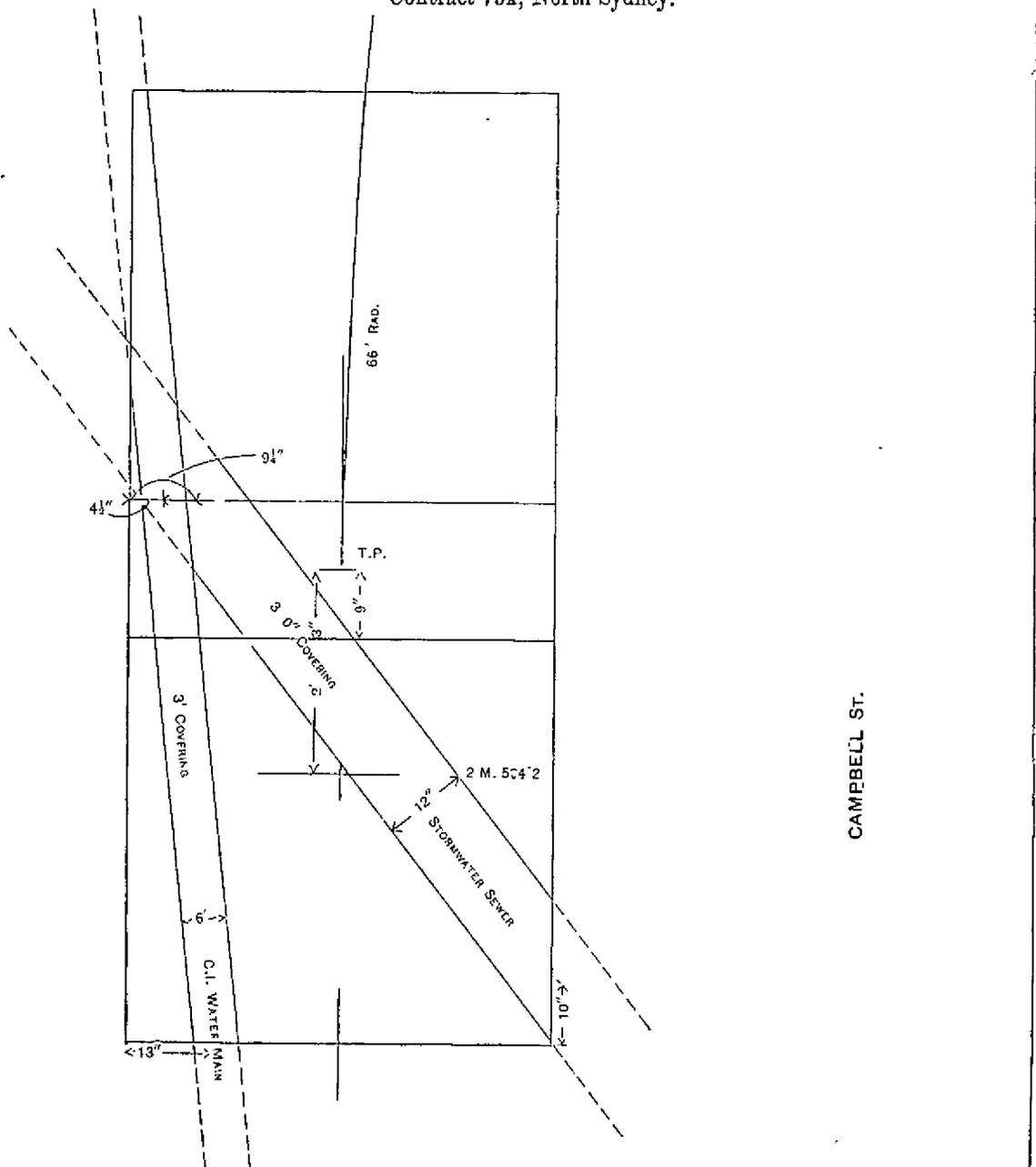
Sketch herewith.



I am, &c.,  
J. W. T. BOYS.

This being a lump sum contract, I should like the Engineer-in-Chief's decision as to whether work of this description will be included in the lump sum.—J.D., 7/5/94. Commissioner and Engineer-in-Chief for Roads, Bridges, and Sewerage. No.—R.R.P.H., 7/5/94. Noted.—J.W.T.B., 8/5/94. File.—J.D., 9/5/94.

No. 7.  
Resident-Engineer Boys to Supervising-Engineer Davis.  
Contract 79A, North Sydney.



This sketch shows the pipes met with in shaft at 2 miles 5042.

I propose to shift the shaft to the position shown in red, and if agreed to, please give the necessary orders for diverting the 12-in. storm-water sewer.

J. W. T. BOYS,

Contract 79A, N. Sydney.

This alteration can be made. I have consulted with Mr. Bagge. The contractors to mould the 12-in. E.W. pipe, and be paid day labour for it.—J.D., 18/5/94. Mr. Boys. Shaft set out in new position.—J.W.T.B., 23/5/94. File.—J.D., 28/5/94.

No. 8.  
Supervising-Engineer Davis to The Engineer-in-Chief for Sewerage.

*Minute Paper.*

Department of Public Works, Roads and Bridges and Sewerage Branch, Sydney, 26 July, 1894.

*Subject*:—Contract No. 79A, North Shore—Recommending that advance be made on approved cement. The contractors have asked that an advance be made on approved cement on this contract. It is usual for this to be done, and I recommend that the request be complied with to the extent of 75 per cent. of the amount of the fixed deposit (£485), at the rate of 75 per cent. of the value of the cement on the ground, on condition that the contractors sign the usual agreement.

J. DAVIS.

Approved.—R.R.P.H., 26/7/94. Mr. Davis.—F.C.P., 26/7/94. Seen. Mr. Norrie for usual agreement.—J.D., 27/7/94. Who are the contractors, and where is the cement stored?—H.F.N.B., 27/7/94. Sewerage. The contractors are Carter & Co., and the shed is in Alfred-street, opposite to the Town Hall.—J.D., 30/7/94. Mr. Norrie. Memorandum herewith, duly signed and stamped. Original agreement also sent herewith.—H.F.N., 7/8/94. The Commissioner-in-Chief for Roads, Bridges, and Sewerage. Seen.—R.R.P.H., 8/8/94. Mr. Davis to note.—F.C.P., 8/8/94. Seen. Mr. Weeden to note.—J.D., 9/8/94. Noted.—S.H.W., 11/8/94. Accountant.—J.D., 15/8/94. Noted agreement placed with bond.—E.H., 16/8/94.

No. 9.

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No. 9.  
Agreement.

## MEMORANDUM.

In consideration of the Minister for Public Works in and for the Colony of New South Wales advancing to us the sum of £485, and of any future advances to be made to us, we hereby agree to repay to the said Minister for Public Works the said sum of £485 and future advances, together with interest at the rate of £6 per centum per annum on such sums respectively from date of advance on demand. And we hereby charge all money due or payable, or becoming due or payable, to us under a certain contract for sewerage works, called or known as contract No. 79A, Sydney Sewerage Works, in the said Colony, entered into by us with the Government of the said Colony, with the repayment of the said sum of £485 and any future advances and interest at the rate aforesaid. And we acknowledge that we now hold all cement now stored in our shed in Alfred-street, opposite Town Hall, Sydney, in the said Colony, or elsewhere, and plant, materials, and every other thing already used or to be used in connection with or under the said contract, for and on behalf of the said Minister for Public Works, as representing the said Government. And also further undertake to give immediate possession of same to the said Minister, or any person appointed by him for that purpose, whenever called upon to do so.

As witness our hands, at Sydney, this 6th day of August, in the year of our Lord 1894,—

JOHN CARTER.

Witness to the signature of John Carter,—

HAROLD F. NORRIE, J.P.

D. G. SNODGRASS.

Witness,—W. BARNETT SMITH, J.P.

## No. 10.

## Resident-Engineer Weedon to Supervising-Engineer Davis.

Contract No. 79A, North Sydney.

Sir,

16 October, 1894.

A portion of this contract at the end near Campbell-street was shown on the section to be taken out in "open cutting." This length was tunnelled and about 40 feet of it had to be timbered. The sewer in this length should be constructed of two-ring work, and I write for authority to instruct the contractors to that effect.

I am, &amp;c.,

STEPHEN H. WEEDON,  
Resident Engineer.

Will Mr. Weedon please give reduced chainages of the proposed two-ringed work?—J.D., 17/10/94. Two miles 4 chains 24·28 feet to 2 miles 4 chains 61·28 feet.—S.H.W., 18/10/94. Mr. Weedon please hand attached letter to contractors.—J.D., 18/10/94. Accordingly.—S.H.W., 24/10/94. File.—J.D., 26/10/94.

## No. 11.

## Supervising-Engineer Davis to Messrs. Carter &amp; Co.

Gentlemen,

Public Works Department, Sewerage Branch, 18 October, 1894.

In consequence of the nature of the ground between 2 miles 4 chains 24·28 feet and 2 miles 4 chains 61·28 feet, it will be necessary to have the sewer lining 10 inches thick. Will you please arrange for this to be done?

I have, &amp;c.,

J. DAVIS,  
Supervising Engineer for Sewerage.

## No. 12.

## Messrs. Carter &amp; Co. to Supervising-Engineer Davis.

Contract No. 79A, North Sydney Sewerage.—Construction of Shafts.

Sir,

North Sydney, 17 November, 1894.

Referring to our conversation with you *re* the above, we desire to confirm the offer then made to construct the shafts in brickwork in lieu of concrete, with a view to the more expeditious completion of the work.

We are, &amp;c.,

CARTER &amp; CO.

On condition that no extra price is to be paid for the brickwork, I recommend that it be substituted for the bluestone concrete shown on contract drawings.—J.D., 21/11/94. Appd.—R.R.P.H. 21/11/94. Messrs. Carter & Co., 22/11/94. Mr. Weedon to note.—J.D., 22/11/94. Noted.—S.H.W., 23/11/94. File.—J.D., 26/11/94.

## No. 13.

## Supervising-Engineer Davis to Messrs. Carter &amp; Co.

Gentlemen,

Public Works Department, Sewerage Branch, 22 November, 1894.

In reply to your letter of the 17th inst., offering to substitute brickwork for bluestone concrete in the shafts on sewerage contract No. 79A, without extra cost to the Department, I have the honor to inform you that the Engineer-in-Chief has approved of your doing as you wish.

I have, &amp;c.,

J. DAVIS,  
Supervising Engineer for Sewerage.

No. 14.

## No. 14.

## Supervising-Engineer Davis to The Engineer-in-Chief for Sewerage.

*Minute Paper.*

*Subject*:—Contract No. 79A, North Sydney. Recommending that 33 feet of the High-street branch be driven in conjunction with this contract.

Department of Public Works, Roads and Bridges and Sewerage Branch,  
Sydney, 22 November, 1894.

In constructing the main sewers it is usual, in order to prevent the concrete and brickwork being damaged by blasting, to drive at least 33 feet of tunnel for the branch sewers at the same time as the tunnel for the main sewer is driven.

In the case of High-street, North Sydney, this appears to have been overlooked when the contract drawings were prepared. The cost of driving 33 feet at schedule rates will be £31 12s. 6d., and I recommend that at least this length should be done. J.D.

Approved.—R.H., 22/11/94. Mr. Weedon to note.—J.D., 23/11/94. Noted.—S.H.W., 26/11/94. File.—J.D., 26/11/94. Messrs. Carter & Co., 28/11/94. Mr. Weedon to note.—J.D., 28/11/94. Previously noted.—S.H.W. File.—J.D., 30/11/94. What will driving alone cost per chain for High-street branch at schedule rates, contract No. 79A?—J.D. The cost of driving alone for sewer 3 ft. 3 in. x 2 ft. 2 in. will be £63 5s. (if 4-inch charges of powder are allowed) per chain.—W.E.A., 21/11/94. Mr. Bagge. The lining is taken at 4½ inches thick, for the excavation, beyond the 3 ft. 3 in. x 2 ft. 2 in. sewer, in rock.—C.H.O.B., 21/11/94. Mr. Davis.

## No. 15.

## Supervising-Engineer Davis to Messrs. Carter &amp; Co.

Gentlemen, Public Works Department, Sewerage Branch, 28 November, 1894.

Referring to the conversation I had with your Mr. Snodgrass relative to doing a portion of the High-street branch in connection with your sewerage contract No. 79A, and to your offer to drive the same at your schedule price No. 3, I have the honor to inform you that the Engineer-in-Chief has approved of this being done. Will you please proceed with the tunnel for at least 33 feet for a 3 ft. 3 in. x 2 ft. 2 in. sewer, allowing for a 5-in lining. I have, &c.,

J. DAVIS,

Supervising Engineer for Sewerage.

## No. 16.

## Messrs. Carter &amp; Co. to The Engineer-in-Chief for Sewerage.

Sir, North Sydney, 10 January, 1895.

Being anxious to complete contract No. 79A, North Sydney sewerage, as quickly as possible, we have to ask your permission to drive the tunnel from No. 12 shaft on contract No. 79 towards shaft No. 13 on contract No. 79A.

As shaft No. 12 is built up in brickwork, we are willing to excavate 33 feet from the end of the drive from No. 12 by guttering and gadding to remove the risk of damage to completed work.

We are, &amp;c.,

CARTER, GUMMOW, &amp; CO.

Register.—J.D., 12/1/95.

## No. 17.

## Supervising-Engineer Davis to The Engineer-in-Chief for Sewerage.

*Minute Paper.*

*Subject*:—Contract No. 79A, North Shore Outfall. Contractors write asking that they be allowed to drive from shaft at foot of Mount-street.

Department of Public Works, Roads and Bridges and Sewerage Branch,

Sydney, 25 January, 1895.

THE shaft at the foot of Mount-street, referred to in the contractors' letter was built under contract No. 79, and 5 feet of sewer lining was put in on the south side of the shaft. The tunnel was driven 50 feet beyond the lining. The contractors ask that they be allowed to continue the drive from this shaft, and undertake to gutter and gad the first 33 feet. I think the request might be granted, as it will greatly facilitate the completion of contract No. 79A, conditionally, however, upon the contractors consenting to use no blasting powder in excavating the tunnel until they have driven 99 lineal feet from the south end of the lining, and further undertake to leave the sewer and shaft constructed under contract No. 79 in the same condition as they are at present. J.D.

Approved.—R.H., 16/1/95. Messrs. Carter & Co., 16/1/95. Mr. Weedon to see.—J.D., 16/1/95. Seen.—S.H.W., 17/1/95. Mr. Davis. File.—J.D., 18/1/95.

## No. 18.

## The Engineer-in-Chief for Sewerage to Messrs. Carter &amp; Co.

Gentlemen, Public Works Department, Sewerage Branch, 16 January, 1895.

In reply to your letter of the 10th instant, asking permission to drive the tunnel from the shaft at the foot of Mount-street, I have the honor to inform you that you may do as you ask, conditionally upon your completing the driving of the tunnel to 99 feet south of the sewer lining without the use of blasting powder, and leave the sewer and shaft constructed under contract No. 79 in the same condition as they are at present. I have, &c.,

ROBERT HICKSON,

Commissioner and Engineer-in-Chief for Roads, Bridges and Sewerage.

No. 19.

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No. 19.

## Resident-Engineer Weedon to Supervising-Engineer Davis.

North Shore Main Outfall Sewer Extension from Mount-street to Campbell-street—Contract No. 79A.  
Sir, 9 January, 1895.

I have the honor to inform you that to-day I laid the question of 14-inch brickwork before the contractors for the above contract, and that they elected to build the shafts to the required height (35 feet from surface of ground), with 14-inch brickwork on two sides, and with 9-inch brickwork on the other two sides that touch the sides of the excavation, filling in solid with sandstone concrete between the 9-inch brickwork and the sides of the excavation.

I have, &amp;c.,

STEPHEN H. WEEDON,  
Resident Engineer.

Seen. This involves no extra cost, as the contractors have already asked to substitute brickwork for concrete at their own cost.—J.D., 12/1/95.

No. 20.

## Resident Engineer Weedon to Supervising-Engineer Davis.

North Shore Main Outfall Sewer Extension from Mount-street to Campbell-street—Contract No. 79A.  
Ironwork for Shafts.

Sir,

9 January, 1895.

With reference to the above, I have the honor to point out that the list of ironwork supplied me for the above contract does not clearly imply that for the shaft at 1m. 76c. 517 one complete length of pipe (schedule item 57 contract No. 93), together with a similar pipe shortened by 8½ inches are required, as is the case; the short length is to hand, but the complete pipe has yet to arrive and is required. Whilst on this subject I would like to know if the length figured on the drawing of this shaft for the short pipe is correct.

I have also to apply for the 3-24 inch bell-mouth pipes, item No. 9.

I have, &amp;c.,

STEPHEN H. WEEDON,  
Resident Engineer.

Could Mr. Adams see me?—J.D., 12/1/95. Mr. Bagge.

Another pipe item 151 has yet to be ordered, which will be done at once. The three bell-mouth pipes have been ordered (*vide* order book). The length put on the short pipe referred to is undoubtedly wrong, and is apparently intended for the longer pipe.—W. E. ADAMS, 12/1/95. Mr. Davis.

Mr. Weedon.—J.D., 14/1/95. Could Mr. Smith hasten the delivery of the three bell-mouthed pipes.—S.H.W., 15/1/95. Mr. Davis. Mr. Smith, when will bell-mouthed pipes be delivered?—J.D., 19/1/95. I have asked Cooke and Webb to push on with this work at once.—W.S. Mr. Weedon.—J.D., 23/1/95. Noted.—S.H.W., 24/1/95. Mr. Davis. File.—J.D., 25/1/95.

No. 21.

## Messrs. Carter &amp; Co. to Supervising-Engineer Davis.

Sir,

North Sydney, 1 March, 1895.

Seeing that certain drives on contract No. 79A, North Sydney Sewerage will not be completed for some months, and having gathered from a conversation with you that the length along High-street might be completed to advantage at the present time, we hereby offer to complete such work at the present schedule rates for contract No. 79A.

We are, &amp;c.,

CARTER &amp; CO.

Will Mr. Weedon please let me have tracing and estimate of the High-street branch to open cutting.—J.D., 1/3/95. Mr. Weedon.

No. 22.

## Resident-Engineer Weedon to Supervising-Engineer Davis.

ESTIMATE North Shore Sewerage Extension, High-street branch:—

8 March, 1895.

		£	s.	d.	£	s.	d.
767 lineal feet.....	Rock tunnelling complete—4-in. powder; size of sewer 3 ft. 3 in. x 2 ft. 2 in. ....	36/-	1,380	12	0		
100 ,, .....	Rock tunnelling complete—4-in. powder; 9-in. dia. pipes .....	27/-	135	6	0		
90 cubic yards .....	Shaft excavation .....	30/-	135	0	0		
60 square yards ..	Cement facing .....	2/6	7	10	0		
13½ cubic yards ..	Sandstone concrete .....	30/-	20	0	0		
33 ,, ..	Bluestone concrete .....	60/-	99	0	0		
45 ,, ..	Filling .....	1/3	2	18	3		
360 ,, ..	Surplus material .....	1/-	18	0	0		
2 No. ...	Manhole covers (£6) .....	3/-	0	18	0		
1-2 square yards ..	Bluestone setts.....	30/-	1	16	0		
	Estimated cost of 3 ft. 3 in. x 2 ft. 2 in. sewer complete, between 1 m. 38'028 and 1 m. 51'1,923 .....		1,800	12	3		
			£1,800	12	3		

Tracing herewith.

STEPHEN H. WEEDON,  
Resident Engineer.

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No. 23.

## No. 23.

Supervising-Engineer Davis to The Engineer-in-Chief for Sewerage.

*Minute Paper.**Subject* :—Contract No. 72A, North Shore—High-street extension.

Department of Public Works, Roads and Bridges and Sewerage Branch,

Sydney, 12 March, 1895.

THE contractors write offering to construct at their schedule rates for contract No. 79A, 18 chains of the High-street sub-main.

It seems to me that it will be advisable to have this length of sewer constructed as proposed by the contractors. By doing so one shaft will be saved, which will cost £163, in addition to which it will enable the reticulating sewers for a large district to be proceeded with at an earlier date than they otherwise would be.

Although contract No. 79A is a lump sum contract, there is a schedule of prices attached thereto, which would apply to the whole of the work comprised in the proposed extension.

The cost, as per estimate attached, will be about £1,800. The schedule rates are reasonable, and as low as would probably be obtained if tenders were invited.

J.D.

Recommended.—R.H., 14/3/95. Will Mr. Davis please see me.—J.B., 15/3/95. For approval.—J.B., 16/3/95. Approved.—J.H.Y., 18/3/95. Mr. Hickson, B.C., J.B., 18/3/95. Seen.—R.H., 19/3/95. Please hand attached letter and tracing to contractors.—J.D., 27/3/95. Mr. Weedon. Accordingly.—S.H.W., 28/3/95. Mr. Davis. File.—J.D., 29/3/95. Mr. Griffith.—J.D., 8/4/95. Seen. See the contractor is informed.—A.D., 11/4/95. Action completed. File.—J.M.S., 16/4/95.

## No. 24.

The Under Secretary for Public Works to The Engineer-in-Chief for Metropolitan Sewerage Construction.

Contract No. 79A, Sydney Sewerage Works, North Sydney.

Carter &amp; Co., Contractors.

3 June, 1895.

THE Bank fixed deposit receipt for £650, lodged in respect of the above contract, will mature on the 19th instant.

Should the deposit be renewed, and if the security is to be returned, should the document held by the Department be handed to Messrs. Carter & Co.?

Jno. P. (for U.S.)

Mr. Griffiths,—How long will it take to finish this contract? If extension of time is required, it should be applied for, as renewal of deposit will depend upon term of extension.—J.M.S., 5/6/95. Mr. Cook as to completion of works.—J.B., 6/6/95.

It will be five months from date before contract No. 79A is completed. High-street branch, which was undertaken by contractors as an addition to the contract, will be finished in four months from date.—W.B.C., Acting Engineer-in-Chief M.S. Construction, 14/6/95. J.B., 17/6/95.

The deposit should be renewed for six months longer.—J.M.S., 17/6/95. Under Secretary. Acting Engineer-in-Chief, Metropolitan Sewerage Construction, Water and Sewerage.—J.B., 18/6/95. Messrs. Carter & Co. asked, 21/6/95. Resubmit with reply.

## No. 25.

The Under Secretary for Public Works to Messrs. Carter &amp; Co.

Gentlemen,

Department of Public Works, Sydney, 21 June, 1895.

I am directed by the Secretary for Public Works to inform you that the Bank fixed deposit receipt for £650, lodged in respect of contract No. 79A, Sydney Sewerage, matured on the 19th instant, and to ask whether you wish the deposit to be renewed, and, if so, for what period?

I am also to ask that you will be good enough to state what action is to be taken in regard to the interest which has accrued under the present deposit.

I have, &amp;c.,

J. BARLING

(Per J.P.),

Under Secretary.

## No. 26.

Messrs. Carter &amp; Co. to The Under Secretary for Public Works.

Sir,

North Sydney, 25 June, 1895.

With reference to your letter, *re* fixed deposit for £650, lodged as security for contract No. 79A, will you be good enough to renew the same for twelve months with the Bank of New Zealand, Pitt-street, and place the accrued interest to the credit of "Carter & Co., North Shore Contract," at the same Bank.

We are, &amp;c.,

CARTER &amp; CO.

Mr. Mitchell.—Jno. P., 25/6/95. F.D.R. for renewal for twelve months sent to Bank of New Zealand, 26/6/95.

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No. 26A.

The Under Secretary for Public Works to The Manager, Bank of New Zealand.

Sir, Department of Public Works, Sydney, 26 June, 1895.

I am directed by the Secretary for Public Works to forward herewith, for renewal for twelve months from the 19th instant, fixed deposit receipt No. A22,097 for the sum of £650, issued by your Bank, and lodged as security in respect of contract No. 79A, Sydney Sewerage.

I am to ask that the amount of accrued interest under the present deposit may be placed to the credit of "Carter & Co., North Shore Contract."

I have, &amp;c.,

J. BARLING,

Under Secretary.

No. 27.

Fixed Deposit Receipt.

(Due 19th June, 1896.)

BANK OF NEW ZEALAND.

Incorporated by Act of the General Assembly.

No. A22207.

Deposit Receipt.

Sydney, 26 June, 1895.

RECEIVED from the Under Secretary for Public Works the sum of six hundred and fifty pounds as a fixed deposit, repayable at the end of twelve months, bearing interest for that period only at the rate of three and one-half per cent. per annum from the 19th June, 1895.

For the Bank of New Zealand—

W. H. BROWNE (for Manager).

E. W. SMITH (for Accountant).

£650.

[Not transferable.]

When payment of this receipt is required, the receipt must be returned duly endorsed.

No. 28.

The Manager, Bank of New Zealand, to The Under Secretary for Public Works.

Bank of New Zealand, Sydney, 26 June, 1895.

WE have much pleasure in handing you herewith our fixed deposit receipt No. A22207 for £650, issued in terms of your requisition of even date. The interest has been placed to credit of Messrs. Carter & Co. as requested.

Yours, &amp;c.,

W. H. BROWNE,

Manager.

Mr. Mitchell to receive.—Jno. P., 27/6/95. F.D.R.—£650 placed in safe. Receipt acknowledged.—W.H.M., 27/6/95.

No. 29.

Final Certificate.

CONTRACT No. 79A.—Progress Return, No. 17, showing quantity and value of work executed or fixed, and material advanced on, on the 23rd day of September, 1895.

Date for completion as per contract, 16th day of October, 1895; extra extension approved, 95-3 to High-street, cost, £1,800; estimated cost of work, £12,831 19s. 6d.; progress payments, £11,840 6s. 2d.; present advance, £694 13s.; total, £12,534 19s. 2d.

Schedule Rate No.	Description.	Unit.	Quantity.	Rate.	Amount.	Total.	
1	Excavation in tunnel (gadding) .....	cubic yard	13	72/-	£ 46 16 0	£ s. d. 11,653 8 6	
3	"    "    (4 in. powder) .....	"	2,049	55/-	5,634 15 0		
4	"    shafts (soft) .....	"	151	6/-	45 6 0		
7	"    "    (rock) .....	"	820	30/-	1,230 0 0		
8	Filling .....	"	196	1/3	12 5 0		
12	Sandstone concrete .....	"	526	30/-	789 0 0		
13	Bluestone .....	"	1,110	50/-	2,775 0 0		
14	Brickwork .....	"	239	60/-	717 0 0		
15	Cement facing .....	square yard	2,253	2/6	281 12 6		
20	9-inch drain stoneware pipes .....	lineal feet	467	2/-	46 14 0		
21	Surplus material .....	cubic yard	1,200	1/-	60 0 0		
22	Fixing iron .....	ton	5	60/-	15 0 0		
	<i>Material on ground:—</i>						
	Cement .....	cask	100	9/4½	46 17 6		46 17 6
	<b>Total</b> .....				£		11,700 6 0

Recapitulation.	Amount.	Total.
Value of work executed to date .....	£ s. d. 11,653 8 6	£ s. d.
„ material .....	46 17 6	
Total, as per the other side.....		11,700 6 0
1st advance on difference between lump sum and value of work at schedule rates .....		2,000 0 0
<i>Deductions to be made :—</i>		
Retention money (10 per cent. of value of work) .....	1,165 6 10	13,700 6 0
Amount of progress payments already made .....	11,840 0 2	13,005 13 0
Amount of 17th progress payment now recommended.....		694 13 0

I hereby certify that the above return is a fair and correct statement of the contract to which it refers, and that the above measurements were made by me with Mr. Reed, contractor's manager.

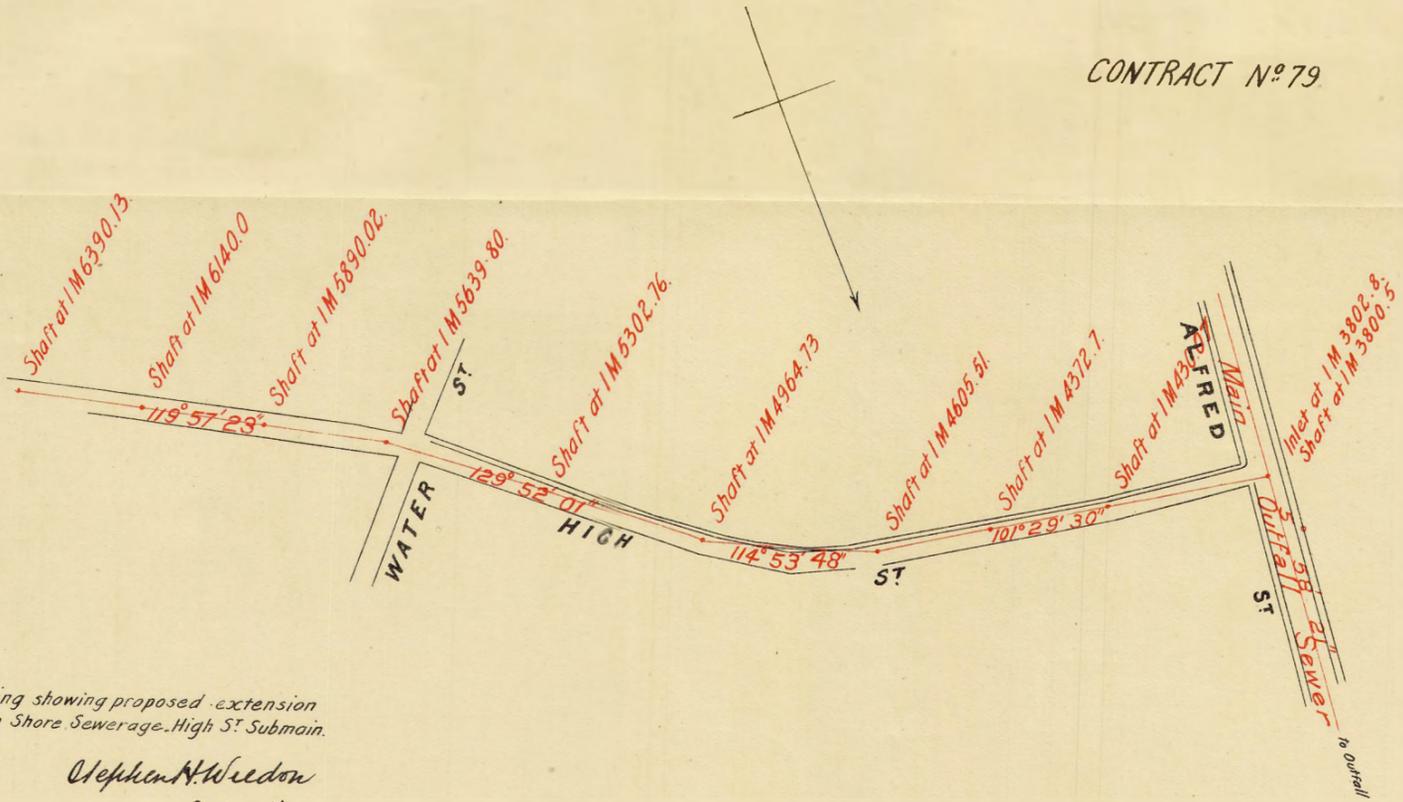
J. GRIFFITHS,  
Supervising Engineer, Metn. Sewerage Construction.

W. E. COOK,  
Officer-in-charge of Work.

I certify that the amount charged in this voucher as to computations, castings, and rates, is correct, that the service has been faithfully performed, and that the expenditure is duly authorised in terms of the Audit Act.

C. D.,  
Head of the Department.

[Plan.]

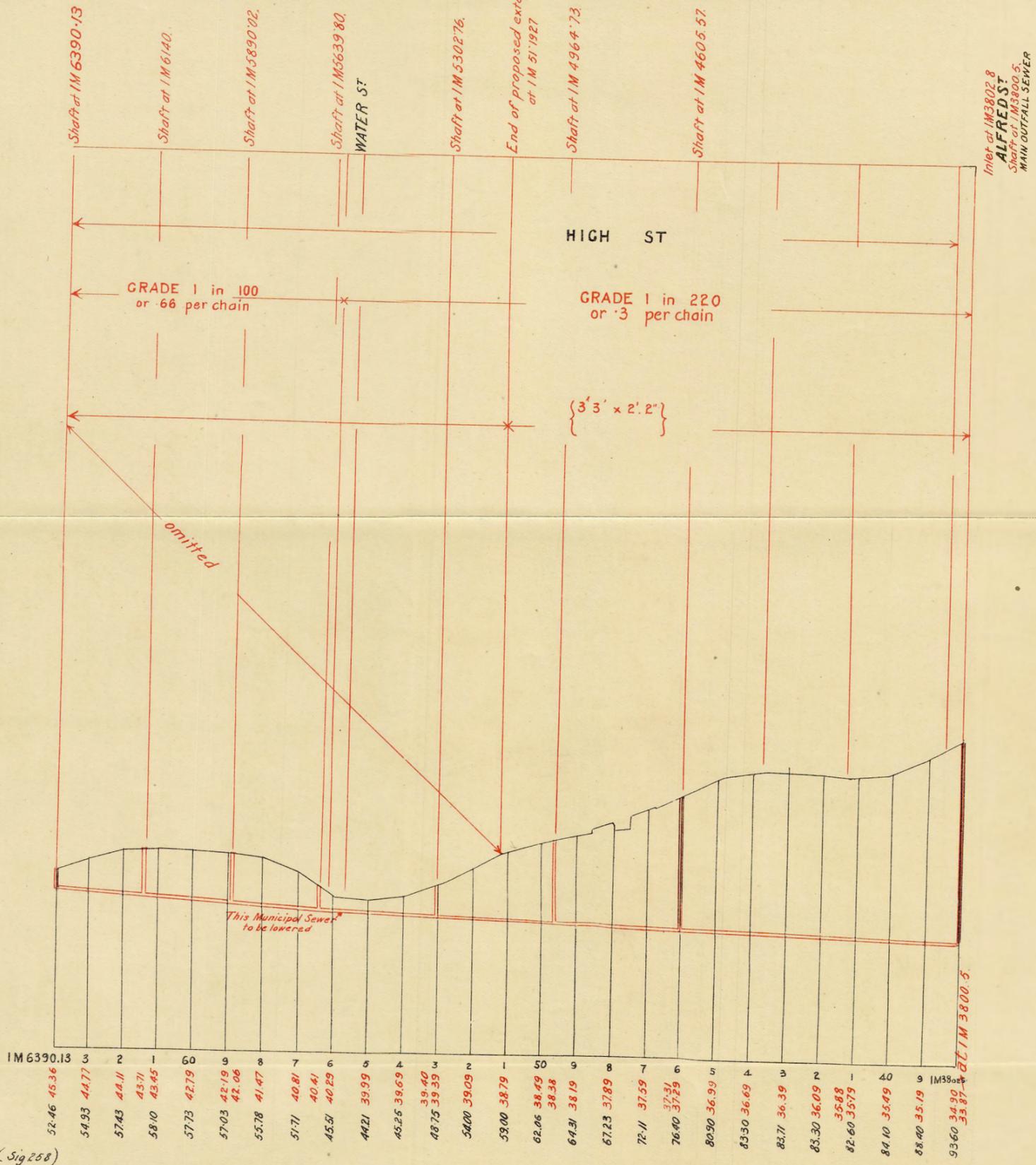


Tracing showing proposed extension  
North Shore Sewerage High St Submain.

Stephen A. Weldon  
8-3-95



### High St Submain



## Contract No. 118, Sydney Sewerage.

### No. 1.

The Engineer-in-Chief for Sewerage to The Under Secretary for Public Works.

Johnstone's Creek Storm-water Channel, from Parramatta-road to 10½ chains beyond Balmain tram line.—  
Contract No. 118, Sydney Sewerage Works.

HEREWITH is submitted for the approval of the Commissioner and Engineer-in-Chief, plans and specifications, in triplicate, for the above storm-water channel.

Amount available, Johnstone's Creek Storm-water Channels, Loans Act, 54 Vic. No. 33, £8,060 11s.;  
55 Vic. No. 35, £29,680; 56 Vic. No. 24, £8,572. Estimated cost, £15,132 10s.

Plans and specifications to be exhibited at the Sewerage Office, Lincoln Inn Chambers, Elizabeth-street.

Tenders to close at 11 a.m., Wednesday, 24th April, 1895.

M. OHLFSEN BAGGÉ,  
Chief Assistant Engineer for Sewerage.

The Commissioner and Engineer-in-Chief for Sewerage.

HEREWITH is forwarded for the approval of the Secretary for Public Works, and for insertion in the *Government Gazette* and local papers, an advertisement inviting tenders for the above.

ROBT. HICKSON,

The Under Secretary.—B.C.

Commissioner and Engineer-in-Chief for Sewerage.

Notice to *Gazette*, 28/3/95. Insert.—J.B., 28/3/95. Tenders for 24/4/95.

### No. 2.

#### Schedule of Tenders received by Tender Board.

Wednesday, 24 April, 1895.

LIST OF TENDERS received for construction of the Johnstone's Creek Storm-water Channel.—Contract  
No. 118, Sydney Sewerage.

Number of tenders received ... ..	Twelve.
Estimated amount ... ..	£15,132.
Amount of lowest tender ... ..	20½ per cent. below schedule prices.
Name of lowest tenderer ... ..	Carter, Gummow, & Co.
Voto ... ..	£8,060 11s., 54 Vic. No. 33; £29,680, 55 Vic. No. 35; £8,572, 56 Vic. No. 24.

	Amount.	Deposit.	Nature.
1. Carter, Gummow, & Co. ... ..	20½ % b.s.	£120	Cheque.
2. Tender unsigned; cheque signed by Justin M'Sweeney ... ..	16 % b.s.	120	"
3. J. F. Carson ... ..	14½ % b.s.	131	"
4. Richard Holloway, William Holloway, and Leonard Holloway ... ..	11½ % b.s.	No deposit.	"
5. Eaton Bros. ... ..	11½ % b.s.	£134	"
6. Wm. Gilliver and C. H. Curtis ... ..	11·21½ % b.s.	135	"
7. Thos. Williams ... ..	9 % b.s.	135	"
8. Thos. Johnston, Patrick O'Rourke, and Patrick Gordon ... ..	5 % b.s.	143	"
9. T. S. Phillips, B. Rhodes, and A. Broughton ... ..	5 % b.s.	144	"
10. R. and S. Butcher ... ..	5 % a.s.	150	"
11. Saml. Smith and John P. Cochran ... ..	5 % b.s.	144	"
12. Hugh Owen ... ..	3 % b.s.	150	"

J. BARLING,  
Vice-President of Tender Board.

Acting Engineer-in-Chief, Metropolitan Sewerage Construction, for report. Is the minimum wage clause inserted in the conditions?—Jno.P. (*for U.S.*), 25/4/95.

As I am informed that this contract is limited to work within reclamation limits, and will not be charged to capital debt of the Board, it will come within the arrangement made as to supervision, viz., all works upon which rates will not be struck by the Board to be carried out by Mr. Hickson's department.—M.P., Acting Engineer, 29/4/95.

Mr. Davis to see me.—R.H., 29/4/95. Prepare usual schedule.—J.D., 1/5/95. Mr. Pridham. Schedule herewith.—T.P., 3/5/95. Principal Assistant Engineer for Country Towns Water Supply and Sewerage.

## No. 1.—CARTER, GUMMOW, &amp; CO'S TENDER.

(Bound up with the Bond).

No. 2.—(Tender unsigned; cheque signed by Justin M'Sweeney).

## TENDER FORM.

IN pursuance of advertisement in the *Government Gazette*, I, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of Johnstone's Creek Stormwater Channel from Parramatta Road to about 10 chains north of the Balmain tramline (Contract No. 118), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by me, at 16 per cent. under the prices affixed to each item in the schedule of quantities and prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this tender; and I do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates quoted above, or, if not in schedule, at a price to be agreed upon at the time; and I hereby undertake that I will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and I enclose herewith my cheque for the sum of £        as a preliminary deposit; and I agree that such sum shall be absolutely forfeited if I at any time within thirty days after the said tender is opened withdraw the same, or if in the event of this tender being accepted I fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board regulations, printed on the back hereof, and by which I agree to be bound.

Dated this 24th day of April, 1895.

## TENDER BOARD REGULATIONS.

No tender shall be received after 11 a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive...	£5 0 0
For amounts exceeding £500 and not exceeding £1,000...	£10 0 0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

CONTRACT

CONTRACT No. 118.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.
	Excavation in open trenches, in more or less hard materials, and in hard rock for main storm-water channel and branches, including removing any pipes, concrete, brickwork, woodwork, and drains, &c., met with, as specified in clauses 3, 6, 8, 9, and 10:—			£ s. d.
1	Excavation in surface soil, mud, sand, clay, ballast, soft rock, only .....	cubic yard	15,800	0 2 0
2	Excavation in hard rock, where guttering and gadding only is permitted .....	"	250	0 8 6
3	Excavation in hard rock, where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed, only, are permitted .....	"	250	0 7 6
4	Excavation in hard rock, where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed, only, are permitted .....	"	1,000	0 6 6
5	Filling in over and at sides of pipes, drains, main and branch storm-water channels, in open cuttings, &c., including all quarry filling and sand filling where ordered, as specified in clauses 4, 5, 6, 8, 9, and 10 .....	"	9,000	0 1 0
6	Removal of surplus materials to such places as may be directed, as specified in clause 7 .....	"	8,300	0 0 9
7	Sandstone concrete in any situation, as specified in clause 11 .....	"	6,800	1 8 0
8	Cement coating in any situation, as specified in clause 12 .....	square yard	20,900	0 2 3
9	Brickwork in cement in 4½-in. lining to invert of storm-water channel, as specified in clauses 2 and 13 .....	cubic yard	60	2 10 0
	Providing, laying, and jointing glazed stoneware plain pipes, junctions, and bends, in trenches, including providing and fixing discs, as specified in clause 14:—			
10	24 in. internal diameter .....	lineal foot	280	0 12 6
11	18 in. " .....	"	120	0 6 0
12	12 in. " .....	"	10	0 3 0
13	6 in. diameter and smaller .....	"	600	0 1 0
14	Receiving, placing, building in, fixing and jointing any metal-work, as cast-iron frame and gully grating supplied by Government, at the site of the works, as specified in clauses 264 and 265 of the schedule to specification .....	cwt.	7.5	0 4 0
15	Providing, dressing, and setting in cement mortar, freestone curbing, as shown, and as specified in clause 188 of the schedule to specification .....	cubic foot	2	0 4 0
16	Providing, dressing, and setting squared freestone pitching and channelling, as shown, and as specified in clause 187 of the schedule to specification .....	square yard	1.5	0 8 0
17	Special bluestone concrete in any situation, as specified in clause 141 of the schedule to specification .....	cubic yard	Rate only	3 0 0
18	Permanent puddle .....	"	"	0 10 0
19	Bluestone metal, 1½-in. gauge, stacked .....	"	"	0 13 0
20	Bluestone metal, 2½-in. gauge, stacked .....	"	"	0 12 0
21	Sand, stacked .....	"	"	0 8 0
22	Oregon timber .....	cubic foot	"	0 2 0
23	Wrought-iron in bolts, screws, nails, spikes, and straps .....	lb	"	0 0 4
24	Portland cement .....	cask	"	0 13 0
25	Artisan or mechanic .....	day	"	0 11 0
26	Skilled labourer .....	"	"	0 10 0
27	Ordinary labourer .....	"	"	0 8 0
28	Cart, horse, and driver .....	"	"	0 11 0
29	One additional horse .....	"	"	0 5 6

The quantities are not guaranteed as correct, and are merely for the guidance of tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 25, 26, 27, 28, and 29 are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer-dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads, crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads and other surfaces, &c., and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

## No. 3.—J. F. CARSON'S TENDER.

## TENDER FORM.

IN pursuance of advertisement in the *Government Gazette*, I, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of Johnstone's Creek Stormwater Channel from Parramatta Road to about ten chains north of the Balmain Tramline (Contract No. 118), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by me, at  $14\frac{1}{2}$  per cent. under the prices affixed to each item in the Schedule of Quantities and Prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this tender; and I do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates quoted above, or if not in Schedule, at a price to be agreed upon at the time; and I hereby undertake that I will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works, a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above-mentioned, and to provide the security required by clause 29 of the said general conditions; and I enclose herewith my cheque for the sum of £131 as a preliminary deposit; and I agree that such sum shall be absolutely forfeited if I at any time within thirty days after the said tender is opened withdraw the same, or if, in the event of this tender being accepted, I fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board Regulations, printed on the back hereof, and by which I agree to be bound.

Dated this 24th day of April, 1895.

Witness.—JNO. J. KOONIE.

J. F. CARSON,  
Bay-street, Croydon.

## TENDER BOARD REGULATIONS.

No tender shall be received after eleven a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive...	...	...	...	...	£5 0 0
For amounts exceeding £500 and not exceeding £1,000...	...	...	...	...	£10 0 0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

CONTRACT

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No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.
	Excavation in open trenches, in more or less hard materials, and in hard rock for main storm-water channel and branches, including removing any pipes, concrete, brickwork, woodwork, and drains, &c., met with, as specified in clauses 3, 6, 8, 9, and 10:—			£ s. d.
1	Excavation in surface soil, mud, sand, clay, ballast, soft rock, only .....	cubic yard	15,800	0 2 0
2	Excavation in hard rock, where guttering and gadding only is permitted .....	"	250	0 8 6
3	Excavation in hard rock, where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed, only, are permitted .....	"	250	0 7 6
4	Excavation in hard rock, where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed, only, are permitted .....	"	1,000	0 6 6
5	Filling in over and at sides of pipes, drains, main and branch storm-water channels, in open cuttings, &c., including all quarry filling and sand filling where ordered, as specified in clauses 4, 5, 6, 8, 9, and 10 .....	"	9,000	0 1 0
6	Removal of surplus materials to such places as may be directed, as specified in clause 7 .....	"	8,300	0 0 0
7	Sandstone concrete in any situation, as specified in clause 11, .....	"	6,800	1 8 0
8	Cement coating in any situation, as specified in clause 12 .....	square yard	20,900	0 2 3
9	Brickwork in cement in 4½-in. lining to invert of storm-water channel, as specified in clauses 2 and 13 .....	cubic yard	60	2 10 0
	Providing, laying, and jointing glazed stoneware plain pipes, junctions, and bends, in trenches, including providing and fixing discs, as specified in clause 14:—			
10	24 in. internal diameter .....	lineal foot	280	0 12 6
11	18 in. " .....	"	120	0 6 0
12	12 in. " .....	"	10	0 3 0
13	6 in. diameter and smaller .....	"	600	0 1 0
14	Receiving, placing, building in, fixing and jointing any metal-work, as cast-iron frame and gully grating supplied by Government, at the site of the works, as specified in clauses 264 and 265 of the schedule to specification .....	cwt.	7.5	0 4 0
15	Providing, dressing, and setting in cement mortar, freestone curbing, as shown, and as specified in clause 188 of the schedule to specification .....	cubic foot	2	0 4 0
16	Providing, dressing, and setting squared freestone pitching and channelling, as shown, and as specified in clause 187 of the schedule to specification .....	square yard	1.5	0 8 0
17	Special bluestone concrete in any situation, as specified in clause 141 of the schedule to specification .....	cubic yard	Rate only	3 0 0
18	Permanent puddle .....	"	"	0 10 0
19	Bluestone metal, 1½-in. gauge, stacked .....	"	"	0 13 0
20	Bluestone metal, 2½-in. gauge, stacked .....	"	"	0 12 0
21	Sand, stacked .....	"	"	0 8 0
22	Oregon timber .....	cubic foot	"	0 2 0
23	Wrought-iron in bolts, screws, nails, spikes, and straps .....	lb	"	0 0 4
24	Portland cement .....	cask	"	0 13 0
25	Artisan or mechanic .....	day	"	0 11 0
26	Skilled labourer .....	"	"	0 10 0
27	Ordinary labourer .....	"	"	0 8 0
28	Cart, horse, and driver .....	"	"	0 11 0
29	One additional horse .....	"	"	0 5 6

The quantities are not guaranteed as correct, and are merely for the guidance of tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 25, 26, 27, 28, and 29 are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer-dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads, crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads and other surfaces, &c., and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

## No. 4.—HOLLOWAY BROTHERS' TENDER.

## TENDER FORM.

In pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of Johnstone's Creek Stormwater Channel from Parramatta Road to about 10 chains north of the Balmain Tramline (Contract No. 118), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by us, at  $11\frac{1}{2}$  per cent. below the prices affixed to each item in the schedule of quantities and prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates quoted above, or, if not in schedule, at a price to be agreed upon at the time; and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and we enclose herewith our cheque for the sum of £140 as a preliminary deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said tender is opened withdraw the same, or if, in the event of this tender being accepted, we fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board Regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 23rd day of April, 1895.

RICHARD HOLLOWAY,  
WILLIAM HOLLOWAY,  
LEONARD HOLLOWAY,  
Goulburn.

## TENDER BOARD REGULATIONS.

No tender shall be received after 11 a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive...	£5 0 0
For amounts exceeding £500 and not exceeding £1,000...	£10 0 0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

CONTRACT

## CONTRACT No. 118.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.
	Excavation in open trenches, in more or less hard materials, and in hard rock for main storm-water channel and branches, including removing any pipes, concrete, brickwork, woodwork, and drains, &c., met with, as specified in clauses 3, 6, 8, 9, and 10:—			£ s. d.
1	Excavation in surface soil, mud, sand, clay, ballast, soft rock, only .....	cubic yard	15,800	0 2 0
2	Excavation in hard rock, where guttering and gadding only is permitted .....	"	250	0 8 6
3	Excavation in hard rock, where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed, only, are permitted	"	250	0 7 6
4	Excavation in hard rock, where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed, only, are permitted	"	1,000	0 6 6
5	Filling in over and at sides of pipes, drains, main and branch storm-water channels, in open cuttings, &c., including all quarry filling and sand filling where ordered, as specified in clauses 4, 5, 6, 8, 9, and 10 .....	"	9,000	0 1 0
6	Removal of surplus materials to such places as may be directed, as specified in clause 7 .....	"	8,300	0 0 9
7	Sandstone concrete in any situation, as specified in clause 11 .....	"	6,800	1 8 0
8	Cement coating in any situation, as specified in clause 12 .....	square yard	20,900	0 2 ½
9	Brickwork in cement in 4½-in. lining to invert of storm-water channel, as specified in clauses 2 and 13 .....	cubic yard	60	2 10 0
	Providing, laying, and jointing glazed stoneware plain pipes, junctions, and bends, in trenches, including providing and fixing discs, as specified in clause 14:—			
10	24 in. internal diameter .....	lineal foot	280	0 12 6
11	18 in. " .....	"	120	0 6 0
12	12 in. " .....	"	10	0 3 0
13	6 in. diameter and smaller .....	"	600	0 1 0
14	Receiving, placing, building in, fixing and jointing any metal-work, as cast-iron frame and gully grating supplied by Government, at the site of the works, as specified in clauses 264 and 265 of the schedule to specification .....	cwt	7.5	0 4 0
15	Providing, dressing, and setting in cement mortar, freestone curbing, as shown, and as specified in clause 188 of the schedule to specification .....	cubic foot	2	0 4 0
16	Providing, dressing, and setting squared freestone pitching and channelling, as shown, and as specified in clause 187 of the schedule to specification .....	square yard	1.5	0 8 0
17	Special bluestone concrete in any situation, as specified in clause 141 of the schedule to specification .....	cubic yard	Rate only	3 0 0
18	Permanent puddle .....	"	"	0 10 0
19	Bluestone metal, 1½-in. gauge, stacked .....	"	"	0 13 0
20	Bluestone metal, 2½-in. gauge, stacked .....	"	"	0 12 0
21	Sand, stacked .....	"	"	0 8 0
22	Oregon timber .....	cubic foot	"	0 2 0
23	Wrought-iron in bolts, screws, nails, spikes, and straps .....	lb	"	0 0 4
24	Portland cement .....	cask	"	0 13 0
25	Artisan or mechanic .....	day	"	0 11 0
26	Skilled labourer .....	"	"	0 10 0
27	Ordinary labourer .....	"	"	0 8 0
28	Cart, horse, and driver .....	"	"	0 11 0
29	One additional horse .....	"	"	0 5 6

The quantities are not guaranteed as correct, and are merely for the guidance of tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 25, 26, 27, 28, and 29 are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer-dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads, crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads and other surfaces, &c., and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

## No. 5.—EATON BROTHERS' TENDER.

## TENDER FORM.

IN pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of Johnstone's Creek Stormwater Channel from Parramatta Road to about 10 chains north of the Balmain Tramline (Contract No. 118), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by us, at 1½ per cent. under the prices affixed to each item in the schedule of quantities and prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates quoted above, or, if not in schedule, at a price to be agreed upon at the time; and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works, a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and we enclose herewith our cheque for the sum of £134 as a preliminary deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said tender is opened withdraw the same, or if, in the event of this tender being accepted, we fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board Regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 24th day of April, 1895.

ANDREW EATON,  
GEORGE EATON,  
Berry-street, North Sydney.

Witness,—WILL. A. PETTIT,  
Berry-street, North Sydney.

## TENDER BOARD REGULATIONS.

No tender shall be received after eleven a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive ... ..	£5 0 0
For amounts exceeding £500 and not exceeding £1,000...	£10 0 0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

CONTRACT

CONTRACT No. 118.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.
	Excavation in open trenches, in more or less hard materials, and in hard rock for main storm-water channel and branches, including removing any pipes, concrete, brickwork, woodwork, and drains, &c., met with, as specified in clauses 3, 6, 8, 9, and 10:—			£ s. d.
1	Excavation in surface soil, mud, sand, clay, ballast, soft rock, only .....	cubic yard	15,800	0 2 0
2	Excavation in hard rock, where guttering and gadding only is permitted .....	"	250	0 8 6
3	Excavation in hard rock, where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed, only, are permitted .....	"	250	0 7 6
4	Excavation in hard rock, where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed, only, are permitted .....	"	1,000	0 6 6
5	Filling in over and at sides of pipes, drains, main and branch storm-water channels, in open cuttings, &c., including all quarry filling and sand filling where ordered, as specified in clauses 4, 5, 6, 8, 9, and 10 .....	"	9,000	0 1 0
6	Removal of surplus materials to such places as may be directed, as specified in clause 7 .....	"	8,300	0 0 9
7	Sandstone concrete in any situation, as specified in clause 11 .....	"	6,800	1 8 0
8	Cement coating in any situation, as specified in clause 12 .....	square yard	20,000	0 2 3
9	Brickwork in cement in 4½-in. lining to invert of storm-water channel, as specified in clauses 2 and 13 .....	cubic yard	60	2 10 0
	Providing, laying, and jointing glazed stoneware plain pipes, junctions, and bends, in trenches, including providing and fixing discs, as specified in clause 14:—			
10	24 in. internal diameter .....	lineal foot	250	0 12 6
11	18 in. " .....	"	120	0 6 0
12	12 in. " .....	"	10	0 3 0
13	6 in. diameter and smaller .....	"	600	0 1 0
14	Receiving, placing, building in, fixing and jointing any metal-work, as cast-iron frame and gully grating supplied by Government, at the site of the works, as specified in clauses 264 and 265 of the schedule to specification .....	cwt.	7.5	0 4 0
15	Providing, dressing, and setting in cement mortar, freestone curbing, as shown, and as specified in clause 188 of the schedule to specification .....	cubic foot	2	0 4 0
16	Providing, dressing, and setting squared freestone pitching and channelling, as shown, and as specified in clause 187 of the schedule to specification .....	square yard	1.5	0 8 0
17	Special bluestone concrete in any situation, as specified in clause 141 of the schedule to specification .....	cubic yard	Rate only	3 0 0
18	Permanent puddle .....	"	"	0 10 0
19	Bluestone metal, 1½-in. gauge, stacked .....	"	"	0 13 0
20	Bluestone metal, 2½-in. gauge, stacked .....	"	"	0 12 0
21	Sand, stacked .....	"	"	0 8 0
22	Oregon timber .....	cubic foot	"	0 2 0
23	Wrought-iron in bolts, screws, nails, spikes, and straps .....	lb	"	0 0 4
24	Portland cement .....	cask	"	0 13 0
25	Artisan or mechanic .....	day	"	0 11 0
26	Skilled labourer .....	"	"	0 10 0
27	Ordinary labourer .....	"	"	0 8 0
28	Cart, horse, and driver .....	"	"	0 11 0
29	One additional horse .....	"	"	0 5 6

The quantities are not guaranteed as correct, and are merely for the guidance of tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 25, 26, 27, 28, and 29 are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer-dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads, crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads and other surfaces, &c., and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

## No. 6.—GILLIVER AND CURTIS' TENDER.

## TENDER FORM.

IN pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of Johnstone's Creek Stormwater Channel from Parramatta Road to about 10 chains north of the Balmain Tramline (Contract No. 118), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by us, at 11·21 $\frac{1}{4}$  per cent. below the prices affixed to each item in the schedule of quantities and prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates quoted above, or, if not in schedule, at a price to be agreed upon at the time; and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and we enclose herewith our cheque for the sum of £135 as a preliminary deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said tender is opened withdraw the same, or if, in the event of this tender being accepted, we fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board Regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 24th day of April, 1895.

WM. GILLIVER,  
CHAS. H. CURTIS,  
Rookwood.

## TENDER BOARD REGULATIONS.

No tender shall be received after 11 a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive...	£5 0 0
For amounts exceeding £500 and not exceeding £1,000...	£10 0 0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

CONTRACT

## CONTRACT No. 118.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.
	Excavation in open trenches, in more or less hard materials, and in hard rock for main storm-water channel and branches, including removing any pipes, concrete, brickwork, woodwork, and drains, &c., met with, as specified in clauses 3, 6, 8, 9, and 10:—			£ s. d.
1	Excavation in surface soil, mud, sand, clay, ballast, soft rock, only .....	cubic yard	15,800	0 2 0
2	Excavation in hard rock, where guttering and gadding only is permitted .....	"	250	0 8 6
3	Excavation in hard rock, where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed, only, are permitted	"	250	0 7 6
4	Excavation in hard rock, where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed, only, are permitted	"	1,000	0 6 6
5	Filling in over and at sides of pipes, drains, main and branch storm-water channels, in open cuttings, &c., including all quarry filling and sand filling where ordered, as specified in clauses 4, 5, 6, 8, 9, and 10 .....	"	3,000	0 1 0
6	Removal of surplus materials to such places as may be directed, as specified in clause 7 .....	"	8,300	0 0 9
7	Sandstone concrete in any situation, as specified in clause 11.....	"	6,800	1 8 0
8	Cement coating in any situation, as specified in clause 12 .....	square yard	20,900	0 2 3
9	Brickwork in cement in 4½-in. lining to invert of storm-water channel, as specified in clauses 2 and 13 .....	cubic yard	60	2 10 0
	Providing, laying, and jointing glazed stoneware plain pipes, junctions, and bends, in trenches, including providing and fixing discs, as specified in clause 14:—			
10	24 in. internal diameter .....	lineal foot	280	0 12 6
11	18 in. " .....	"	120	0 6 0
12	12 in. " .....	"	10	0 3 0
13	6 in. diameter and smaller .....	"	600	0 1 0
14	Receiving, placing, building in, fixing and jointing any metal-work, as cast-iron frame and gully grating supplied by Government, at the site of the works, as specified in clauses 264 and 265 of the schedule to specification .....	cwt.	7.5	0 4 0
15	Providing, dressing, and setting in cement mortar, freestone curbing, as shown, and as specified in clause 188 of the schedule to specification .....	cubic foot	2	0 4 0
16	Providing, dressing, and setting squared freestone pitching and channelling, as shown, and as specified in clause 187 of the schedule to specification .....	square yard	1.5	0 8 0
17	Special bluestone concrete in any situation, as specified in clause 141 of the schedule to specification .....	cubic yard	Rate only	3 0 0
18	Permanent puddle.....	"	"	0 10 0
19	Bluestone metal, 1½-in. gauge, stacked .....	"	"	0 13 0
20	Bluestone metal, 2½-in. gauge, stacked .....	"	"	0 12 0
21	Sand, stacked .....	"	"	0 8 0
22	Oregon timber .....	cubic foot	"	0 2 0
23	Wrought-iron in bolts, screws, nails, spikes, and straps .....	lb	"	0 0 4
24	Portland cement .....	cask	"	0 13 0
25	Artisan or mechanic .....	day	"	0 11 0
26	Skilled labourer .....	"	"	0 10 0
27	Ordinary labourer .....	"	"	0 8 0
28	Cart, horse, and driver .....	"	"	0 11 0
29	One additional horse .....	"	"	0 5 6

The quantities are not guaranteed as correct, and are merely for the guidance of tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 25, 26, 27, 28, and 29 are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer-dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads, crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads and other surfaces, &c., and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

## No. 7.—THOS. WILLIAMS' TENDER.

## TENDER FORM.

IN pursuance of advertisement in the *Government Gazette*, I, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of Johnstone's Creek Stormwater Channel from Parramatta Road to about 10 chains north of the Balmain tramline (Contract No. 118), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by me, at 9 per cent. below the prices affixed to each item in the schedule of quantities and prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this tender; and I do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates quoted above, or, if not in schedule, at a price to be agreed upon at the time; and I hereby undertake that I will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and I enclose herewith my cheque for the sum of £ as a preliminary deposit; and I agree that such sum shall be absolutely forfeited if I at any time within thirty days after the said tender is opened withdraw the same, or if in the event of this tender being accepted I fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board regulations, printed on the back hereof, and by which I agree to be bound.

Dated this 24th day of April, 1895.

THOS. WILLIAMS,  
Islington Terrace, Parramatta-road, Forest Lodge.

## TENDER BOARD REGULATIONS.

No tender shall be received after 11 a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive...	£5	0	0
For amounts exceeding £500 and not exceeding £1,000...	£10	0	0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

CONTRACT

CONTRACT No. 118.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.
	Excavation in open trenches, in more or less hard materials, and in hard rock for main storm-water channel and branches, including removing any pipes, concrete, brickwork, woodwork, and drains, &c., met with, as specified in clauses 3, 6, 8, 9, and 10:—			£ s. d.
1	Excavation in surface soil, mud, sand, clay, ballast, soft rock, only .....	cubic yard	15,800	0 2 0
2	Excavation in hard rock, where guttering and gadding only is permitted .....	"	250	0 8 6
3	Excavation in hard rock, where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed, only, are permitted .....	"	250	0 7 6
4	Excavation in hard rock, where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed, only, are permitted .....	"	1,000	0 6 6
5	Filling in over and at sides of pipes, drains, main and branch storm-water channels, in open cuttings, &c., including all quarry filling and sand filling where ordered, as specified in clauses 4, 5, 6, 8, 9, and 10 .....	"	9,000	0 1 0
6	Removal of surplus materials to such places as may be directed, as specified in clause 7 .....	"	8,300	0 0 9
7	Sandstone concrete in any situation, as specified in clause 11.....	"	6,800	1 8 0
8	Cement coating in any situation, as specified in clause 12 .....	square yard	20,900	0 2 3
9	Brickwork in cement in 4½-in. lining to invert of storm-water channel, as specified in clauses 2 and 13 .....	cubic yard	60	2 10 0
	Providing, laying, and jointing glazed stoneware plain pipes, junctions, and bends, in trenches, including providing and fixing discs, as specified in clause 14:—			
10	24 in. internal diameter .....	lineal foot	280	0 12 6
11	18 in. " .....	"	120	0 6 0
12	12 in. " .....	"	10	0 3 0
13	6 in. diameter and smaller .....	"	600	0 1 0
14	Receiving, placing, building in, fixing and jointing any metal-work, as cast-iron frame and gully grating supplied by Government, at the site of the works, as specified in clauses 264 and 265 of the schedule to specification .....	cwt.	7.5	0 4 0
15	Providing, dressing, and setting in cement mortar, freestone curbing, as shown, and as specified in clause 188 of the schedule to specification .....	cubic foot	2	0 4 0
16	Providing, dressing, and setting squared freestone pitching and channelling, as shown, and as specified in clause 187 of the schedule to specification .....	square yard	1.5	0 8 0
17	Special bluestone concrete in any situation, as specified in clause 141 of the schedule to specification .....	cubic yard	Rate only	3 0 0
18	Permanent puddle.....	"	"	0 10 0
19	Bluestone metal, 1½-in. gauge, stacked .....	"	"	0 13 0
20	Bluestone metal, 2½-in. gauge, stacked .....	"	"	0 12 0
21	Sand, stacked .....	"	"	0 8 0
22	Oregon timber .....	cubic foot	"	0 2 0
23	Wrought-iron in bolts, screws, nails, spikes, and straps .....	lb	"	0 0 4
24	Portland cement .....	cask	"	0 13 0
25	Artisan or mechanic .....	day	"	0 11 0
26	Skilled labourer .....	"	"	0 10 0
27	Ordinary labourer .....	"	"	0 8 0
28	Cart, horse, and driver .....	"	"	0 11 0
29	One additional horse .....	"	"	0 5 6

The quantities are not guaranteed as correct, and are merely for the guidance of tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 25, 26, 27, 28, and 29 are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer-dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads, crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads and other surfaces, &c., and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

## No. 8.—JOHNSTON, O'ROURKE, AND GORDON'S TENDER.

## TENDER FORM.

IN pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of Johnstone's Creek Stormwater Channel from Parramatta Road to about 10 chains north of the Balmain Tramline (Contract No. 118), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by us, at 5 per cent. below the prices affixed to each item in the schedule of quantities and prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates quoted above, or, if not in schedule, at a price to be agreed upon at the time; and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works, a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and we enclose herewith our cheque for the sum of £143 as a preliminary deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said tender is opened withdraw the same, or if, in the event of this tender being accepted, we fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board Regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 24th day of April, 1895.

THOS. JOHNSTON, }  
 PATRICK O'ROURKE, } North Sydney,  
 PATRICK GORDON, }  
 William-street, Sydney.

## TENDER BOARD REGULATIONS.

No tender shall be received after eleven a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive ... ..	£5 0 0
For amounts exceeding £500 and not exceeding £1,000...	£10 0 0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

CONTRACT No. 118.—This is the Schedule of Quantities and Prices heretofore referred to.

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.
	Excavation in open trenches, in more or less hard materials, and in hard rock for main storm-water channel and branches, including removing any pipes, concrete, brickwork, woodwork, and drains, &c., met with, as specified in clauses 3, 6, 8, 9, and 10:—			£ s. d.
1	Excavation in surface soil, mud, sand, clay, ballast, soft rock, only .....	cubic yard	15,800	0 2 0
2	Excavation in hard rock, where guttering and gadding only is permitted .....	"	250	0 8 6
3	Excavation in hard rock, where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed, only, are permitted .....	"	250	0 7 6
4	Excavation in hard rock, where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed, only, are permitted .....	"	1,000	0 6 6
5	Filling in over and at sides of pipes, drains, main and branch storm-water channels, in open cuttings, &c., including all quarry filling and sand filling where ordered, as specified in clauses 4, 5, 6, 8, 9, and 10 .....	"	9,000	0 1 0
6	Removal of surplus materials to such places as may be directed, as specified in clause 7 .....	"	8,300	0 0 9
7	Sandstone concrete in any situation, as specified in clause 11 .....	"	6,800	1 8 0
8	Cement coating in any situation, as specified in clause 12 .....	square yard	20,900	0 2 3
9	Brickwork in cement in 4½-in. lining to invert of storm-water channel, as specified in clauses 2 and 13 .....	cubic yard	60	2 10 0
	Providing, laying, and jointing glazed stoneware plain pipes, junctions, and bends, in trenches, including providing and fixing discs, as specified in clause 14:—			
10	24 in. internal diameter .....	lineal foot	280	0 12 6
11	18 in. " .....	"	120	0 6 0
12	12 in. " .....	"	10	0 3 0
13	6 in. diameter and smaller .....	"	600	0 1 0
14	Receiving, placing, building in, fixing and jointing any metal-work, as cast-iron frame and gully grating supplied by Government, at the site of the works, as specified in clauses 264 and 265 of the schedule to specification .....	cwt.	7.5	0 4 0
15	Providing, dressing, and setting in cement mortar, freestone curbing, as shown, and as specified in clause 188 of the schedule to specification .....	cubic foot	2	0 4 0
16	Providing, dressing, and setting squared freestone pitching and channelling, as shown, and as specified in clause 187 of the schedule to specification .....	square yard	1.5	0 8 0
17	Special bluestone concrete in any situation, as specified in clause 141 of the schedule to specification .....	cubic yard	Rate only	3 0 0
18	Permanent puddle .....	"	"	0 10 0
19	Bluestone metal, 1½-in. gauge, stacked .....	"	"	0 13 0
20	Bluestone metal, 2½-in. gauge, stacked .....	"	"	0 12 0
21	Sand, stacked .....	"	"	0 8 0
22	Oregon timber .....	cubic foot	"	0 2 0
23	Wrought-iron in bolts, screws, nails, spikes, and straps .....	lb	"	0 0 4
24	Portland cement .....	cask	"	0 13 0
25	Artisan or mechanic .....	day	"	0 11 0
26	Skilled labourer .....	"	"	0 10 0
27	Ordinary labourer .....	"	"	0 8 0
28	Cart, horse, and driver .....	"	"	0 11 0
29	One additional horse .....	"	"	0 5 6

The quantities are not guaranteed as correct, and are merely for the guidance of tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 25, 26, 27, 28, and 29 are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer-dams, fluming; temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads, crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads and other surfaces, &c., and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

## No. 9.—PHILLIPS, RHODES, AND BROUGHTON'S TENDER.

## TENDER FORM.

In pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of Johnstone's Creek Stormwater Channel from Parramatta Road to about 10 chains north of the Balmain Tramline (Contract No. 118), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by us, at 5 per cent. below the prices affixed to each item in the schedule of quantities and prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates quoted above, or, if not in schedule, at a price to be agreed upon at the time; and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and we enclose herewith our cheque for the sum of £144 as a preliminary deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said tender is opened withdraw the same, or if, in the event of this tender being accepted, we fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board Regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 24th day of April, 1895.

T. S. PHILLIPS,  
B. RHODES,  
A. BROUGHTON,  
335A, George-street, City.

## TENDER BOARD REGULATIONS.

No tender shall be received after 11 a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive...	...	...	...	...	...	...	...	...	...	£5 0 0
For amounts exceeding £500 and not exceeding £1,000...	...	...	...	...	...	...	...	...	...	£10 0 0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

CONTRACT

CONTRACT No. 118.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.
	Excavation in open trenches, in more or less hard materials, and in hard rock for main storm-water channel and branches, including removing any pipes, concrete, brickwork, woodwork, and drains, &c., met with, as specified in clauses 3, 6, 8, 9, and 10 :—			£ s. d.
1	Excavation in surface soil, mud, sand, clay, ballast, soft rock, only .....	cubic yard	15,800	0 2 0
2	Excavation in hard rock, where guttering and gadding only is permitted .....	"	250	0 8 6
3	Excavation in hard rock, where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed, only, are permitted .....	"	250	0 7 6
4	Excavation in hard rock, where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed, only, are permitted .....	"	1,000	0 6 6
5	Filling in over and at sides of pipes, drains, main and branch storm-water channels, in open cuttings, &c., including all quarry filling and sand filling where ordered, as specified in clauses 4, 5, 6, 8, 9, and 10 .....	"	9,000	0 1 0
6	Removal of surplus materials to such places as may be directed, as specified in clause 7 .....	"	8,300	0 0 9
7	Sandstone concrete in any situation, as specified in clause 11.....	"	6,800	1 8 0
8	Cement coating in any situation, as specified in clause 12 .....	square yard	20,900	0 2 3
9	Brickwork in cement in 4½-in. lining to invert of storm-water channel, as specified in clauses 2 and 13 .....	cubic yard	60	2 10 0
	Providing, laying, and jointing glazed stoneware plain pipes, junctions, and bends, in trenches, including providing and fixing discs, as specified in clause 14 :—			
10	24 in. internal diameter .....	lineal foot	280	0 12 6
11	18 in. " .....	"	120	0 6 0
12	12 in. " .....	"	10	0 3 0
13	6 in. diameter and smaller .....	"	600	0 1 0
14	Receiving, placing, building in, fixing and jointing any metal-work, as cast-iron frame and gully grating supplied by Government, at the site of the works, as specified in clauses 264 and 265 of the schedule to specification .....	cwt.	7.5	0 4 0
15	Providing, dressing, and setting in cement mortar, freestone curbing, as shown, and as specified in clause 188 of the schedule to specification .....	cubic foot	2	0 4 0
16	Providing, dressing, and setting squared freestone pitching and channelling, as shown, and as specified in clause 187 of the schedule to specification .....	square yard	1.5	0 8 0
17	Special bluestone concrete in any situation, as specified in clause 141 of the schedule to specification .....	cubic yard	Rate only	3 0 0
18	Permanent puddle.....	"	"	0 10 0
19	Bluestone metal, 1½-in. gauge, stacked .....	"	"	0 13 0
20	Bluestone metal, 2½-in. gauge, stacked .....	"	"	0 12 0
21	Sand, stacked .....	"	"	0 8 0
22	Oregon timber .....	cubic foot	"	0 2 0
23	Wrought-iron in bolts, screws, nails, spikes, and straps .....	lb	"	0 0 4
24	Portland cement .....	cask	"	0 13 0
25	Artisan or mechanic .....	day	"	0 11 0
26	Skilled labourer .....	"	"	0 10 0
27	Ordinary labourer .....	"	"	0 8 0
28	Cart, horse, and driver .....	"	"	0 11 0
29	One additional horse .....	"	"	0 5 6

The quantities are not guaranteed as correct, and are merely for the guidance of tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 25, 26, 27, 28, and 29 are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer-dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads, crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads and other surfaces, &c., and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

## No. 10.—R. &amp; S. BUTCHER'S TENDER.

## TENDER FORM.

In pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of Johnstone's Creek Stormwater Channel from Parramatta Road to about 10 chains north of the Balmain Tramline (Contract No. 118), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by us, at 5 per cent. above the prices affixed to each item in the schedule of quantities and prices annexed hereto; and to complete the same within eighteen months from the date of the acceptance of this tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates quoted above, or, if not in schedule, at a price to be agreed upon at the time; and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works, a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and we enclose herewith our cheque for the sum of £150 as a preliminary deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said tender is opened withdraw the same, or if, in the event of this tender being accepted, we fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board Regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 24th day of April, 1895.

R. & S. BUTCHER,  
Holtermann-street, North Sydney.

## TENDER BOARD REGULATIONS.

No tender shall be received after eleven a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive ... ..	£5 0 0
For amounts exceeding £500 and not exceeding £1,000...	£10 0 0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

CONTRACT

CONTRACT No. 118.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.
	Excavation in open trenches, in more or less hard materials, and in hard rock for main storm-water channel and branches, including removing any pipes, concrete, brickwork, woodwork, and drains, &c., met with, as specified in clauses 3, 6, 8, 9, and 10:—			£ s. d.
1	Excavation in surface soil, mud, sand, clay, ballast, soft rock, only .....	cubic yard	15,800	0 2 0
2	Excavation in hard rock, where guttering and gadding only is permitted .....	"	250	0 8 6
3	Excavation in hard rock, where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed, only, are permitted	"	250	0 7 6
4	Excavation in hard rock, where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed, only, are permitted	"	1,000	0 6 6
5	Filling in over and at sides of pipes, drains, main and branch storm-water channels, in open cuttings, &c., including all quarry filling and sand filling where ordered, as specified in clauses 4, 5, 6, 8, 9, and 10 .....	"	9,000	0 1 0
6	Removal of surplus materials to such places as may be directed, as specified in clause 7 .....	"	8,300	0 0 9
7	Sandstone concrete in any situation, as specified in clause 11.....	"	6,800	1 8 0
8	Cement coating in any situation, as specified in clause 12 .....	square yard	20,900	0 2 3
9	Brickwork in cement in 4½-in. lining to invert of storm-water channel, as specified in clauses 2 and 13 .....	cubic yard	60	2 10 0
	Providing, laying, and jointing glazed stoneware plain pipes, junctions, and bends, in trenches, including providing and fixing discs, as specified in clause 14:—			
10	24 in. internal diameter .....	lineal foot	280	0 12 6
11	18 in. " .....	"	120	0 6 0
12	12 in. " .....	"	10	0 3 0
13	6 in. diameter and smaller .....	"	600	0 1 0
14	Receiving, placing, building in, fixing and jointing any metal-work, as cast-iron frame and gully grating supplied by Government, at the site of the works, as specified in clauses 264 and 265 of the schedule to specification .....	cwt.	75	0 4 0
15	Providing, dressing, and setting in cement mortar, freestone curbing, as shown, and as specified in clause 188 of the schedule to specification .....	cubic foot	2	0 4 0
16	Providing, dressing, and setting squared freestone pitching and channelling, as shown, and as specified in clause 187 of the schedule to specification .....	square yard	15	0 8 0
17	Special bluestone concrete in any situation, as specified in clause 141 of the schedule to specification .....	cubic yard	Rate only	3 0 0
18	Permanent puddle.....	"	"	0 10 0
19	Bluestone metal, 1½-in. gauge, stacked .....	"	"	0 13 0
20	Bluestone metal, 2½-in. gauge, stacked .....	"	"	0 12 0
21	Sand, stacked .....	"	"	0 8 0
22	Oregon timber .....	cubic foot	"	0 2 0
23	Wrought-iron in bolts, screws, nails, spikes, and straps .....	lb	"	0 0 4
24	Portland cement .....	cask	"	0 13 0
25	Artisan or mechanic .....	day	"	0 11 0
26	Skilled labourer .....	"	"	0 10 0
27	Ordinary labourer .....	"	"	0 8 0
28	Cart, horse, and driver .....	"	"	0 11 0
29	One additional horse .....	"	"	0 5 6

The quantities are not guaranteed as correct, and are merely for the guidance of tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 25, 26, 27, 28, and 29 are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer-dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads, crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads and other surfaces, &c., and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

## No. 11.—SMITH AND COCHRAN'S TENDER.

## TENDER FORM.

IN pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of Johnstone's Creek Stormwater Channel from Parramatta Road to about 10 chains north of the Balmain Tramline (Contract No. 118), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by us, at 5 per cent. under the prices affixed to each item in the schedule of quantities and prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates quoted above, or, if not in schedule, at a price to be agreed upon at the time; and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and we enclose herewith our cheque for the sum of £144 as a preliminary deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said tender is opened withdraw the same, or if, in the event of this tender being accepted, we fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board Regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 23rd day of April, 1895.

Witness,—W. H. TERRY.

SAMUEL SMITH,

JOHN PTK. COCHRAN,

Trades Hall, Dixon-street, Sydney

(Sydney District Council, A.L.F. Co-operative Association).

## TENDER BOARD REGULATIONS.

No tender shall be received after 11 a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz:—

For amounts up to £500 inclusive...	£5	0	0
For amounts exceeding £500 and not exceeding £1,000...	£10	0	0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

CONTRACT

## CONTRACT No. 118.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.
	Excavation in open trenches, in more or less hard materials, and in hard rock for main storm-water channel and branches, including removing any pipes, concrete, brickwork, woodwork, and drains, &c., met with, as specified in clauses 3, 6, 8, 9, and 10 :—			£ s. d.
1	Excavation in surface soil, mud, sand, clay, ballast, soft rock, only .....	cubic yard	15,800	0 2 0
2	Excavation in hard rock, where guttering and gadding only is permitted .....	"	250	0 8 6
3	Excavation in hard rock, where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed, only, are permitted .....	"	250	0 7 6
4	Excavation in hard rock, where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed, only, are permitted .....	"	1,000	0 6 6
5	Filling in over and at sides of pipes, drains, main and branch storm-water channels, in open cuttings, &c., including all quarry filling and sand filling where ordered, as specified in clauses 4, 5, 6, 8, 9, and 10 .....	"	9,000	0 1 0
6	Removal of surplus materials to such places as may be directed, as specified in clause 7 .....	"	8,300	0 0 9
7	Sandstone concrete in any situation, as specified in clause 11.....	"	6,800	1 8 0
8	Cement coating in any situation, as specified in clause 12 .....	square yard	20,900	0 2 3
9	Brickwork in cement in 4½-in. lining to invert of storm-water channel, as specified in clauses 2 and 13 .....	cubic yard	60	2 10 0
	Providing, laying, and jointing glazed stoneware plain pipes, junctions, and bends, in trenches, including providing and fixing discs, as specified in clause 14 :—			
10	24 in. internal diameter .....	lineal foot	280	0 12 6
11	18 in. " .....	"	120	0 6 0
12	12 in. " .....	"	10	0 3 0
13	6 in. diameter and smaller .....	"	600	0 1 0
14	Receiving, placing, building in, fixing and jointing any metal-work, as cast-iron frame and gully grating supplied by Government, at the site of the works, as specified in clauses 264 and 265 of the schedule to specification .....	cwt.	7.5	0 4 0
15	Providing, dressing, and setting in cement mortar, freestone curbing, as shown, and as specified in clause 188 of the schedule to specification .....	cubic foot	2	0 4 0
16	Providing, dressing, and setting squared freestone pitching and channelling, as shown, and as specified in clause 187 of the schedule to specification .....	square yard	1.5	0 8 0
17	Special bluestone concrete in any situation, as specified in clause 141 of the schedule to specification .....	cubic yard	Rate only	3 0 0
18	Permanent puddle.....	"	"	0 10 0
19	Bluestone metal, 1½-in. gauge, stacked .....	"	"	0 13 0
20	Bluestone metal, 2½-in. gauge, stacked .....	"	"	0 12 0
21	Sand, stacked .....	"	"	0 8 0
22	Oregon timber .....	cubic foot	"	0 2 0
23	Wrought-iron in bolts, screws, nails, spikes, and straps .....	lb	"	0 0 4
24	Portland cement .....	cask	"	0 13 0
25	Artisan or mechanic .....	day	"	0 11 0
26	Skilled labourer .....	"	"	0 10 0
27	Ordinary labourer .....	"	"	0 8 0
28	Cart, horse, and driver .....	"	"	0 11 0
29	One additional horse .....	"	"	0 5 6

The quantities are not guaranteed as correct, and are merely for the guidance of tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 25, 26, 27, 28, and 29 are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer-dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads, crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads and other surfaces, &c., and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

## No. 12.—HUGH OWEN'S TENDER.

## TENDER FORM.

In pursuance of advertisement in the *Government Gazette*, I, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of Johnstone's Creek Stormwater Channel from Parramatta Road to about 10 chains north of the Balmain Tramline (Contract No. 118), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by me, at 3 per cent. under the prices affixed to each item in the schedule of quantities and prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this tender; and I do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates quoted above, or if not in Schedule, at a price to be agreed upon at the time; and I hereby undertake that I will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works, a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and I enclose herewith my cheque for the sum of £150 as a preliminary deposit; and I agree that such sum shall be absolutely forfeited if I at any time within thirty days after the said tender is opened withdraw the same, or if, in the event of this tender being accepted, I fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board Regulations, printed on the back hereof, and by which I agree to be bound.

Dated this 24th day of April, 1895.

Witness,—ROBERT AMOS.

HUGH OWEN,  
99, Elizabeth-street, Paddington.

## TENDER BOARD REGULATIONS.

No tender shall be received after eleven a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive ... ..	£5 0 0
For amounts exceeding £500 and not exceeding £1,000...	£10 0 0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

CONTRACT

CONTRACT No. 118.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.
	Excavation in open trenches, in more or less hard materials, and in hard rock for main storm-water channel and branches, including removing any pipes, concrete, brickwork, woodwork, and drains, &c., met with, as specified in clauses 3, 6, 8, 9, and 10:—			£ s. d.
1	Excavation in surface soil, mud, sand, clay, ballast, soft rock, only .....	cubic yard	15,800	0 2 0
2	Excavation in hard rock, where guttering and gadding only is permitted .....	"	250	0 8 6
3	Excavation in hard rock, where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed, only, are permitted .....	"	250	0 7 6
4	Excavation in hard rock, where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed, only, are permitted .....	"	1,000	0 6 6
5	Filling in over and at sides of pipes, drains, main and branch storm-water channels, in open cuttings, &c., including all quarry filling and sand filling where ordered, as specified in clauses 4, 5, 6, 8, 9, and 10 .....	"	9,000	0 1 0
6	Removal of surplus materials to such places as may be directed, as specified in clause 7 .....	"	8,300	0 0 9
7	Sandstone concrete in any situation, as specified in clause 11.....	"	6,800	1 8 0
8	Cement coating in any situation, as specified in clause 12 .....	square yard	20,900	0 2 3
9	Brickwork in cement in 4½-in. lining to invert of storm-water channel, as specified in clauses 2 and 13 .....	cubic yard	60	2 10 0
	Providing, laying, and jointing glazed stoneware plain pipes, junctions, and bends, in trenches, including providing and fixing discs, as specified in clause 14:—			
10	24 in. internal diameter .....	lineal foot	280	0 12 6
11	18 in. " .....	"	120	0 6 0
12	12 in. " .....	"	10	0 3 0
13	6 in. diameter and smaller .....	"	600	0 1 0
14	Receiving, placing, building in, fixing and jointing any metal-work, as cast-iron frame and gully grating supplied by Government, at the site of the works, as specified in clauses 264 and 265 of the schedule to specification .....	cwt.	7.5	0 4 0
15	Providing, dressing, and setting in cement mortar, freestone curbing, as shown, and as specified in clause 188 of the schedule to specification .....	cubic foot	2	0 4 0
16	Providing, dressing, and setting squared freestone pitching and channelling, as shown, and as specified in clause 187 of the schedule to specification .....	squareyard	1.5	0 8 0
17	Special bluestone concrete in any situation, as specified in clause 141 of the schedule to specification .....	cubic yard	Rate only	3 0 0
18	Permanent puddle.....	"	"	0 10 0
19	Bluestone metal, 1½-in. gauge, stacked .....	"	"	0 13 0
20	Bluestone metal, 2½-in. gauge, stacked .....	"	"	0 12 0
21	Sand, stacked .....	"	"	0 8 0
22	Oregon timber .....	cubic foot	"	0 2 0
23	Wrought-iron in bolts, screws, nails, spikes, and straps .....	lb	"	0 0 4
24	Portland cement .....	cask	"	0 13 0
25	Artisan or mechanic .....	day	"	0 11 0
26	Skilled labourer .....	"	"	0 10 0
27	Ordinary labourer .....	"	"	0 8 0
28	Cart, horse, and driver .....	"	"	0 11 0
29	One additional horse .....	"	"	0 5 6

The quantities are not guaranteed as correct, and are merely for the guidance of tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 25, 26, 27, 28, and 29 are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer-dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads, crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads and other surfaces, &c., and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

## No. 3.

The Principal Assistant Engineer for Country Towns Water Supply and Sewerage  
to The Engineer-in-Chief for Public Works.*Minute Paper.*

Department of Public Works, Engineer-in-Chief's Office, Sydney, 8 May, 1895.

*Subject* :—Johnstone's Creek Stormwater Channel, Contract No. 118.—Submitting Tenders.

In submitting the tenders for the construction of the Johnstone's Creek Stormwater Channel, I beg to point out that this is a case where, as the channel passes across the proposed reclamation, in accordance with the arrangement made at the time the metropolitan sewerage was taken over by Mr. Darley, the Engineer-in-Chief for Public Works, will supervise the construction. Mr. Darley is, I understand, to supervise the construction of all sewerage works in the metropolitan area, which will eventually be transferred to the Board, but that any works which will not be vested in the Board are to be carried out as usual by the Engineer-in-Chief for Public Works.

The portion of this channel from a short distance below Booth-street is on the reclaimed area, and would, therefore, be carried out by the Engineer-in-Chief for Public Works.

As to the portion above Booth-street, there has a difficulty arisen with the owners of the property signing the usual indemnity. Pending this question being settled, I propose that the work should be proceeded with below the Booth-street bridge, and that the tender should accordingly be accepted with the provision that the work above Booth-street shall only be carried out conditionally upon the necessary authority being obtained from the property owners.

The lowest tender is that of Messrs. Carter, Gummow, & Co., at 20½ per cent. below schedule rates, which I recommend should be accepted, and that in the acceptance it should be stipulated that the work is not to be proceeded with until the contractors receive written instructions to that effect.

J. DAVIS,

Principal Assistant Engineer for Country Towns

Engineer-in-Chief for Public Works.

Water Supply and Sewerage.

I recommend the acceptance of Carter, Gummow, & Co.'s tender at 20½ per cent. below schedule rates, on the above conditions.—ROBT. HICKSON, 8/5/95. Under Secretary for Public Works. For Board.—Jno. P., 8/5/95. The Secretary. Passed.—J.B., 10/5/95.

Submitted to the Board of Reference, May 10th, 1895. The Board concur in the recommendation of Mr Hickson to accept the tender of Messrs. Carter, Gummow, & Co., at 20½ per cent. below schedule rates, under the following special conditions, viz.:—That the work is not to be proceeded with until the contractors have received instructions to that effect.—F. HOLMES, Acting Secretary.

Submitted.—J.B., 14/5/95. Approved.—J. H. Y., 14/5/95. Accept, 14/5/95. What amount of security should be lodged in respect of the contract? Messrs. Carter, Gummow, & Co., Auditor-General, Mr. Norrie, 16/5/95.

## No. 4.

## The Under Secretary for Public Works to Messrs. Carter &amp; Co.

Sirs,—

Department of Public Works, Sydney, 16 May, 1895.

I have the honor, by direction of the Secretary for Public Works, to inform you that your tender, dated the 24th ultimo, is accepted for construction of the Johnstone's Creek Stormwater Channel, Contract No. 118, at 20½ per cent. below the rates set forth in the printed schedule of prices.

It is to be distinctly understood that the work is only to be proceeded with on the part from Booth-street towards the harbour when you have written instructions to proceed therewith.

The work is to be carried out in strict accordance with the several contract exhibits relating to this contract, and to be completed within 18 months from this date.

The security required on this contract will be a Fixed Deposit Receipt, in favour of the Secretary for Public Works, for the sum of £605.

I have to refer you to the Engineer-in-Chief for Public Works for further information, and to request that you will call upon the Officer-in-Charge of Bonds and Contracts, at this office, for the purpose of executing the necessary documents for the due observance of your contract.

I am, &amp;c.,

J. BARLING,

Under Secretary.

## No. 5.

## The Under Secretary for Public Works to Messrs. Carter &amp; Co.

Sir,

Public Works Department, Sydney, 3 June, 1895.

I have the honor, with respect to the acceptance of your tender for Contract No. 118, Sydney Sewerage Works, to remind you that the time limited by clause 29 of the general conditions relating to the contract for the receipt of the necessary cash deposit herein, viz., £605 expired on 30th May, last, and to inform you that if the same be not paid into my hands within seven days from the date hereof, the Minister for Public Works will exercise his rights under the contract.

You will understand that this letter is written entirely without prejudice.

I have, &amp;c.,

J. BARLING,

Under Secretary,

(Per J.P.)

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No. 6.  
Fixed Deposit Receipt.

(Due 6th June, 1896.)

BANK OF NEW ZEALAND.

Incorporated by Act of the General Assembly.

No. A22200.

*Deposit Receipt.*

Sydney, New South Wales, 6 June, 1895.

RECEIVED from the Under Secretary for Public Works, the sum of six hundred and five pounds as a fixed deposit, repayable at the end of twelve months, bearing interest for that period only at the rate of three and one-half per cent. per annum from the date hereof.

For the Bank of New Zealand—

R. H. RIGG, Asst. Manager,  
R. R. GILES, (for Accountant).

£605.

[Not transferable.]

When payment of the receipt is required, the receipt must be returned duly endorsed.

## No. 7.

## Contract of Agreement and Annexures.

*Minute Paper.*

Department of Public Works, Bonds and Contracts Branch, Sydney, 17 June, 1895.

*Subject* :—Johnstone's Creek Stormwater Channel, Contract No. 118.

THE agreement, heroin duly prepared, has been executed by the contractors Messrs. Carter, Gummow, & Co., and stamped, and might now be forwarded to the Engineer-in-Chief for Public Works.

The tender, and all other papers herein, are sent herewith.

HAROLD F. NORRIE,  
Officer-in-Charge.

Acct. to receive—Jno. P. 13/6/95.

## TENDER FORM.

IN pursuance of advertisement in the *Government Gazette*, I or we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of Johnstone's Creek Stormwater Channel from Parramatta Road to about 10 chains north of the Balmain Tramline (Contract No. 118), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by me or us, at per cent. under the prices affixed to each item in the schedule of quantities and prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this tender; and I or we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rates quoted above, or, if not in schedule, at a price to be agreed upon at the time; and I or we hereby undertake that I or we will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above-mentioned, and to provide the security required by clause 29 of the said general conditions; and I or we enclose herewith our or my cheque for the sum of £ as a preliminary deposit; and I or we agree that such sum shall be absolutely forfeited if I or we at any time within thirty days after the said tender is opened withdraw the same, or if, in the event of this tender being accepted, I or we fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board Regulations, printed on the back hereof, and by which I or we agree to be bound.

Dated this day of , 189 .

## TENDER BOARD REGULATIONS.

No tender shall be received after 11 a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive...	£5 0 0
For amounts exceeding £500 and not exceeding £1,000...	£10 0 0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

CONTRACT No. 118.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.
	Excavation in open trenches, in more or less hard materials, and in hard rock for main storm-water channel and branches, including removing any pipes, concrete, brickwork, woodwork, and drains, &c., met with, as specified in clauses 3, 6, 8, 9, and 10:—			£ s. d.
1	Excavation in surface soil, mud, sand, clay, ballast, soft rock, only .....	cubic yard	16,800	0 2 0
2	Excavation in hard rock, where guttering and gadding only is permitted .....	"	250	0 8 6
3	Excavation in hard rock, where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed, only, are permitted .....	"	250	0 7 6
4	Excavation in hard rock, where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed, only, are permitted .....	"	1,000	0 6 6
5	Filling in over and at sides of pipes, drains, main and branch storm-water channels, in open cuttings, &c., including all quarry filling and sand filling where ordered, as specified in clauses 4, 5, 6, 8, 9, and 10 .....	"	9,000	0 1 0
6	Removal of surplus materials to such places as may be directed, as specified in clause 7 .....	"	8,300	0 0 9
7	Sandstone concrete in any situation, as specified in clause 11 .....	"	6,800	1 8 0
8	Cement coating in any situation, as specified in clause 12 .....	square yard	20,900	0 2 3
9	Brickwork in cement in 4½-in. lining to invert of storm-water channel, as specified in clauses 2 and 13 .....	cubic yard	60	2 10 0
	Providing, laying, and jointing glazed stoneware plain pipes, junctions, and bends, in trenches, including providing and fixing discs, as specified in clause 14:—			
10	24 in. internal diameter .....	lineal foot	280	0 12 6
11	18 in. " .....	"	120	0 6 0
12	12 in. " .....	"	10	0 8 0
13	6 in. diameter and smaller .....	"	600	0 1 0
14	Receiving, placing, building in, fixing and jointing any metal-work, as cast-iron frame and gully grating supplied by Government, at the site of the works, as specified in clauses 264 and 265 of the schedule to specification .....	cwt.	75	0 4 0
15	Providing, dressing, and setting in cement mortar, freestone curbing, as shown, and as specified in clause 188 of the schedule to specification .....	cubic foot	2	0 4 0
16	Providing, dressing, and setting squared freestone pitching and channelling, as shown, and as specified in clause 187 of the schedule to specification .....	square yard	15	0 8 0
17	Special bluestone concrete in any situation, as specified in clause 141 of the schedule to specification .....	cubic yard	Rate only	3 0 0
18	Permanent puddle .....	"	"	0 10 0
19	Bluestone metal, 1½-in. gauge, stacked .....	"	"	0 13 0
20	Bluestone metal, 2½-in. gauge, stacked .....	"	"	0 12 0
21	Sand, stacked .....	"	"	0 8 0
22	Oregon timber .....	cubic foot	"	0 2 0
23	Wrought-iron in bolts, screws, nails, spikes, and straps .....	lb	"	0 0 4
24	Portland cement .....	cask	"	0 13 0
25	Artisan or mechanic .....	day	"	0 11 0
26	Skilled labourer .....	"	"	0 10 0
27	Ordinary labourer .....	"	"	0 8 0
28	Cart, horse, and driver .....	"	"	0 11 0
29	One additional horse .....	"	"	0 5 6

The quantities are not guaranteed as correct, and are merely for the guidance of tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 25, 26, 27, 28, and 29 are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer-dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads, crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads and other surfaces, &c., and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

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*Minute Paper.*

*Subject:—Johnstone's Creek Storm-water Channel—No. 118.*

Department of Public Works, Bonds and Contracts Branch, Sydney, 17 May, 1895.

IN order to enable me to prepare the necessary bond herein, I should be furnished with the plans, specification, and general conditions at your earliest convenience.

B.C., The Engineer-in-Chief for Public Works.

H. F. NORRIS,  
Officer-in-charge.

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The necessary plans, specifications, and conditions herewith.—J. DAVIS, 20/5/95. B.C., The Officer-in-charge, Bonds and Contracts.

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AGREEMENT made this 15th day of June, in the year of our Lord 1895, between John Carter, Frank Moorhouse Gummow, and David Graham Snodgrass, of North Sydney, in the Colony of New South Wales, contractors, carrying on business together under the name, style, or firm of "Carter, Gummow, & Co." (and hereinafter styled or referred to as "the contractors"), of the one part, and Her Most Gracious Majesty Queen Victoria of the other part.

WHEREAS the Minister for Public Works of the said Colony (hereinafter called the said Minister) recently called for tenders, by notice published in the *Government Gazette* (of which notice a copy is hereunto annexed, marked "A"), for the construction of the Johnstone's Creek Storm-water Channel, from Parramatta Road to 10½ chains beyond Balmain Tram-line, this present contract being called or known as Contract No. 118, Sydney Sewerage Works, in the said Colony, as shown in the plans relating thereto in the office of the Engineer-in-Chief for Public Works, and marked "No. 1" to "No. 8," both inclusive, and according to the specification and schedule to specification, and under and subject to the special condition and general conditions, which are hereunto annexed, and marked respectively "B," "C," "D," and "E." And whereas the contractors made the tender hereunto annexed, marked "F," to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of the said storm-water channel, agreeably to the said plans, specification, schedule to specification, special condition, and general conditions, and at 20½ per cent. below the prices affixed to each item in the schedule of prices annexed thereto, and marked "G," and within the time in the said tender mentioned, any additions or deductions to be paid or allowed for at the said rate, or, if not in schedule, at a price to be agreed upon at the time. And whereas the said tender was accepted by the said Minister, with the reservation therein set, and such acceptance was duly notified to the contractors on the 16th day of May, now last past, and has been assented to by them, as they hereby severally admit and acknowledge (a copy of the said acceptance is hereunto annexed, and marked "H"). And whereas the contractors have deposited the sum of £605 in the Bank of New Zealand, at Sydney, in the said Colony, in the name of the Under Secretary for Public Works, at interest upon fixed deposit, No. 422,200, dated the 6th day of June, 1895, for twelve months, and have handed the receipt for same to the said Minister to be held by him as such Minister or the Minister for Public Works for the time being of the said Colony, on behalf of Her Majesty, as security for the due performance of this contract, and all other matters and things herein contained, and which, on the part of the contractors, are to be done and performed. Now this agreement witnesseth that, in consideration of the premises, the contractors do hereby, for themselves, their heirs, executors, and administrators, covenant with and to Her said Majesty the Queen, Her heirs and successors: That they, the contractors, shall and will perform the various works required in and about the full and proper construction, erection, and completion of the said storm-water channel in accordance in all things with the said plans, specification, schedule to specification, special condition, and general conditions, within the time and at and after the rate of 20½ per cent. below the prices affixed to each item in the said schedule of prices as in the said tenders mentioned. It being also hereby declared that any additions to or deductions from the said works mentioned or set out in the said specification or schedule to specification or shown in the said plans, are to be paid or allowed for, as the case may be, at and according to the said rate, or, if not in schedule, at a price to be agreed upon at the time. And it is hereby agreed and declared between and by the said parties hereto that the said copy notice, specification, schedule to specification,

specification, special condition, general conditions, tender, schedule of prices, and copy acceptance of tender, marked as aforesaid, all being hereunto annexed as aforesaid, shall be read as incorporated in and forming part and parcel of these presents in like manner as if the same had been herein written and set forth at length, and that the said several annexures, the said plans, and these presents shall together be taken to be the contract between the said parties in respect of the said works.

In witness whereof, the said parties to these presents have hereunto set their hands and seals the day and year first before written.

Signed, sealed, and delivered by the said John } JOHN CARTER.  
Carter, in the presence of,— }  
HAROLD F. NORRIE, J.P.

Signed, sealed, and delivered by the said Frank } F. M. GUMMOW.  
Moorhouse Gummow, in the presence of,— }  
HAROLD F. NORRIE.

Signed, sealed, and delivered by the said David } D. G. SNODGRASS.  
Graham Snodgrass, in the presence of,— }  
HAROLD F. NORRIE.

“A.”

#### TENDERS FOR PUBLIC WORKS.

Department of Public Works, Sydney, 5 April, 1895.

TENDERS will be received at this office for the public works specified in the Schedule hereunder up to 11 o'clock a.m. of the various dates set forth in the second column.

All envelopes containing tenders must be addressed to the President of the Tender Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Tenderers may be in attendance when the tenders are opened, and the name of the lowest tenderer will be announced, if possible, before the duties of the Board have terminated.

The following conditions will have to be strictly complied with, otherwise the tenders will not be taken into consideration :—

1st.—Each tender must state the time within which it is proposed to complete the work, and in every instance the full Christian and surname or names of persons tendering.

2nd.—Every tender must contain an undertaking on the part of the person tendering to make the cash deposit provided for in the general conditions and to be answerable for the due performance of the contract in the event of the tender being accepted; and undertaking, in that event, to execute and deliver to the Minister for Public Works a valid legal contract with Her Majesty the Queen for securing such performance.

3rd.—No tender will be considered which shall have been received after 11 o'clock a.m. on the day upon which tenders are to be received, unless there are circumstances which, in the opinion of the Board, render it desirable that it should be received.

4th.—Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive ... ..	£5	0	0
For amounts exceeding £500 and not exceeding £1,000 ... ..	10	0	0

For all sums over £1,000, one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the manager of the bank upon which it is drawn, or a bank draft.

5th.—Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

6th.—In the event of any tenderer failing to take up his tender, complete the contract agreement, and proceed with the contract within the time specified, or withdrawing his tender within thirty days after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account of such contract shall be absolutely forfeited to the Crown, and shall be paid to the credit of the Consolidated Revenue of the Colony.

7th.—Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted, but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

8th.—In the event of any contract being tendered for at a schedule of rates, the approximate quantities as given of each item must be worked out and a total sum shown.

All deposits, with the exception of that of the lowest tenderer, when practicable, will be returned to the persons entitled thereto immediately after the Board shall have adjourned; and the deposit made by the successful tenderer shall be returned to him on executing the contract agreement for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender will not be returnable until the service is satisfactorily completed.

It is to be understood that the Government does not bind itself to accept the lowest or any tender; and no tender will be accepted until the head of the branch under whose directions the work is to be carried out has reported upon the whole of the tenders received.

J. H. YOUNG.

Roads.

## Roads.

Description of Work or Supplies to be Tendered for.	Dates up to which Tenders will be received.	Where Plan, Specification, and form of Tender may be seen.	Remarks.
* * * * Construction of the Johnstone's Creek Storm-water Channel, from Parramatta Road to 10½ chains beyond Balmain Tram Line. Contract No. 118, Sydney Sewerage Works.	* 24 April, 1895	* * * * Office of the Commissioner and Engineer-in-Chief for Roads, Bridges, and Sewerage, Sydney.	* * .
* * * *	*	* * * *	* *

This is the copy notice marked "A," referred to in our annexed agreement with Her Majesty the Queen, dated the 15th day of June, A.D. 1895.

Witness,—HAROLD F. NORRIE.

JOHN CARTER.  
F. M. GUMMOW.  
D. G. SNODGRASS.

## "B."

CONTRACT No. 118.—Sydney and Suburbs Storm-water Drainage—Johnstone's Creek Storm-water Channel, from south side of Parramatta Road northwards to about 10·50 chains north of centre line of Balmain tramline.

## SPECIFICATION.

1. *Description of Contract.*

THIS contract comprises the provision by the contractor of all labour, machinery, tools, plant, and every requisite for the construction of Johnstone's Creek Storm-water Channel, as described in detail in the specification, schedule to specification, special condition, and general conditions, and as shown on the following drawings:—

- No. 1.—General plan of storm-water channel and branches.
- No. 2.—Longitudinal sections of main channel and branches
- No. 3.—General cross sections of main channel and branches.
- No. 4.—Enlarged details of changes of size of channel, cross sections, &c.
- No. 5.—Details of Lillie Bridge junction and of cross sections of channel.
- No. 6.—Details of Orphan School branch junction, pipe-inlets, and cross sections of channel.
- No. 7.—Details of junctions, inlets, gully-shafts, pipe-sewers, &c.
- No. 8.—Details of junctions and cross sections of channel.

2. *Materials.*

The materials are to be of the description and quality specified in clauses 7 to 22, and 36 to 39 of the schedule to specification.

3. *Excavation.*

The excavation to be executed in accordance with clauses 41, 42, 44, 45, 47 to 60, 62, 63, 66, 67, 69, 73 to 77, 80 and 83 to 87 of the schedule to specification.

The schedule prices for excavation shall include the removal of any pipes, concrete, brickwork, woodwork, &c., thereon, and also the cost of the works comprised in clauses 77, 86, and 107, of the schedule to specification, and clauses 6 and 9.

4. *Filling.*

The filling is to be executed in accordance with clauses 86, 87, 88 to 90, 92 to 97, and 101 to 107 of the schedule to specification.

The schedule price of one (1) cubic yard of filling is to apply to filling in any situation in the construction of the works, as specified in the various clauses herein quoted.

5. *Restoring of Road and other Surfaces.*

All road, path, and other surfaces which have been broken up or injured during the term of the contract, to be restored to the same condition as they were before the commencement of the works, as specified in clauses 101 to 107 of the schedule to specification.

6. *Restoring Buildings, Walls, Fences, &c.*

All fences and works of any description met with on the site of the works, which the Engineer considers necessary to have taken up and removed, are to be carefully taken up, replaced, and re-erected at such places, along such lines, and at such times, as may be ordered, and to be left at completion of works in the same order and condition as they were before the commencement of the works, at contractor's cost, as specified in clause 106 of the schedule to specification.

### 7. *Surplus Materials.*

All surplus materials to be dealt with as specified in clauses 98, 99, and 100 of the schedule to specification, except that in this contract all surplus materials to be led to spoil at one price per cubic yard.

### 8. *Temporary Bridges, &c.*

Contractor to provide and maintain temporary bridges, hoarding, fences, roads, &c., as specified in clause 86 of the schedule to specification.

### 9. *Carpenters' Work.*

The carpenters' work to be executed as specified in clause 127 of the schedule to specification and clause 15.

Where the channel passes underneath the Booth-street road bridge, between two piers, the contractor to adopt such precautions as the engineer may deem necessary for the safety of the existing bridge and preservation of the traffic over said bridge, by underpinning, bracing, and placing piles of piers on sills if directed on completion of channel, and fitting and fixing said piers in the same manner as they were before the commencement of the works. The cost of underpinning, providing sills, braces, and all labour and materials, to be covered by and included in the schedule rates of excavation. The contractor will be held wholly responsible for all stoppages of traffic, delays, accidents, &c., which he or his men may cause during the execution of the works at this bridge.

### 10. *Sewers, Storm-water Channels, &c.*

The various works are to be executed in conformity with clauses 132 to 139, of the schedule to specification. Contractor to provide and construct all pipe junctions for gullies, house, and other drains, as shown, and as shall be directed.

The storm-water channel is to be an open concrete channel throughout, as shown on drawings, with eight changes of sizes of channels, scour channel in centre where shown, and while passing underneath the Parramatta Road bridge, the existing concrete invert to be carefully taken up and removed as specified, and the channel to be lowered to the new gradient, and to the exact cross section shown, by means of picking and gadding only.

The existing concrete invert of the adjoining 7.24 chains of channel to be carefully taken up and removed as specified, and the channel invert for a length of 33 feet, adjoining the northern side of existing stone-bridge, to be carefully lowered to the new gradient, and to the exact cross section by means of picking and gadding only.

Open concrete junctions to be constructed at junctions of main-channel with Gehring's branch, with Orphan School branch, with Taylor-street branch (a pipe drain), and open concrete junction with branch channel leading to end of existing Lillie Bridge grounds covered drain.

The open branch concrete and pipe channels, connecting these junctions with the existing Gehring's Creek drain, Orphan School drain, Taylor-street drain, and the drain from the Lillie Bridge grounds, to be constructed as shown.

If during the progress of the contract, the engineer may deem it necessary to omit or alter any of the sewers, junctions, channels, inlets, or other works shown or described in the clauses herein quoted, then the contractor shall be bound to omit altogether or alter, as may be ordered at the time, any sewers, junctions, channels, inlets, &c., as the case may be, and such omission or alteration shall not entitle him to any claim for loss, damage, or compensation. He shall be only entitled to be paid for the work actually ordered and carried out at the various schedule rates referring to such work.

### 11. *Concrete Work.*

The concrete to be used in the construction of these works to be sandstone concrete of the quality specified in clause 142 of the schedule to specification. The concrete work to be executed as specified in clauses 143, 146 to 149, 152 to 157, 159, 165 to 167, 170 and 171 of the schedule to specification.

### 12. *Cement Coating.*

The cement coating to be executed as specified in clauses 180 and 181 of the schedule to specification, and to be in the proportion of one of cement to two of sand.

### 13. *Brickwork.*

The brickwork is to be executed as specified in clauses 11, 12, 172, 177, and 179, of the schedule to specification. The invert of storm-water channel from the north side of Parramatta Road bridge northwards, for a length of 7.25 chains, to be lined with brick on edge flooring, to be executed as shown, and as herein specified.

### 14. *Pipe-laying and Jointing.*

The providing, laying, and jointing of glazed stoneware pipes to be executed as specified in clauses 13, 14, 137, 170, 189 to 194, of the schedule to specification.

### 15. *Tarring.*

All sawn, adzed, and round hardwood in tenons, mortise holes, braces, uprights of piers, and wall-plates of bridge in Booth-street, to receive two coats of tar, where ordered, as specified in clauses 273 and 274 of the schedule to specification.

### 16. *Schedule to Specification, Special Condition, and Conditions of Contract.*

Notwithstanding that certain clauses of the schedule to specification are specially enumerated, it is to be understood that the schedule to specification, special condition, and the general conditions attached to the specification shall be held binding in all matters relating to this contract, as far as the Engineer may deem the same applicable.

17. *Note.*

Parties tendering are particularly requested to observe that they must name only one rate of percentage above or below all the prices in schedule, and not one rate of percentage upon certain items, and another rate or rates upon others.

This is the specification marked "B," referred to in our annexed Agreement with Her Majesty the Queen, dated the 15th day of June, A.D. 1895.

Witness,—HAROLD F. NORRIE.

JOHN CARTER.  
F. M. GUMMOW.  
D. G. SNODGRASS.

## "C."

## SCHEDULE TO SPECIFICATION.

*Land required for works.*

1. Access to the site of the works (other than by public roads) to be had by means of such land Access to works. the Engineer may deem necessary.
2. For the purpose of sinking, working, and building shafts on lines of streets, and on private Surface area for shafts. ground, the contractor to have temporary possession of an area of 24 feet by 17 feet at the site of each shaft, unless otherwise directed.
3. For the purpose of excavating open trenches, and for constructing the various works therein, Surface area for open trench. and raising embankments over same, or where ordered, contractor to have temporary possession of such land, of the exact widths and lengths which, in the opinion of the Engineer, is required for these works.
4. The land herein referred to to be set out by the Engineer upon receiving written application Application for land. from the contractor. Such application must be made four weeks prior to the time the said land is required.

*Setting-out work.*

5. The centre lines of sewers, &c., are shown on general plans by full lines, which will be marked on the surface of the ground, the same as on plans, as the works proceed.
6. Contractor shall at his own cost and expense at any time—by day or by night, either on working days or on Sundays or holidays—render all such assistance and supply all such labour, plant, and lighting as the Engineer or Superintending Officer may require, to set out, to check such setting-out, or to inspect any portion of the works, which must for that purpose be left clear and free from any obstruction or impediment. During and for the performance of those operations, contractors shall be obliged to suspend any or all of his work, if required to do so by the Superintending Officer, and without having any claim for loss or damage on account of such temporary suspension.

*Materials.*

7. All materials supplied by the contractor are to be of the best quality and description of their Samples. respective kinds. Samples of each kind to be submitted for the approval of the Engineer, and retained in office; and, on approval having been obtained, they are to be delivered on the works ready for use, as per sample.
8. The contractor shall inform the Engineer of the sources whence the various materials are supplied, Source of supply and manufacture. or of the places of their manufacture, and afford him every facility to inspect their supply or manufacture at any stage of the same.
9. Due notice shall be given by contractor to the Superintending Officer when any material is Notice of delivery. brought on the ground, all of which must be neatly stacked in regular heaps, submitted for approval, and approved of in writing by the Superintending Officer, before it may be used in the works. None but that so approved shall be used.
10. The contractor to provide approved gauge-boxes or scales for measuring or weighing all materials Gauging and weighing. supplied.
11. Bricks to be double-pressed, of well-mixed material of approved quality and uniform fineness; Bricks. to be new, sound, hard, and well-burnt kiln bricks, free from cracks and all other defects, equal in every respect to the sample brick to be seen at the Engineer's office. They are to have sharp arrises, and to be of approved dimensions, form, and colour, and, when ordered, to be specially moulded. Radiating and specially-formed bricks to be provided for all segmental shafts. All bricks to be subjected to the following tests:—
  - (a) *Tensile strength.*—The tensile strength to be tested, in the departmental testing machine, by Tests. laying the brick horizontally on its base of 3 inches, between supports 7 inches apart, and the strain applied across the centre of the brick. An average breaking strain of twelve bricks to be taken, which must not be less than 8,000 lb.
  - (b) *Porosity.*—Bricks immersed in water for twenty-four hours must not increase in weight more than 3 per cent.

Should the twelve bricks fracture under the foregoing average strain, or prove more porous than 3 per cent, then the Engineer may reject the whole stack of bricks from which the twelve bricks were taken.

12. In the event of the contractor delivering bricks of a mixed description and quality, the Defective bricks. Superintending Officer shall have the power to require of the contractor to have those bricks which, in his opinion, are suitable for the works, picked out and stacked where directed, and those unsuitable removed from the site of the contract; and in the event of the contractor refusing or failing to comply with such request within twelve hours from the time it has been made, then in all such cases the Superintending Officer shall have the power of rejecting the whole of the bricks so delivered by the contractor.

13. Stoneware pipes to be of well-ground and mixed material, of tough, tenacious, impervious Stoneware pipes. quality, well-burnt, sound, hard, uniform in thickness, true in section, straight longitudinally, uniformly glazed both inside and outside, free from fire and other cracks, flaws, and ash-holes, the collar perfectly joined to the barrel, and in every way equal to sample pipe to be seen at the Engineer's office.

Pipes

## Dimensions.

Pipes to be of the following thicknesses and depth of collars, namely :—

Pipes, inside diameter, 9 inches ; thickness,  $\frac{1}{16}$  inch ; depth of collar, 2 inches.

"	"	12	"	"	1	"	"	2	"
"	"	15	"	"	$1\frac{1}{4}$	"	"	$2\frac{1}{4}$	"
"	"	16	"	"	$1\frac{3}{8}$	"	"	$2\frac{1}{2}$	"
"	"	18	"	"	$1\frac{1}{2}$	"	"	$2\frac{3}{4}$	"
"	"	21	"	"	$1\frac{3}{4}$	"	"	2	"
"	"	24	"	"	$1\frac{7}{8}$	"	"	$2\frac{3}{4}$	"

## Tests.

All parcels of pipes used in these works will be tested and submitted to the following crushin strains, as applied in the departmental testing machine :—

24-inch diameter pipe,	165 lb. per square inch of bearing surface.
21 " "	165 " " "
18 " "	142 " " "
16 " "	142 " " "
12 " "	142 " " "
9 " "	142 " " "

If the Engineer deems it necessary, the pipes will also be tested for porosity. Should the pipes fracture under the foregoing strains, or not prove impervious to water, then the Engineer may reject the whole parcel from which the pipes were taken.

## Defective pipes, &amp;c.

14. In the event of the contractor delivering quantities of pipes, bends, and junctions of a mixed description and quality, the Superintending Officer shall have the power to require of the contractor to pick out and stack, where directed, those pipes, bends, and junctions which, in his opinion, are suitable for the works, and those unsuitable removed from the site of the contract; and in the event of the contractor refusing or failing to comply with such request within twelve hours from the time it has been made, then in all such cases the Superintending Officer shall have the power of rejecting the whole of the pipes, bends, and junctions so delivered by the contractor.

## Sandstone.

15. All sandstone used in the construction of these works to be hard, sound, and solid, of the best description, free from all defects, and as per sample to be seen in the Engineer's office, and to stand a crushing strain of 6,500 lb. per square inch. A tensile test will also be required; for this six stones must be prepared, 4 in. by 4 in. by 12 in.; these, when laid on their natural beds upon supports 10 inches apart, must give an average breaking strain of not less than 4,333 lb., the strain being applied across the centre of the stone.

## Bluestone.

16. All bluestone used in the construction of these works to be of the best description of basaltic bluestone obtainable, free from honeycomb and all defects, and as per sample to be seen at Engineer's office.

## Sand.

17. Sand to be sharp quartz sand, free from all earthy, loamy, or clayey matter, equal in quality to the sample of Nepean River sand to be seen at the Engineer's office, and to be washed perfectly clean whenever the Engineer deems it necessary.

Cement.  
Condition.

18. The cement to be used throughout these works to be well packed in strongly-made casks; to be the best Portland cement, of approved brands and manufacture, delivered in thoroughly sound condition, fit for immediate use, and without requiring seasoning or air-slacking; to be free from any symptoms of staleness, caking, damage to the packing, hard or set lumps; and no barrel or portion of same to be used until it has been examined and approved. The Engineer may delay approval of any parcel of cement pending tests extending over a longer period than hereinafter specified. Samples taken from various casks, from each parcel brought on the works, to be submitted for testing. Such samples shall be taken out of the package in an equal section, extending from the surface to the centre of the cask. The cement, when gauged with water to a stiff paste, must set in a damp atmosphere in from one and a half to six and a half hours. Neat cement, of the consistency abovementioned, will be made into pats, kept in moist air until set, and then placed in water at a temperature of between 65° and 80° F., and also in Deval's hot bath, at a temperature of 180° F. These test pats will be examined from day to day, and should they show symptoms of blowing, or any alteration or variation in form or volume, or imperfect setting capacity, the whole parcel from which the cement was taken will be rejected. The cement shall weigh not less than 100 lb. per imperial struck bushel, filled from the hopper. Each cask shall contain not less than 374 lb., exclusive of weight of packing. The specific gravity to be not less than 3.00; but cement up to or exceeding the specified degree of fineness, if of a lighter weight than herein stipulated, but otherwise equal to the specified tests, may be accepted subject to the decision of the Engineer, provided that the deficiency in weight is made up in quantity. The cement must be ground so fine that the residue on a sieve of 6,400 meshes per square inch, without rubbing shall not exceed 20 per cent., and on a sieve of 14,500 meshes not more than 30 per cent. For the test for tensile strength, the cement will be gauged with three times its weight of standard sand (viz., sand from crushed sandstone, washed, dried, and sifted through a sieve of 400 and retained upon one of 900 meshes to the square inch), and mixed with an average of about 10 per cent. of their weight of water, and made into briquettes formed in moulds of 1 inch sectional area at the weakest part. Such briquettes to be kept in a damp atmosphere, and put into water twenty-four hours after they have been made, and remain in water at a temperature of between 60° and 70° F., until their tensile strength is tested. These briquettes must bear a tensile stress of not less than 100 lb. per square inch after seven days, and 200 lb. per square inch after twenty-eight days from being moulded. Cement, when tested neat, must bear a tensile stress of at least 300 lb. to the square inch after three days, two of them in water; and 450 lb. after seven days, six of them in water; and 550 lb. after twenty-eight days, twenty-seven of them in water. Briquettes shall also, after being in a damp atmosphere for twenty-four hours, be kept in water at a temperature of 180° F. for six days, when the tensile stress must be equal to that specified for twenty-eight days at normal temperature. The tensile strength will be ascertained in the Government testing-machine, with the load increasing at the rate of 200 lb. per minute, and the average breaking weight of six briquettes will be taken for each test. Any cement which absorbs in proportion more than two (2) milligrams of carbonic acid to three (3) grains of cement shall be taken as containing more than the permissible quantity of free lime or magnesia. Should the sample fail in any or all of these tests, or show irregularity in quality, or not show a proper progressive increase

Weight.  
Specific gravity.

## Fineness.

## Tensile strength.

## Hot test.

Rate in loading  
testing machine.

## Free lime.



- Tests of castings.** 31. All castings of every description, before they leave the foundry, to be carefully examined and weighed, to be slung on chains above ground, and to be sounded with a hammer, and they are again to be carefully examined, slung, and sounded with a hammer when delivery of same is taken at the site of the works.
- Tests of pipes.** 32. All straight pipes required in the contract, before delivery of same is taken on the works, shall be, at the foundry or at the site of the works, as shall be directed, duly proved under hydrostatic pressure equal to a column of water of 200 feet, and when under pressure to be thoroughly sounded quickly all over with a hammer of not less than 4 lb.
- Gun-metal** 33. The gun-metal required throughout these works to be an alloy composed of eight parts of copper to one part of tin, unless otherwise specified.
- Cast-steel tests.** 34. The tests for cast-steel shall be as follows:—  
Bars turned to  $\frac{3}{4}$ -inch diameter for a sufficient length to have 5 inches under actual tension, shall have an ultimate tensile strength of not less than 26 tons per square inch, and a minimum elongation of 18 per cent.
- Cost of tests.** 35. The cost of providing the materials and wrought and cast iron works, &c., herein described, required by the Engineer for testing purposes, and the carriage of same to the Public Works testing-room, place of manufacture, site of works, or to the University, as the case may be, and as shall be directed, shall be borne solely by the contractor; and any of the materials, or any part of the wrought-iron and gun-metal work, or any of the pipes, castings, &c., injured or broken by the testing, shall be immediately replaced by new and sound materials at contractor's expense; wrought-iron, gun-metal, cast-iron pipes, or other castings, to be again tested as before described, until the whole have been tested to the entire satisfaction of the Engineer.
- Timber.** 36. Timber to be of the best description, sound, straight, free from sap, large or loose knots, wanes, shakes, gum-veins, pipes, or other defects.
- Hardwood.** 37. Hardwood used in the works to be of approved timber.  
Round timber to be carefully barked, the diameter given on drawing is to be measured at the small ends.  
Hewn timber is to be squared true on all sides, and dressed fair and clean with the adze, so as to show no axe-marks, to be of full dimensions, free from sapwood, and no heart timber must appear on the outside.  
Sawn timber to have clean sharp arrises, to be cut die square, free from heart timber, and of the full dimensions shown or specified.
- Softwood.** 38. Softwood timber to be of the best Baltic or yellow deals, and of the exact dimensions specified when finished.
- Split fencing timber.** 39. Split posts and rails for fencing must be perfectly straight and cleanly split, free from large knots, splinters, and other defects.

#### *Earth-borings.*

40. When earth-borings have been taken the results have been shown on drawings, but the Government undertake no guarantee whatever regarding the kinds of soil that will be met with or the firmness or stratification of the ground to be excavated, or the amount of unwatering to be done, or the strength of the timbering that may be required, or the nature and extent of other precautions which may have to be adopted.

#### *Clearing and Grubbing.*

41. The areas of the sites for all excavations and of all embankments, together with a margin of 10 feet in width beyond all these areas, to be cleared and grubbed of all trees, scrub, stumps, roots (to the depth of same), and dead timber, and the whole of such trees, scrub, stumps, roots, and dead timber thus grubbed and cleared to be removed and cleared away from any lands set apart for the purposes of this contract. The cost of all clearing and grubbing to be covered by and included in the schedule price for excavation.

#### *Excavation.*

42. No excavation to be commenced on any portion of the contract until, in the opinion of the Engineer, sufficient building materials are on the ground, together with the necessary appliances and plant to ensure the uninterrupted progress and continuance of the works, after they once have been commenced, at any locality, without any delay or stoppage.

43. It is to be distinctly understood that, when sinking shafts and driving tunnels, the materials excavated, on their arrival at level of staging above mouth of shaft, are to be at once removed; and when materials, &c., are to be conveyed through shafts to the tunnel works, that all such materials, on arrival at mouth of shafts, must be at once conveyed to the works underground, as the contractor cannot be allowed to occupy a larger area than that authorised by the Engineer.

44. When excavating in open trenches, if ordered, the materials excavated and raised to the surface are to be at once removed; and when materials are being conveyed to open trenches, where they occur in public roads, they must be at once taken into the work, so as not to impede the usual traffic.

45. The road metal, ballast, pitching, wood-paving, concrete, asphalt, flagging, sodding, &c., when they are met with in excavation, are to be carefully removed, put aside, and stacked where directed.

**Cross-sections to vary.**

46. The cross-sections of tunnel excavation are shown on Drawings, but they will vary with the solidity of the ground, and as the Engineer directs.

**Method of excavation in trenches without timbering.**

47. Wherever the solidity of the ground permits it, the excavation in trenches for concrete or brickwork to be taken out with vertical sides to level of springing of sewer arch, and to the exact widths of concrete or brickwork shown on Drawings, and below that level to bottom of trench with curved or vertical sides, as shall be directed.

**Width of trenches where timbering is required.**

48. Where timbering is required, trenches 8 feet deep and under shall have vertical sides, and shall be 1 ft. 3 in. wider to outside of polling-boards than width of concrete or brickwork. Where trenches are over 8 feet deep and require timbering, they shall have vertical sides, and shall be 1 ft. 3 in. wider to outside of polling-boards than the width of the concrete or brickwork for the lower 8 feet. Above that level they shall be 2 feet wider to outside of polling-boards than concrete or brickwork.

49. The excavation for foundation of embankments to be taken out, where ordered, 12 inches below surface of ground, and to such widths and lengths as shall be directed, or as ordered for benching. For embankments.

50. The excavation in solid rock for pipe-trenches shall have vertical sides, and shall be of the following sizes, viz. :— Width of trenches.

For 24-inch diameter stoneware pipe sewers...	...	...	3 ft. 9 in. wide.
21-inch " " " " " " " "	...	...	3 ft. 4 in. "
18-inch " " " " " " " "	...	...	3 ft. 0 in. "
15-inch " " " " " " " "	...	...	2 ft. 6 in. "
12-inch " " " " " " " "	...	...	2 ft. 0 in. "
9-inch " " " " " " " "	...	...	2 ft. 0 in. "

51. When timbering is not required in excavation in all other ground for pipe-trenches, the trenches shall be of the same widths as those in solid rock. Where timbering is required, the excavation for pipe-trenches 8 feet deep and under shall have vertical sides, and shall be of the following sizes to the outside of the polling-boards, viz. :—

24-inch diameter stoneware pipe-sewers...	...	...	4 ft. 0 in. wide.
21-inch " " " " " " " "	...	...	3 ft. 7 in. "
18-inch " " " " " " " "	...	...	3 ft. 3 in. "
15-inch " " " " " " " "	...	...	2 ft. 9 in. "
12-inch " " " " " " " "	...	...	2 ft. 3 in. "
9-inch " " " " " " " "	...	...	2 ft. 3 in. "

52. Where timbering is required, the excavation for pipe-trenches more than 8 feet deep shall have vertical sides, and shall be the widths given in clause 61 for the lower 8 feet and for any depth over and above 8 feet, the trenches shall be of the following sizes to the outside of the 1½-inch polling-boards (unless otherwise ordered in writing), viz. :— Width of trenches.

24-inch diameter stoneware pipe-sewers...	...	...	4 ft. 9 in. wide.
21-inch " " " " " " " "	...	...	4 ft. 4 in. "
18-inch " " " " " " " "	...	...	4 ft. 0 in. "
15-inch " " " " " " " "	...	...	3 ft. 6 in. "
12-inch " " " " " " " "	...	...	3 ft. 0 in. "
9-inch " " " " " " " "	...	...	3 ft. 0 in. "

53. Transverse and other cheeks to be excavated to receive pipe-sockets and junctions, and for the purpose of making the joints. Cheeks.

54. The trenches for the cast-iron pipe-sewers to be excavated to the depths and widths which the Engineer may order. Joint-holes to be excavated to the dimensions specified or ordered by the Engineer. Cast-iron pipe trenches.

55. The excavation of trenches to be carried on in such a manner that they shall be always completed and approved for a length of 48 feet (unless otherwise directed) in advance of sewers or other works. Trenches

56. In ground which, in the opinion of the Engineer, does not require blasting, the excavation is to be carried on by means of picking, and when the ground, in the opinion of the Engineer, is hard and suitable for blasting, charges of compressed powder, not exceeding 4 inches in length by 1½ inch in diameter, shall be used. The Engineer, however, reserves to himself the right of ordering any excavation which he may consider blasting would facilitate, to be taken out by means of charges of compressed powder not exceeding 2 inches in length by 1½ inch diameter, or he may prohibit the use of explosives altogether, when the excavation shall then be done by means of guttering and gadding. If explosives, other than compressed powder, are permitted to be used, the charges thereof will be determined by the Engineer. The use of explosives.

57. When the use of explosives is authorised, the contractor shall use every precaution and carry on such operations with such limited charges of powder only, or other approved explosives, as will loosen the shale, rock, &c., without shattering the same; and to employ approved means to prevent, effectually and thoroughly, all stones or other materials from being thrown out of trench, tunnel mouth, or shaft. Precautions.

58. Blasting will not be allowed between the hours of 10 p.m. and 6 a.m., nor after 1 p.m. on Saturdays, except by the written authority of the Engineer. Working hours.

59. Every hole drilled for blasting purposes will be measured by an inspector, and charged under his supervision. Drilling and charging holes.

60. No larger quantity of explosives shall be taken underground than is likely to be used during any current shift. Storage of explosives.

61. When pipe-sewers are to be laid in tunnels, the dimensions of tunnel to be 4 ft. x 3 ft., exclusive of timbering. Pipe-sewer tunnels.

62. If the contractor has exceeded the sectional area of excavation ordered, he shall remove such extra excavation, and in the case of trenches make good and fill in same at sides of trench with approved materials, and at bottom of trench with concrete described in clause 142, at his sole cost; the actual cubic contents only of the excavation and of the concrete work shown on drawings and ordered for each special length of sewer in open trench shall be paid for; and in the case of excavation in tunnels and shafts the contractor shall remove such extra excavation, and make good and fill in same with concrete or brickwork, in the manner herein specified, at his sole cost; the actual cubic contents only of the excavation and of the brick and concrete work shown on drawings, and ordered for each special length of tunnel or shaft, shall be paid for. Excessive excavation.

63. If, however, in cases where the use of explosives is ordered (and in no other case) the Engineer considers it impracticable to excavate any particular length of tunnel or shaft to the exact sectional area ordered, then he may, according to the nature of the ground, allow a margin of concrete lining not exceeding 3 inches over and above that ordered. Maximum allowance.

64. Unless otherwise directed, the excavation of the various tunnels to be commenced from the different faces described in the specification, simultaneously within the specified time after the date the contract has been signed. Starting tunnel excavation.

65. Ventilating fans or other approved means to be provided and worked by the contractor at all working shafts and tunnel faces where directed by the Engineer. Ventilation.

- Enlarging shaft or tunnel.** 66. In all cases where a greater thickness of lining, or a greater cross-section area of tunnel or shaft is ordered to be executed, from whatever cause, after the length of tunnel or shaft in question has been excavated to the profile ordered in the first instance, or if any portion of the excavation of open trench is ordered to be deepened, the excess of excavation so ordered shall be paid for at schedule rates for tunnel, shaft, or open trench excavation, as the case may be, and as the Engineer shall classify and direct at the time.
- Inspection and approval.** 67. No concrete or brickwork shall be commenced until the portion of sewer excavation in tunnel or open trench to be operated upon has been cleaned and levelled, and until the Engineer has examined and approved of same.
- Shafts.** 68. Shafts are to be sunk at the various sites shown on longitudinal sections and on general plans, or in lieu of those shown, at such other sites as the Engineer from time to time may determine. Wherever shafts are ordered they are to be sunk truly plumb, and of the full dimensions shown on drawings, or as may be ordered at the time, clear of timbering.
- Shafts in open trenches.** 69. All excavation for shafts situated within the lengths of open trenches, is to be paid for as "excavation in open trench."
- Temporary shafts.** 70. If the contractor desires, to suit his own convenience, to sink temporary shafts, they are to be sunk only at approved places, and on completion of work to be filled in, as specified in clause 95, to the satisfaction of the Engineer. The cost of sinking, timbering, unwatering, &c., and of filling in, withdrawing, or covering up timber of such shafts, to be defrayed entirely by the contractor.
- Shaft plant.** 71. All shafts, temporary or permanent, to be provided and fitted during their construction and completion, or during the progress of the contract, if deemed necessary by the Engineer, with approved winding engines and steel-wire ropes capable of resisting a strain equal to six times that of the working maximum strain, or with such other winding arrangements, ladders, staging, &c., as shall be directed and approved of by the Engineer.
- Sumps.** 72. Where directed, sumps are to be sunk at the bottom of shafts not less than 6 feet deep below invert of sewer, and afterwards to be filled in with concrete, as specified in clause 142.
73. Any other sumps which the contractor, for his own convenience, may think fit to sink on line of sewer, in tunnel, or in open trenches, during the construction of these works, are to be filled in with concrete, as specified in clause 142, and the cost of sinking, timbering, unwatering, and filling in with concrete and removing the materials, &c., to be defrayed entirely by the contractor.
- Sub-ducts.** 74. The excavation for sub-ducts in tunnel and open trench to be made below invert of sewer, or as shall be directed, with a fall towards each working shaft or face, and of such dimensions and gradients as may be determined at the time.
- Material for "filling."** 75. Any material obtained from the excavation, which, in the opinion of the Engineer, is suitable for refilling or other works comprised in this contract, shall be put aside in separate spoil-banks beyond the site of the works.
- Classification of material from shafts and tunnels.** 76. In the case of tunnel and shaft excavation, when "solid rock" or "more or less hard material," or "solid rock" and "more or less hard material" occur, provision is made on the longitudinal section and in the schedule of quantities for the materials to be classified under these headings. No guarantee is given as to the means which may be ordered for excavating such work. The actual excavation done in tunnels, shafts, and open trenches will, however, be paid for, not exceeding that ordered or specified.
- Works covered by 1 cubic yard of excavation.** 77. The schedule price for one (1) cubic yard of excavation in any situation shall include the cost of taking out and placing said excavation aside in separate temporary spoil-banks beyond the actual site of work, together with the works comprised in clauses 41 and 107.

#### *Sub-ducts.*

78. Sub-ducts to be constructed, when decided on, along lines of tunnels and open trenches, commencing on each length midway, or thereabouts, between two working shafts or faces, 33 inches below invert of sewer, &c., or as shall be directed at the time, and having a fall towards each working shaft, or face of such gradients as may be determined at the time. Sub-ducts of 9 inches, or of a greater or less internal diameter, to be laid immediately underneath the timber floor of tunnel or open trench, or at sides of sewer, in hardwood boxes varying in size and dimensions as shown on drawing. Said boxes to be laid straight and true to levels decided upon, and the pipes to be laid therein, upon, and surrounded by sandstone chippings and quarry refuse. Dry sandstone packing, 4-inch gauge, to be put over pipes.

79. In solid and disintegrated rock the excavation for sub-duct to be executed as shown on cross-sections, and as shall be directed, and the sub-duct to consist of glazed stoneware spigot and faucet pipes of 9 inch internal diameter, more or less, as the case may be. The pipes to be jointed dry, and the filling above same up to under side of sewer lining, to be of dry stone, hand-packed, as before described. The Engineer may also, if he deems it necessary, order the pipes to be jointed all together, or in part, with tarred gasket, 1½ inch deep, and cement mortar 1¾ inch deep. The mortar to be prepared of 1 part cement to 2 parts of sand.

#### *Existing Gas, Water, and Sewer Pipes, and Sewers.*

80. During the excavation and construction of these works, the contractor is to take every precaution and provide and execute all, which in the opinion of the Engineer is necessary, to prevent the existing gas, water, or sewer pipes, and sewers wherever met with, or that are adjacent to these works, from injury, and to maintain the same at his sole cost, until, in the opinion of the Engineer, the refilling of excavation and the general progress of the works render further precaution unnecessary. All damage to existing water, gas, or sewer pipes, and sewers, to be repaired at once by contractor at his own cost to the satisfaction of the Engineer.

#### *Railway and Tramway.*

81. Before proceeding to excavate underneath or near any railway or tramway, the contractor must give ample notice in writing to the District Railway or Tramway Engineer of his intention to commence operations; and he must adopt such precautions as the said Engineer may think necessary or prudent for the safety or preservation of the traffic over the said railway or tramway. The contractor

will be held wholly responsible for all stoppage of traffic, delays, accidents &c., that he or his men may cause, no matter how brought about, during the execution of the work under or near any railway or tramway.

82. The Railway Commissioners may, if they consider it advisable, place a watchman or watchmen on all work to be executed under or near any railway or tramway, for the purpose of seeing that no danger to the traffic is allowed to occur; but this shall not relieve the contractor of any of the responsibilities set forth in the foregoing clause, and the expense of such watchman or watchmen is to be borne by the contractor.

*Diverting Water.*

83. During the construction of these works the contractor shall, at his own cost, do all work which may be required for the effectual diversion of surface-water, subsoil water, and storm-water across and beyond the site of the works, to keep the trenches free from water during the whole time the works are in progress, and in preventing any injury to the works by floods or any other causes.

*Diverting Sewage.*

84. During the construction of the works in general, and of all points of intersection of existing and new sewers, and until completion of all works connected therewith, the contractor, at his own cost, to execute all the works of every description required to prevent injury to private property or to the existing or new works by sewage, and erect and construct watertight fluming across sites of works for the purpose of conveying constantly the whole of the sewage which may flow in said sewers at any time, to the entire satisfaction of the Engineer.

*Unwatering.*

85. All water which, during the progress of the work, may drain into excavations, to be properly, effectively, and continually pumped out, and the whole to be kept dry until after the completion, setting, and hardening of all brick and concrete work and pipe sewers, at the sole cost of the contractor. The greatest care to be taken to prevent running water passing over any of the brick, concrete, and pipe-work until it has set perfectly hard; any concrete, mortar, and cement jointing exposed to wash of water must be taken up at once, and replaced by fresh concrete, mortar, and jointing, at contractor's expense.

*Temporary Bridges, Roads, Fences, &c.*

86. The contractor shall provide, erect, and maintain all necessary temporary bridges, footways, &c., over rivers, creeks, water-courses, open trenches, and underneath railways, tramways, roads, streets, and foot-paths, so as to ensure that the flow of water or traffic is uninterrupted, as the case may be, during the period of contract. He shall also provide, erect, and maintain all temporary fences, hoarding-barriers, night-lights, &c., necessary to thoroughly protect both the general public, land, and property; and shall also properly ballast the temporary roads which may be required for the convenience of the public, and which the Engineer may order.

In the event of the contractor refusing or neglecting to carry out any of the above work, the Engineer shall have power (after having given twenty-four hours' notice in writing of such intention) to do the same at the contractor's expense, and the cost thereof shall be charged to the contractor on account of this contract.

*Temporary Timbering.*

87. During the excavation the contractor to adopt every precaution, and provide all materials, as planking, strutting, shoring, timbering, piling, sheet-piling; all packing materials, as straw, asphalted felt, bags, tarred gasket, puddle, &c., and carefully execute (unless where otherwise specified) all piling, sheet-piling, timbering, &c., where they are required, and carefully and securely close up and pack against the outside of all joints and open spaces between polling-boards, sheet-piles, or timbering, wherever they occur, and caulk open joints where directed, and execute whatever may be required to prevent any buildings, or other superstructures, road and other surfaces over and adjacent to the line of sewer, from settling, cracking, being shaken, slipping, or falling in, and to prevent any portion of the floors, sides, roofs, and end faces of excavation, beyond the exact cross-sections and dimensions determined on, from slipping, falling, running in, or being forced through joints and open spaces in the timbering and sheet-piling, and maintain said timbering, piling, shoring, &c., where and when directed till completion of the works, to the entire satisfaction of the Engineer and at the contractor's sole cost.

*Filling.*

88. The materials referred to in clauses 75 and 93, to be used in filling in the spaces between sides of excavation, and of concrete and brickwork, over sewers, into headings, filling in abandoned open channels, low ground adjoining channels, into road and other embankments, &c., as shown on drawings and as ordered by the Engineer. Sand only to be used in filling over sewer between copings on lines of aqueducts. All filling, unless otherwise specified, to be brought up in level layers, spread 6 inches thick, each layer to be rammed (and watered if directed) until approved of, before the succeeding layer is put on. This filling to be carried up to the surface of the ground, or to such other level or slope, &c., as may be directed at the time. Embankments to be formed as shown on longitudinal sections, to be finished in horizontal layers 9 inches thick after spreading, to be well rammed (and watered when directed) until approved of before the succeeding layer is put on, with side slopes and top widths, as shown on drawings, or as may be determined at the time; to be finished with such benches and curves as shall be directed. Only iron-shod rammers of not less than 10 lb. weight, of approved pattern, to be used, and one man to be employed in ramming to each man employed in filling.

Embankments.

Rammers.

89. Material only of approved quality shall be used in refilling the spaces between sides of pipes, &c., and sides of excavation, and over pipes, &c. The refilling to be done in level layers, spread 6 inches thick (and watered when directed), each layer to be carefully and separately rammed as hereinbefore specified. The lower layers up to level of top of pipes to be carefully packed and rammed solidly under and at sides of pipes and socket-joints with spades or other narrow tools. The filling to be done as above described, to such a distance below the level of the street, road, path, &c., as the case may be, to admit of the ballasting, metal, or other covering being replaced.

Filling pipe trenches.

90. On completion of concrete, brickwork, &c., in shafts, the space between the sides of excavation and outer face of brickwork or concrete to be filled in in 6-inch layers, well rammed (and watered where directed) with materials provided for in clauses 75 and 93, great care being taken in lowering the materials to the bottom, so that stones do not fall on top, or against sides of pipe-shafts, brick or concrete lining. Where stones are permitted to be used as filling they are to be put in in alternate layers with the earth, and at least 12 inches of earth to be placed nearest and round the pipe-shafts, brick or concrete lining.

91. Shafts not required as manholes or ventilators, on completion of contract, or when directed by the Engineer, to have all timber withdrawn (as specified in clause 95), and to be carefully filled in.

Quarry filling.

92. Where it is found necessary to carry the excavation deeper than the underside of concrete foundations, in order to obtain a compact solid bottom, the portion so excavated to be filled in to the underside of concrete foundation, or as may be directed, with good quarry filling, spread 6 inches thick, rammed and watered until approved. The price per cubic yard for providing and putting in position quarry filling is to be 1 cubic yard of "filling."

Extra material required.

93. All soil, sand, and other materials which the excavations of this contract do not supply, and which it is necessary to obtain for the completion of the embankments and filling of every description, the contractor shall procure, of approved quality, from any other source or land outside the limits of this contract. The cost of providing to be included in the price per cubic yard for "filling."

Timber left in.

94. As the works proceed, all shoring, timbering, staging, temporary bridges, piling, sheet-piling, &c., shall be withdrawn, excepting permanent timbering, as shown on drawings, and in all other cases where, in the opinion of the Engineer, the withdrawing of the same is impracticable, or would endanger the safety of the works, buildings, streets, and other surfaces over and adjacent to the works, when the contractor must obtain an order in writing, signed by the Engineer, to the effect that piling, sheet-piling, shoring, timbering, &c., may be covered up.

Withdrawing timbering.

95. In withdrawing timbering from open trenches and shafts, the same shall be commenced from bottom of excavation, or, as the Engineer may direct, from lowest practicable portion of same, and continued upwards; the contractor to exercise every precaution by means of intermediate shoring, plankings, props, &c., and the filling in around and above sewer and shaft lining to be carried on simultaneously with the withdrawing of the timbering. The cost of withdrawing to be included in the price per cubic yard for "filling."

Measurement of "filling."

96. Refilling into excavation shall be measured, the net dimensions of excavation, less the actual displacement of any permanent works. Any other "filling" shall be measured the actual cross-sections ordered.

Works covered by 1 cubic yard of filling.

97. The schedule price for one (1) cubic yard of filling in any situation shall include the cost of removing the materials from temporary spoil-banks, or from other sources outside the limits of this contract, and the depositing same in accordance with the plans and specification, together with the work and material described in clauses 92, 93, 95, and 107.

#### *Surplus Material.*

Lead on spoil.

98. The excavated material not required, or approved for filling, to be removed off the works to such places as shall be ordered, spread and trimmed, and to be paid for as lead.

Measurements.

99. The surplus materials to be measured, the actual net excavations less the actual net refilling.

Length of lead.

100. The distance of lead shall be measured from top of shaft or end of open cutting to centre of spoil-bank or other place of deposit.

#### *Restoration of Roads and other Surfaces.*

Wood-blocked streets.

101. After the filling in of sewer trenches and shafts has been consolidated and approved, the surfaces of roads, streets, paths, &c., to be at once restored in the manner hereafter described, viz.: In the case of streets which are wood-blocked on concrete, the City Surveyor will replace same on behalf of the contractor, at the rate per square yard stated in specification; in the case of roads or streets which are ballasted and metalled, 9 inches of ballast shall be laid thereon, and after this has been blinded with selected and approved material, the metal put aside, as specified in clause No. 45, shall be evenly spread and rammed until approved; in the case of roads or streets which are ballasted only, 9 inches of ballast shall be laid thereon, and blinded as above; and in the case of other coverings, the surfaces to be restored to the same condition as they were before the commencement of the work. Materials damaged, injured, or otherwise not approved of as fit for reinstating surfaces, to be replaced by contractor with new, sound, and approved materials of their respective kinds, together with any additional ballast which may be required, over and above that found on the site of the excavation and referred to in clause 45. If, however, in the opinion of the Engineer, sufficient hard rock is excavated from the tunnels, shafts, and open cuttings, the contractor will be allowed to break such rock to a 4-inch gauge, and use same for restoring road surfaces.

Ballasted and metalled streets.

Ballasted only streets.

Damaged materials from road surfaces.

4-inch gauge sandstone ballast.

Clearing roads and streets.

102. Immediately the pipes are laid, or concrete and other work in connection with shafts, manholes, lampholes, &c., are executed, and the ground filled in over same in any length of sewer, it is to be distinctly understood that all surplus material is to be carted away, the road cleaned until approved, and the road and other surface to be made good, flush with surrounding surfaces of roads, paths, &c., to the satisfaction of the Municipal authorities and the Engineer, in accordance with the specification; and if the contractor fails to do this, the Engineer shall be at liberty, without further notice, to get the roads cleaned, and the road and other surfaces made good at contractor's cost.

Maintenance of roads, streets, &c.

103. The contractor shall maintain the surface of the roads, streets, &c., after the excavations have been filled in, where the streets, roads, &c., have been broken up or injured during the progress of the work, during the period of the contract time, and afterwards during the period of maintenance, and shall from time to time make good any sinkings in the surface, and shall provide any additional metal, ballast, or other material that may be necessary during these periods.

Cost.

104. The whole cost of work and materials in connection with the restoration of road and other surfaces to be solely borne by the contractor.

Municipal certificates.

105. The contractor shall, at the termination of the period of maintenance, procure certificates from the Municipal authorities concerned, that the roads, &c., in their respective districts are in a satisfactory condition.

*Restoring*

*Restoring Buildings, Walls, Fences, &c.*

106. All buildings, walls, fences, and works of any description met with on the site of the works, that it is found necessary to remove or that may be disturbed, are to be replaced or repaired, at the sole cost of the contractor, and left, at the completion of the works, in the same order and condition as they were before the commencement of the works.

*Trimming.*

107. On completion of all embankments, cuttings, and filling, all top surfaces and slopes to be dressed and trimmed off to the specified inclinations and surfaces, and to such other inclinations, slopes, and surfaces as may be directed at the time, and all materials accumulating after trimming and levelling top surfaces and slopes, &c., shall at the completion of the works be removed, carted away, or spread about, as may be directed by the Engineer; and the schedule rates for filling and excavation shall include and cover all costs for trimming and dressing surfaces, and of removing, carting away, or spreading about all superfluous accumulations at the conclusion of contract.

*Sodding.*

108. On completion of embanking and filling, where ordered, all top surfaces and slopes to be protected by sodding. The surfaces to be sodded are to be boxed out the widths and depths required for the reception of turf-lining. The materials boxed out to be dealt with as provided in clause 107. The sods to be the best obtainable within a radius of 5 miles, of approved quality, not less than 3 inches in thickness and 10 inches square, full cut, with square arrises, to be laid in approved bond on their flat beds, close jointed over all top surfaces of filling or embanking, to be beaten down as the work proceeds with proper tools, as shall be directed, and when finished to present throughout perfectly smooth and plain surfaces. If the season requires it, the turfing to be properly and regularly watered to ensure the grass taking fresh root. The boxing out and turfing to be carried out simultaneously, and no greater area to be boxed out at any time than can be covered with turfing during two working days. The price for sodding to cover all the work described in this clause.

*Soiling and Sowing.*

109. All slopes of embankments, cuttings, and filling, after they have been trimmed, to be covered, when directed, with a layer of surface soil, to be carefully rolled, and when finished to be of a thickness of not less than 3 inches. All slopes, soiled or not soiled, of embankments, cuttings, or filling (where not sodded), after they have been trimmed, &c., and when ordered, to be sown with couch grass seed, as shall be directed, and to be rolled afterwards.

*Piling, Timbering, &c.*

110. Piling to be executed as required and ordered, but the actual quantities required can only be ascertained during the progress of the excavations, and as the trial piles are sunk. Quantities of piling.

111. The whole of the timber which in the opinion of the Engineer is required for each part of the various works, or for such portions of the same as he may determine at the time, shall be cut and delivered on the ground prior to contractor commencing the excavation of such part or portion of said work. All timber, when brought on the ground to be at once properly and carefully stacked on even plain surfaces, and all timbers to lay perfectly straight in the stacks; all timbers bent, split, unsound, or objected to on other grounds by the Engineer shall be removed by the contractor from the ground within twenty-four hours after such objections have been made known to him, and if he neglects to do so they shall be removed without further notice by the Engineer, at contractor's cost; all rejected timbers to be marked by a brand or axe-mark. Delivery. Stacking. Rejection.

112. All timbers required and delivered for each respective part of works, to be, when dressed, pointed, placed, and fixed in position, of the various lengths and dimensions indicated and shown on the drawings referring to such works, or of such other dimensions which the Engineer may deem suitable for the works. Dimensions.

113. All square or round piles shall be sharpened (pointed) at the lower end, the sharpened sides to be cut to a batter of 1 to 6, finished at lowest end with a flatter diamond-cut point, as shown on drawings; the lowest point to be exactly in the straight line of the true axis of the pile, and the sharpened sides to be cut true to the axis of pile to prevent same from twisting and slanting when being driven. Pointing piling.

114. All lower ends of sheet-piles to be sharpened on one side only to an inclined edge as shown on drawings, and as shall be directed, to ensure the pile when being driven to drift towards the pile last driven; all sheet-piles of the same length and thickness within each respective panel to have their ends sharpened exactly the same as regards length of cut surface and inclination of bottom edge. Pointing sheet-piles.

115. All round, square, and sheet piles to be straight-grown timber, and before being driven, all square, angle and guide piles to be faced truly straight on the sides against which sheet-piles are to be driven and finished as shown on plans; all round piles for staging across rivers, against which planked sides for concrete filling are to be fixed, to be finished with a straight adzed face the depth required for reception of said planking. Dressing piles.

116. All sheet-piles to be perfectly parallel, and, before being driven, to be truly faced and fitted to each other within each panel (between each pair of guide-piles), as shown on drawings, forming a straight close joint.

117. All round, square, and sheet-piles are to be hooped with wrought-iron rings at the top, such rings to be of not less than 2 x 1 in. iron for the square and round piles, and of not less than 2 in. x ½ in. iron for the sheet-piles; stronger rings to be provided and used when directed. All piles are to be pointed, as hereinbefore described, and where driven into hard ground, when directed and ordered, the points to be protected by wrought-iron steel-pointed shoes, weighing, except where otherwise directed, 28 lb. each for the main and guide piles, and 8 lb. each for the sheet-piles. All shoes to be provided and made of such shape and workmanship as the Engineer shall approve of. They are to be carefully and truly fitted and fixed on to points of piles, and the lowest points of shoes for the round and square piles to be fixed exactly in a straight line with the axis of each pile. Ringing and shoeing piles.

118. The exact lines and positions of all piles shall be carefully and correctly ascertained and staked out by the contractor, to the satisfaction of the Engineer, and all stakes fixed in water or river-beds

to extend above high-water level before any piles are placed and driven. After the staking out, piles to be placed truly plumb, or to such batters as may be directed, in their respective positions between guide-wales. All sheet-piles to be placed, truly plumb, between each pair of guide-piles, and lowered into their respective positions between two walings, fitted and fixed on both sides of guide-piles, as shown on drawings.

Pile-driving

119. After the excavations for the various foundations have been completed, timbered, and approved, the pile-driving as indicated on drawings, or where ordered, to be proceeded with as follows:— In order to ascertain the lengths of piles required for the foundations of the different piers and abutments, as indicated on drawings, the contractor is first to drive trial piles, in the manner hereinafter specified, in positions required for permanent purposes, one for each alternate pier, or as shall be directed. Any extra expense in connection with trial piles to be borne by the contractor. After the different lengths of piles required for the works have been in this manner ascertained, the permanent piles to be placed in their exact positions, and then to be driven perfectly plumb (or to such batters as may be directed) until tested and approved, as specified.

Weight and fall of ram.

120. Long piles from 25 feet and upwards, of 12 inches and greater diameters, to be driven with a ram weighing from 20 to 30 cwt., having a drop over head of pile of not less than 5 feet, the drop to increase in height as the pile is driven, as shall be directed. Any pile driven with a ram of 20 cwt. or more, as the case may be, falling 10 feet, to be driven until at the last stroke it does not drive more than the specified depth, and any pile not standing this test to be drawn when ordered, and to be replaced by a longer pile. Shorter piles may be driven with a ram of less weight than 20 cwt.; and when rams of lighter weight are allowed to be used over shorter piles, sheet-piles, &c., the height of drop to vary from 12 to 18 feet, as the Engineer shall direct.

Pitching piles.

121. All piles to be pitched of such lengths as will ensure good sound heads at the levels shown on drawings, or as may be given at the time by the Engineer. No pile shall be pitched until measured and marked by an officer of the Department, nor cut off until tested and approved. Tenons, 8 in. x 4 in. x 6 in. deep, to be neatly cut on pile heads. Any pile which may be too short, or which may have been driven out of plumb, or out of the stipulated batter, or which may split below the level of the required height when driven, to be at once drawn, and to be replaced by a sound pile, driven plumb, or battered, as the case may be, of the required length, at contractor's cost. The contractor must be careful not to pitch any pile which he is not satisfied will be long enough. Scarfing of piles is not permitted. The driving of piles to be commenced and carried on in such order of works as specified, and as shall be directed.

Close and sheet-piling.

122. Where close piling is shown on drawings, all angle-piles and guide-piles to be driven first, after which the upper guide-wales are to be fitted and fixed on to heads of main piles, and then the whole of the sheet-piles of one panel, after being prepared and fitted, to be lowered and placed into position for driving, after which they are to be driven each a few feet at a time, so that the whole panel of sheet-piles shall be driven to the specified depth, as near as possible together; in this manner each panel is to be driven, one after another, unless otherwise ordered.

Timbering, framing, staging.

123. As the sheet-piling and excavation between same proceeds, the lower guide-wales to be fitted and fixed together with all transverse, diagonal, and angle struts as shown on drawings, and with such additional and intermediate struts as the Engineer may deem necessary during the progress of the works.

Capsills, transverse sleepers.

124. Capsills to be accurately mortised, placed upon bearing piles, and to bear truly on pile-heads. Transverse sleepers to be spaced as shown, placed upon capsills, halved out  $1\frac{1}{2}$  inch deep at points of intersection; and planks to be laid and close-fitted between sleepers upon the capsills. Sleepers and planks to be secured to capsills with wrought-iron  $\frac{1}{2}$ -inch square 9-inch spikes.

Net quantities

125. The net quantities of all permanent timbering, planking, and piling, as shown on drawing, and where ordered, and of all other shoring, timbering, piling, sheet-piling, which the Engineer has ordered to be covered up, shall be ascertained by measurement before any timbers are covered up, and paid for at schedule rates, which shall cover and include the cost of timber fixed in works, iron used in fixing same, wrought-iron shoes for piles, packing materials, &c.

Measurements.

126. The measurements to be taken to ascertain the net quantities of timber to be paid for under this contract, shall be as under, viz.:—For all hewn and sawn timber where ordered, in any situation in the construction of these works, the width multiplied by the depth and the actual length (tenons included) shall be the net measurement. For round timber, other than piles, ordered to be covered up, the diameter given is to be measured, exclusive of bark, at the smallest end, and the area of such diameter multiplied by the actual length fixed in the works, shall be the net measurement. For piles where ordered, in any situation in the construction of these works, the measurement shall be the actual number of lineal feet (tenons included) of each such pile as placed in position, driven, and fixed in the works.

#### *Carpenter's Work.*

127. The whole of the carpenter's work for girders, planks, working-platforms, railings, &c., to be of the timbers specified or approved, and of the best workmanship, to be framed, fitted and fixed, finished, cleaned off, rough parts sand-papered (where directed), and completed in the best possible manner, in strict accordance with drawings, and measurements indicated and dimensions figured thereon, with all necessary nails, spikes, screw-bolts, drift-bolts, wood-screws, coach-screws, wrought-iron straps, stays, and other fastenings of the best quality and approved workmanship. All holes for bolts, spikes, nails, &c., to be bored with the exact augers, and all mortise holes and tenons, &c., to be cut so as to fit exactly, to prevent timbers from splitting. All timber split during the progress of the work and its term of maintenance to be at once replaced by sound timber. All scantlings requiring scarfing in places are to be joined together as shown on sections, and as shall be directed.

#### *Cylinders.*

128. The cylinders for piers, buildings, &c., to be hoisted up in the necessary lengths, accurately placed in position, lowered, and the sinking proceeded with by weighting as long as cylinders continue to go down, the tops to be finished at same level. As the cylinders are sinking into the ground the materials inside to be removed by such excavating appliances as may be approved. On completing the excavation of each cylinder to secure and approved foundations, the water to be expelled by pressure of air or other approved

approved method, and on having ascertained the cylinder to be perfectly true in position and plumb, the bottom to be thoroughly cleaned and levelled, after which the concrete, as specified in clauses 140 to 145, and 148, to be filled in for the first 6 feet under air pressure, or as shall be directed, till twenty-four hours after having deposited same in position. Above this level the cylinders to be filled in with concrete, as specified, to level of top of cast-iron cap. Concrete filling

129. The sinking of cylinders to be continued, if required, to greater depths than shown on drawings; such additional depths to be paid for at schedule rate, which is to include all charges, except cost of extra lengths of cast-iron cylinder; a corresponding deduction to be made if secure foundations are obtained at lesser depths. Sinking to greater depths.

130. If rock, boulders, dead logs, &c., are met with in an irregular manner, or at one side, while sinking cylinders, the air-lock, or other approved method, must be applied, and the obstructions removed, so as to ensure the cylinders to sink plumb, and to rest on a perfectly flat and solid bottom; no powder or other explosives to be used in the removal of such obstacles. The sinking to be proceeded with as soon as possible after delivery of ironwork, to ensure the erection of bridges, &c., without delay. Rock, &c.

131. After the sinking is completed, making up or fitting lengths are to be provided and cast, at schedule rate, so as to bring the top of the cylinders to the exact level shown on drawings. Fitting lengths.

#### *Sewers, Storm-water Channels, &c.*

132. As the cross-section area of each respective length of tunnel and open trench has been excavated, cleaned, and approved, the sewers, storm-water channels, and other works specified, shown on drawing and determined by the Engineer, to be built therein.

133. In rock and other compact formation the concrete and brick lining to be filled in solid between internal surfaces of sewer, storm-water channel, &c. (less, in the case of concrete,  $\frac{3}{8}$ -inch space required for cement facing), and surfaces of tunnel or open trench. Tunnel lining.

134. Under all shafts, when ordered, relieving arches of brick or concrete to be built of a thickness, form, and width, as shall be directed at the time. Under temporary shafts excavated by contractor for his own convenience, the extra brick and concrete work to be at the contractor's cost. Relieving arches.

135. The thickness and description of the lining, whether concrete only, of brick and concrete, or of brick only, required for the different portions of tunnels and open trenches, depends upon the nature of the ground through which they are driven or excavated, as the case may be, and shall be determined by the Engineer as the excavation advances. Lining

136. In strong compact rock,  $4\frac{1}{2}$ -inch concrete and brick lining will be requisite; and, as the materials occur less compact, two or three rings of brickwork or brick and concrete lining, as shall be determined by the Engineer as the tunnel proceeds, may be required.

137. Junction chambers for sub-main and reticulating pipes, upper inlet chambers in shafts for junctions with reticulating pipe-sewers, drop-shafts, penstock and gas-check chambers, flushing-stations, weir-chambers with storm-water discharge pipes, ventilating shafts, aqueducts on arches, and on wrought-iron girders, syphons, buildings, bridges, culverts, storm-water channel junctions, intersections with existing roads, sewer, and water pipes, branch inlets, man-holes, gullies, road work, &c., to be constructed in connection with main sewers, branch sewers, and storm-water channels of concrete, brickwork, masonry, cement-facing, iron, timber, stoneware, and cast-iron pipes, &c., of the exact sizes, heights, shapes, forms, curves, and with such ornamental red, white, and other bricks, panels, mouldings, piling, &c., as shown on drawings, and as may be ordered and directed at the time. Shafts to be built of concrete or brickwork, at the option of the Engineer, to the thickness and shape shown on drawings, or as shall be directed. Curved junctions for branch, oval, or pipe sewers, as shown on drawings, and where ordered, to be constructed in concrete, to enter the main sewers at such levels above the invert, with such radius and longitudinal fall as shown, or as shall be determined at the time. Junctions and inlet chambers.  
Curved junctions.

138. Cast-iron pipes, landing platforms,  $\perp$  bars, scupper boxes, gully gratings, girders, over weir and shaft-chambers, or other castings, flushing-valves, gas-check frames, penstocks, man-hole covers, saddles, stop-board grooves, &c., to be walled and built in, as shown on drawings; at points of intersection, branch junctions, gas-check chambers, pipe ventilating shafts, where ordered, &c. Cast-iron work.

139. Step-irons, supports to wrought-iron ladders, holdfasts, ends of wrought and cast iron girders, bars, &c., to be built into side walls of shafts, and anchor bolts for fixing cast-iron frame for penstocks, gas-checks, &c., to be built into walls of shaft chambers, as shall be directed. Flap-traps to be built in where ordered. Permanent putlog holes in shapes of reveals, for temporary staging, are to be left in walls of gas-check chambers, shaft chambers, and shafts where directed; and, in all cases, unless otherwise ordered, the reveals are to be built round of the same thickness of brick or concrete as shown on walls of shafts or chambers at the places referred to. Putlog holes to be included in the schedule price for brick-work. Stop-board grooves to be formed in concrete where ordered. Building in wrought-iron work.

#### *Concrete work.*

140. Bluestone concrete used in these works to be composed of one part of cement, two parts of sand, and four parts of bluestone metal. The bluestone metal to be broken to a size to pass freely with its largest dimensions, through a ring of  $1\frac{1}{2}$  inch in diameter, to be free from dirt, quarry refuse, and to be screened through a sieve of  $\frac{1}{2}$  inch meshes, and then to be washed with fresh water until approved. Bluestone concrete.

141. Special concrete, if required, to be composed of two parts of cement, three parts of sand, and seven parts of bluestone metal, prepared as specified in clause 140. Special concrete.

142. Sandstone concrete, where ordered to be used in these works, to be composed of one part of cement, two parts of sand, and five parts of sandstone metal. The sandstone metal to be free from dirt, quarry refuse, sieved (as specified in clause 140), washed, and of a size to pass with its largest dimensions through a ring of 2 inches in diameter. Sandstone concrete.

143. All concrete to be prepared close to where it is required on a sawn timber plank platform. All proportions to be correctly ascertained by measurement, the metal to be well washed when put on the platform and levelled at top, the sand to be placed in a level layer upon the metal, and the cement to be placed in a level layer upon the sand; after which all materials to be carefully mixed and turned over twice, and then the whole to be mixed with fresh clean water, and thoroughly turned over twice, and oftener if required, until, in the opinion of the Engineer, it shall be fit for the work before it leaves the platform; Mixing.

platform; it shall then be conveyed to the works as shall be directed, and be used fresh. Referring to clause 10, the gauge boxes are to be made to the following internal dimensions, viz.:—For stone 3 feet square in plan, and for sand 2 ft. 6 in. square. The depth of each box to be made so as to give the correct proportion of material.

Mixing by machinery.

144. If the concrete is made by machinery, all materials to be prepared as previously described, then to be mixed dry, and afterwards with fresh clean water, as may be directed and as shall be approved of; to be used fresh.

145. The different kinds of concrete described under clauses 140, 141, and 142, as bluestone concrete, special concrete, and sandstone concrete, respectively, shall be used in the various parts of these works as specified, and as may be ordered at the time.

Order of work.

146. After the excavation for foundation of each respective part of the works, and the piling, planking, timbering, staging, &c., for same have been completed, and the bottom of excavations has been cleared and approved, the concrete work to be built thereon to the exact dimensions, and of such forms and shapes as shown on the drawings referring to each respective part of said works.

Boxing, timbering, centering.

147. The contractor to provide, at his own cost, approved concrete boxes, centres, staging, shoring, planking, &c., of the exact forms, shapes, curves, &c., required; in a proper, secure, and substantial manner, due allowance being made for  $\frac{5}{8}$  inch thick cement-facing over all internal exposed surfaces of concrete work; and great care being taken that all centering and concrete boxes can be easily withdrawn. After completion of any portion of the concrete, the concrete boxes and the centering, as the case may be, shall not be removed until the Engineer or his Superintending Officer has given written permission to that effect.

Method of work.

148. The concrete, after it has been approved of, to be conveyed into cast-iron cylinders, shafts, excavations for piers, and other deep foundations, in skips of approved size, and to every other part of the work as may be directed, and as shall be approved of, and tipped into same and upon the surface of each layer from a height not exceeding 18 inches, to be quickly spread out in layers not exceeding 9 inches in thickness. Commencing at each part of the work at lowest level of excavation or surface of work, the concrete to be brought up in horizontal layers or parallel with specified longitudinal gradients of works; each layer, when spread, to be quickly and evenly rammed all over until approved of.

Below springing line.

149. In circular, oval, elliptical, and open channels, the concrete to be filled first into central pads, or, in accordance with the transverse curvature of invert or bottom of channel, into central strips, not exceeding 2 feet in width for wide open channels, then into bottom layer right up to extreme width at sides, and then into the curved sides, as shown on drawings, up to top of side walls in open channels, or to level of springing in closed channels.

Above springing line.

150. After the concrete has been carried up to the level of springing, all concrete arches to be commenced at both walls or abutments simultaneously, and carried on towards centre line in radiating parallel strips, spread 9 inches thick, of the whole width of arch, or in lengths as specified in clauses 157 and 158, and as shall be directed at the time, and rammed as before described. Where the arch is thicker than 9 inches, the lower layer to be always completed throughout 12 inches in advance of the upper succeeding layer.

Above arches.

151. After completion of the closing arch, all concrete work above springing of the same, at sides of arch, in manholes, chambers, shafts, &c., to be carried up in the same manner as specified in clause 148, and of the exact dimensions, curves, and thicknesses, &c., as shown on drawings.

Covering up work.

152. No portion of the concrete work described in the previous clauses (unless otherwise directed in writing) to be covered up with earth or brickwork until it has been examined and approved of by the Engineer. Any leakage that may appear in each layer to be carefully attended to and be made good and repaired at the time, as shall be approved, before each succeeding layer is put on.

Leakage.

Joining lengths.

153. All end faces of layers of concrete to be stepped back at each respective length of sewer or other work, as shall be directed, to be carefully washed clean with fresh water, and then to be grouted prior to each layer of the adjoining length being commenced and joined on to the same.

Injury to work.

154. No traffic shall pass over any fresh concrete work except where such is duly protected against injury by boarding, planks, or any other means approved of by the Engineer or Superintending Officer at the time.

Treatment after any stoppage.

155. In the event of any stoppage occurring to the work, from whatever cause, or in anticipation of rainfall, the contractor, before temporarily stopping work, shall finish it off at whatever level the work may be raised at the time, by thoroughly grouting the whole of the surface with cement grout. The contractor also to provide and have always on hand approved tarpaulins for the purpose of covering all fresh concrete work and brickwork, when ordered, so as to protect the same during all stoppages in the daytime and at night from sun and rain, and during hot or dry weather, to keep said tarpaulins watered to prevent the work from cracking and setting too quickly on the outside.

156. In all cases where a layer at mid-day or at evening is left incomplete the said layer shall not be continued after any stoppage until the surface of the lower and the end of the upper layer have been washed clean and then grouted with cement grout.

Order of work in open trench.

157. The concrete and brickwork in sewers and channels to be built in open trenches, in three continuous lengths of 40 feet each (unless otherwise directed), that is to say, when the arching-in of the first 40 feet commences, the next length of 40 feet must be completed up to the springing of arch, and the third 40 feet length must be in progress, and the latter so timed that the work is raised up to springing of arch by the time the closing-in of the adjoining length commences.

Order of work in tunnel.

158. The concrete and brickwork in sewers and channels on completion of each length of tunnel to be carried on in each length, from the middle towards each end simultaneously, in three continuous lengths of 16 ft. 6 in. each, unless otherwise directed; that is to say, when the arching of the first 16 ft. 6 in. commences; the next 16 ft. 6 in. length must be in progress from height of invert up to the springing of arch; the third 16 ft. 6 in. length must be in progress between floor of tunnel and level of invert of sewer.

Order of works.

159. At all plinths for piers of arches and abutments, piers of arches, abutments, between wings of abutments, pilasters, foundations, of buildings, culverts, &c., unless otherwise directed, each layer to be completed right through the whole length and width of the work before the succeeding layer is put on.

Sundry.

Where concrete has to be walled or filled in against and between brick facings or masonry, the latter in each case to be well wetted and grouted, and then to be covered with a coat of cement mortar  $\frac{1}{2}$  inch thick before

before the concrete is built against it, and it is to be brought up simultaneously with same in layers 6 inches thick after ramming, the brick or masonry facings, however, being always kept 6 inches (or more, as the case may be) higher than the concrete work up to level of string-course or other defined limit, when the work has to be finished level all through.

160. The brickwork, masonry, and concrete-filling between all arches and at sides of end-arches Aqueducts. to be carried up simultaneously over the whole length and width of every aqueduct, building, or other structure (unless otherwise directed), so that all arches or other structures shall be simultaneously and equally weighted as the brick, stone, and concrete work rises against and over same.

161. The concrete in piers of arches of aqueducts, abutments, and approaches to aqueducts to be Aqueducts. carried up in the first instance from bottom of excavations to level of top of plinths; in the second instance to level of top of skewbacks; in the third instance to level of underside of string-course; and in the fourth instance to level of top of coping of aqueducts.

162. When all piers and abutments of aqueducts have been built to level of springing of arches or Aqueducts. to top of skewbacks, as the case may be, the concrete, brick, and stone arches, as specified, to be built one after another over the openings upon centres, cambered as shall be directed, of such number as shall be specified, strong enough in every part to carry the weight of the arch to be built thereon, till all openings of one aqueduct are arched over, after which the whole of the arches shall be allowed two weeks' time to set and harden before the brick and stone facings, and the concrete, &c., between the arches and at sides of end-arches is commenced. In filling in, between arches and at sides of end-arches the various layers of concrete, of the thickness specified in clauses 148 and 159, as the case may be, to be brought up extending on to extrados of arches till the thickness of each layer at its end is reduced to  $4\frac{1}{2}$  inches above extrados, when it is to be finished at the time with a radiating end face before the succeeding layer is put on. The junctions of the storm-water sewers to be constructed with such curves, shapes, forms, flat arches between wrought-iron rolled girders, &c., as shown on drawings. On completion of junctions, or any Junctions. lengths of storm-water channel, as may be specified, to exact level of underside of iron girders, the latter Iron girders. to be laid transversely over side-walls of junctions or channels, bedded in and upon special cement mortar,  $\frac{1}{2}$ -inch thick, truly parallel to each other, and spaced 4 feet from centre to centre, or as may be specified, after which the concrete filling along side-walls, between and over ends of girders, to be completed. The arches of 4-foot span or thereabout, with a rise of 5 inches in centre between the girders, to be commenced from lower end, and to advance to the upper end of the junction or channel in each case (all girders being carefully stiffened and held in position by props, as shall be directed), with not less than twelve centres or as may be directed, of the exact width of junction or channel between side-walls. The arches Jack arches. to be built as specified in clause 150, and on completion to form a level concrete decking 3 inches above level of top of girders.

163. The concrete lining round sewer on lines of aqueducts and approaches (between underside of Lining round sewer on arches string-course and underside of coping, unless where otherwise specified) to be brought up between brick and stone facings (where such occur) simultaneously with same, as specified in clause 159. The concrete to be finished transversely level with underside of copings. This work to be carried on along each line of aqueduct in the manner and in lengths as specified in clauses 161 and 162.

164. In conjunction with the concrete surrounding sewer, where the latter is built upon arches Bond-rods. and in embankments, the contractor to provide, fit, place in position, and wall in with the concrete, longitudinally in each corner at top and bottom of concrete lining  $\frac{3}{8}$ -inch diameter bond-rods in 16-foot lengths. The ends to overlap 12 inches, and tied together with binding-wire, and, transversely,  $\frac{5}{8}$ -inch diameter bond-rods  $4\frac{1}{2}$  inches above soffit of sewer of such lengths as to fit between the outer brick lining, or as shall be directed, spaced 10 feet from centre to centre. The cost of providing, fitting, placing, and walling-in said bond-rods to be included in the schedule price per cubic yard of concrete.

165. Special care to be taken by contractor to prevent the concrete, &c., from cracking at ends of Cracking. each respective and successive length of sewer and channel in any situation in consequence of the draught in same, by providing and carefully closing up ends of sewers or channels with canvas or wooden shields or doors, and by carrying the works on in continuous lengths, without delays and stoppages, so as to prevent air-cracks or shrinkage.

166. Should, however, cracks occur at ends of any length of sewer, storm-water channel, or other Repairing cracks. work, during its construction and time of maintenance, they shall be opened up for their whole length and depth, and of such width as may be directed at the time, and filled in with neat cement mortar and grout by the contractor, at his own expense, to the satisfaction of the Engineer, or he may order such cracked parts of the works to be taken down and rebuilt at contractor's cost.

167. The concrete work comprised in this contract to be completed to the exact dimensions shown Allowance for rendering. on drawings, less  $\frac{5}{8}$  inch at all exposed inner and outer surfaces, and after the boxes and centerings have been removed, all exposed outer and inner surfaces shall present compact, solid, even, plain faces. All faulty and honeycomb portions, cavities, holes, or other defects, to be at once repaired by the contractor, at his own cost, with concrete or mortar, as the case may require, to the satisfaction of the Engineer. No portion of the concrete work to be covered up with earth or brickwork until it has been examined and approved.

168. After the concrete or masonry has been built to the exact height and gradient (leaving Bedding and fixing cast-iron and wrought-iron work. sufficient space for jointing), the whole of the cast and wrought iron work, after having been washed clean with fresh water, is to be truly laid and jointed in its exact positions, lines and gradients, on fillets of mortar; and as the concrete rises against and around the castings, bond-rods, &c., leaving a space of not less than  $\frac{1}{2}$  inch all round between the concrete and iron, this space round the invert, or underneath bottom of plates and rods, as the case may be, to be filled in with grout or mortar, as shall be directed at the time, whilst above the springing line the outer surface of the castings, &c., to be grouted, and then to be covered with a coat of special mortar  $\frac{1}{2}$  inch thick before the concrete is built on to and around said pipes, castings, frames, &c.

169. All anchor-bolts in connection with cast-iron and wrought-iron work, to be placed in the exact Anchor-bolts. positions required; to be washed clean, wetted, bedded upon, and surrounded with special mortar in each case before the concrete is built round same.

170. All stoneware or cast-iron pipes, &c., where they are shown to be or ordered to be surrounded Laying and fixing cast-iron and stoneware pipes. with concrete, to be clean washed with fresh water, to be laid and jointed in the exact lines and gradients on fillets of mortar, and to be grouted all round as the concrete is being built round same.

171.

Building on or  
against rock.

171. Prior to commencing any concrete which has to be built on to and against rock faces, all shaken and loose rock to be removed; all rock surfaces to be well cleaned, washed, and wetted, and all beds, open joints, and spaces between concrete and rock faces to be carefully filled in with cement mortar, and the cost of thus preparing rock faces, washing, grouting, flushing, &c., to be included in, and covered by the schedule price per cube yard for the concrete.

#### *Brickwork.*

Method of work.

172. In executing the brickwork in any situation in the construction of these works, all bricks to be thoroughly soaked in clean fresh water immediately before being used, and all work to be built with whole bricks (except where otherwise directed), of approved shape and dimensions, to ensure the bond of each particular part of the work being executed, in the manner as shown on drawings, and as may be ordered at the time, with  $\frac{1}{4}$ -inch joints, each brick to be set full upon and rubbed in cement mortar, and every course to be carefully and thoroughly grouted, and well wetted before the succeeding course is put on, care being taken to keep the inner and outer faces of work clean by placing fillets of mortar on outer and inner edges before grouting.

Radiating bricks.

173. The brickwork in arches up to 12-feet span to be built as shown on longitudinal and cross sections in radiating courses, with radiated bricks where ordered, in  $4\frac{1}{2}$ -inch rings, in approved bond, the bricks of each course to break joint over the centre of those above or below. Where the brickwork consists of two or more rings, said rings to be built simultaneously, the lower ring to be always completed throughout  $4\frac{1}{2}$  inches in advance of the upper succeeding ring, each brick to be set full upon and rubbed in cement mortar, and each ring to be keyed in centre and to be covered with a coat of cement mortar  $\frac{1}{2}$ -inch thick, to ensure the thorough bonding between the different rings. When completing any length of brick closing arch of main sewer, storm-water channels, &c., the courses at end of same to be stepped back, as shall be directed, and the end face of each ring or course to be well wetted, and then grouted, prior to each ring of the succeeding length being commenced.

Stepping ends.

Arches over 12-  
feet spans.

174. The brickwork in arches over 12-feet span to be built in radiating through-courses, of rubbed and gauged bricks if directed, in approved bond; to be commenced at both abutments simultaneously, the whole width of same, and to be completed in the most perfect manner throughout the full width and thickness of arch, and to be keyed in centre.

Simultaneous  
progress of  
various works.

175. The brickwork in abutments, abutment piers, wings, parapets, pilasters, spandrels, piers, face-walls, &c., to be built of the various heights, thicknesses, and other dimensions, together with all recesses, projections, panelling, &c., and carried up at each special part or length of work simultaneously with the concrete and masonry, in English or other approved bond, in truly level courses or in courses truly parallel with longitudinal gradient of work, and in such other lines and curves as shown on drawings, or as may be ordered at the time. Where directed, all outer and inner faces of walls to be carried up straight, square, and plumb, with perfectly fair and even faces.

Faces.

Weep-holes.

176. Weep-holes of the sizes shown, to be left through the brick walls where directed, and every-thing to be made good where necessary.

Brick inverts in  
storm-water  
channels.

177. The brick-on-edge flooring of inverts of storm-water channels on steep gradients, as shown on drawings, and where ordered, in any situation in the construction of these works, to be laid in approved bond; each brick to be set full upon and rubbed in special cement mortar, after which the whole of the surfaces of the brick-on-edge flooring to be carefully and thoroughly grouted.

Pargetting  
shafts.

178. The  $\frac{1}{2}$ -inch thick mortar covering (pargetting) of outside faces of brickwork or concrete of ventilating shafts, manholes, sewer-chambers, and sewers, as shown on drawings, shall not be measured and paid for as cement facing, but included in the measurement of the brick or concrete work, and paid for as such.

Putlog holes.

179. All putlog holes to be filled in, taking particular care to match the bricks and the mortar. All external faces of brickwork to be thoroughly cleaned, and all joints to be raked (if ordered  $\frac{3}{4}$  inch deep), and pointed with special cement mortar, and to be finished off with a neatly struck and cut joint.

Pointing up.

#### *Cement Facing.*

Thickness.

180. The whole of the internal and external concrete (and brick surfaces, if ordered), where such is shown on drawings, and in any situation in the construction of these works, to be protected by a cement facing to be put on in two thicknesses; the facing throughout, when finished, to be  $\frac{5}{8}$  inch in thickness. All surfaces of concrete or brickwork to be well wetted before the cement facing is put on. The cement facing of all surfaces of works to be finished, as shown on drawings, and, where directed, with joints struck in imitation of ashlar masonry.

Proportions.

181. The different kinds of cement facing with which the exposed surfaces of these works are to be protected, are:—Cement facing, prepared of cement and sand in the proportion of 1 of cement to 2 of sand; and special cement facing, prepared of cement and sand in the proportion of 1 of cement and 1 of sand. The different qualities of cement facing, as above described, to be executed in the various parts of these works as shall be specified, and as may be ordered at the time.

Qualities.

#### *Masonry.*

Method of build-  
ing ashlar.

182. All freestone and bluestone ashlar of the exact sizes, forms, and shapes, to be built in where shown on drawings, and where directed, simultaneously with the concrete and brickwork. Stones to be washed clean and to be well wetted with fresh clean water immediately before being used, to be laid upon their natural beds in approved bond, and set solidly upon and in cement mortar in the exact positions required; after which all joints between stones, between stones and brickwork, and between stones and concrete, to be carefully filled in with grout. Prior to each succeeding course being put on, the surface of the previous course to be well wetted and washed clean. All ashlar stones to be properly lifted by lewisings, or as shall be directed when being placed in position. All beds and joints to be punched, axed, and picked, so as to form  $\frac{3}{8}$  inch joints throughout. All exposed joints of masonry and between masonry and brickwork, &c., to be carefully raked out,  $\frac{3}{4}$  inch deep, and filled in solid with special mortar, neatly pointed, finished flush with outside faces of work. All masonry to be left perfectly clean at completion of works.

183. Freestone ashlar, to be provided in any situation in the construction of these works, of the Freestoneashlar. exact dimensions, moulded, sunk, weathered, throated, checked, grooved, radiated, curved, channeled, fine-axed, battered, hammer-dressed, worked, rubbed where directed, and finished off in the best possible manner, as shown on drawings, and in accordance with any details which the Engineer may provide during the progress of the works. All stones to be in lengths, as shown, and shall be directed, with truly squared and axe-dressed beds, joints, and backs. All joints from exposed surfaces of stones, and from faces of concrete work, as the case may be, to be axed-in 2 inches deep. The plinths, where shown on drawings, to be weathered with 2 inches parallel drafted margin, under edge of weathering and at all external angles of same. All external faces of plinths, skewbacks, abutments, piers, wings of abutments, &c., to be pitched-faced, no part of which to project more than approved of beyond true line of wall, with a true pitched line along each exposed arris, and with 2-inch parallel drafted margin as shown. All capstones over pilasters to be of one stone. Holes for lewis-bolts to be sunk where directed, of the depth and size required. All quoins, of the exact sizes specified, to be set in and out bond to all angles.

184. Bluestone ashlar to be provided in any situation in the construction of these works, of the Bluestoneashlar. exact dimensions, forms, shapes, moulded, weathered, throated, fine-axed, sunk for reception of cast-iron bearing plates; and faces of weir-crest stones to be radiated, and to have vertical bird's-mouth grooves sunk along centre line of joints, as shall be directed; to be built in with the concrete, brickwork, and freestone masonry, as the case may be, and as the latter rises, where shown on drawings and as may be directed, to be lewised and set as specified in clause 182. All stones to be washed clean and to be well wetted before being used. Holes for lewis and anchor bolts to be sunk, where directed, of the depth and size required.

185. Squared freestone rubble masonry, in any situation in the construction of these works, to be Squared rubble masonry. built of squared hammer-dressed throughstones, unless otherwise directed, in from 10 to 14 inch level courses, as may be directed at the time, or on lines of open channels in courses parallel with longitudinal gradient. Said masonry to be built straight, curved, battered, or sloped, every stone to be set full up on and in cement mortar. When the exposed face of wall is battered, the surface of each course to be at right angles with line of batter, the top course to be built of larger stones, level at top and squared at back. All stones to be punched, dressed, and picked to the exact thicknesses, sizes, and forms required, and set in the most approved bond, with joints throughout not exceeding  $\frac{1}{2}$  inch in thickness. All stones to be washed clean and wetted with clean fresh water before being used. Every course to be carefully grouted before the succeeding course is put on. All masonry to be finished with a neatly struck and cut joint as the work proceeds, and to be left perfectly clean on completion.

#### *Squared Bluestone Pitching.*

186. Squared bluestone pitchers, in any situation in the construction of these works, to be set in sand, in regular 9-inch courses, lengthwise across the channel, in the most approved bond, and in single ring or course round manhole covers, &c. All stones to be dressed and picked so as to ensure the joints all through not to exceed  $\frac{1}{2}$  inch in thickness. No stone to be less than 9 in. x 9 in. x 9 in., but to be longer, curved, and radiated if directed.

#### *Squared Freestone Pitching and Channeling.*

187. Squared freestone pitchers, in any situation in the construction of these works, to be set upon their natural beds in sand or in cement mortar, as may be specified, in regular 12-inch courses, lengthwise across the course of the channel, in approved bond, with  $\frac{1}{2}$ -inch wide joints throughout. No stone to be less than 12 inches deep, 12 inches wide, and 12 inches in length, but to be longer, curved, and radiated if directed. If the pitchers are set in cement, all stones to be washed clean and well wetted with clean fresh water before being used, to be set full upon and in cement mortar, and on completion of pitching, all joints to be carefully filled with cement grout. All pitching in road channels to be set in sand in regular courses parallel with kerb-stones, in approved bond, with  $\frac{1}{2}$ -inch joints, no stone to be less than 12 inches wide, 8 inches deep, unless otherwise specified, and 18 inches long, but to be longer, curved, and radiated if directed. On completion of pitching set in sand all joints to be carefully filled in with sand.

#### *Freestone Kerbing.*

188. Kerb-stones in such lengths, picked and axe-dressed to such widths, depths, shapes, and forms, with squared and axed ends, insuring  $\frac{1}{2}$ -inch joints throughout, to be set upon their natural beds in sand, in any situation in the construction of these works, along such lines, levels, gradients, and curves as shown on drawings, and as may be directed at the time.

#### *Pipe-laying and Jointing.*

189. After the trenches have been excavated to the exact depths, levels, and gradients, and after Glazed stoneware pipes. the foundation layer of concrete has been filled in where ordered, as the case may be (leaving sufficient room for jointing), glazed stoneware pipes of the required diameter to be laid thereon, along such lines, curves, and inclinations, as shown on general plans and longitudinal sections, true, straight, and solid; and for all vertical branch pipe-sewers and ventilating pipe-shafts, the pipes to be set true, straight, and plumb.

190. In clay or similar soil the pipes to rest direct and solid upon the soil. In rock they are to be Foundations. laid as shown on drawing, on a 1-inch bed of poor mortar, composed of one part of cement and six parts of sand, the cost of same to be included in items for pipe-laying. In soil liable to be scoured out or easily shifted, they shall, if directed by the Engineer, be laid on sandstone concrete, as shown on drawing.

191. In every case the pipes shall be laid in such a manner that their barrels shall bear firmly and Laying. evenly on their bed, the sockets being entirely free from pressure in the joint-hole, and the spigots concentric with the sockets.

192. The pipes are to be jointed as follows:—The 6-inch pipes with tarred gasket  $\frac{1}{2}$  inch deep after Jointing pipes. setting, and special cement mortar  $1\frac{1}{4}$  inch deep within socket of pipe; the 9-inch pipes with tarred gasket  $\frac{1}{2}$  inch deep after setting, and special cement mortar  $1\frac{3}{8}$  inch deep within socket of pipe; the 10-inch pipes with tarred gasket  $\frac{1}{2}$  inch deep after setting, and special cement mortar  $1\frac{3}{8}$  inch deep within socket of pipe; the 12-inch pipes with tarred gasket  $\frac{5}{8}$  inch deep after setting, and special cement mortar  $1\frac{3}{8}$  inch deep within socket of pipe; the 15-inch pipes with tarred gasket  $\frac{5}{8}$  inch deep after setting, and special cement mortar

mortar  $1\frac{3}{8}$  inch deep within socket of pipe ; the 16-inch pipes with tarred gasket  $\frac{3}{4}$  inch deep after setting, and special cement mortar  $1\frac{1}{2}$  inch deep within socket of pipe ; the 18-inch pipes with tarred gasket  $\frac{3}{4}$  inch deep after setting, and special cement mortar  $1\frac{3}{4}$  inch deep within socket of pipe ; the 21-inch pipes with tarred gasket  $\frac{5}{8}$  inch deep after setting, and special cement mortar  $1\frac{3}{8}$  inch deep within socket of pipe ; the 24-inch pipes with tarred gasket  $\frac{3}{4}$  inch deep after setting, and special cement mortar 2 inches deep within socket of pipe.

**Inner joints.** 193. The tarred gasket to be placed in the faucet and set tight round spigot end of pipe, after which the remaining space in faucet to be cleaned, wetted, and filled in with stiff special cement mortar, packed in solid, splayed off outside to an angle of 45 degrees, and neatly finished off. The inner joints between pipes to be carefully filled with special cement mortar all round, neatly wiped off as a finish. Each pipe length thus finished to be carefully cleaned out before another pipe length is added.

**Junction pipes.** 194. Junction pipes of any desired size are to be laid into the line of pipe-sewers wherever required by the Engineer. The socket ends of all junction pipes, junction blocks, junction holes, ventilating pipes, and dead ends are to be protected against the ingress of foreign substances, and made easily accessible for effecting future connections, by being closed with earthenware discs having a temporary watertight joint all round, the cost of providing and fixing same to be included in items for pipe-laying.

#### *Cast-iron Pipe-laying.*

**Cast-iron spigot and faucet pipes.** 195. After the pipe-trenches have been excavated to the exact depths, levels, and gradients required, cast-iron pipes of the diameters shown or ordered, to be laid along lines (curved or straight), and solid upon the bottom of the trench, or upon a foundation layer of concrete, and the vertical pipes placed as shown, leaving sufficient room for jointing.

**Jointing.** 196. The pipes are to be jointed as follows :—The 6-inch and 7-inch diameter pipes with spun-yarn  $2\frac{3}{4}$  inch and 3 inch deep respectively after setting up, and soft lead  $1\frac{1}{2}$  inch deep after setting up ; the 8-inch, 9-inch, and 10-inch diameter pipes with spun-yarn 3 inches,  $3\frac{1}{2}$  inches, and  $3\frac{1}{2}$  inches deep respectively after setting up, and soft lead  $1\frac{1}{2}$  inch deep after setting up ; the 11-inch, 12-inch, 14-inch, 15-inch, and 18-inch diameter pipes with spun-yarn 3 inches,  $3\frac{1}{4}$  inches,  $3\frac{1}{4}$  inches,  $3\frac{1}{4}$  inches, and  $3\frac{1}{4}$  inches deep respectively after setting up, and soft lead  $1\frac{3}{4}$  inch deep after setting up ; the 20-inch, 22-inch, 24-inch, 26-inch, 28-inch, 30-inch, 32-inch, 34-inch, and 36-inch diameter pipes with spun-yarn 3 inches,  $3\frac{1}{4}$  inches,  $3\frac{1}{4}$  inches,  $3\frac{1}{4}$  inches,  $3\frac{1}{4}$  inches,  $3\frac{1}{2}$  inches,  $3\frac{1}{2}$  inches,  $3\frac{1}{2}$  inches, and  $3\frac{1}{2}$  inches deep respectively after setting up, and soft lead 2 inches deep after setting up.

**Expansion joints.** 197. Should the faucets of pipes used in these works, in places, be of greater or lesser depths than indicated in the previous clause, then the spun-yarn packing is to be of greater or lesser depths as may be required, the depths of the lead joints to remain as specified. Expansion joints to be made in the same manner, but of such special depth of lead joint, with or without spun-yarn packing as shown on drawings and as may be ordered at the time. All curves on lines of pipe-sewers to be accurately formed with the spigot and faucet joints of the pipes without any abrupt horizontal and vertical dip, rise, or bend. The spun-yarn to be tightly platted or laid round each spigot end, so as to fill the socket of each pipe after setting up to the exact depth specified, leaving in each instance the remaining depth of faucet for the specified lead joint, the latter to be made at each joint in the trench with one running, and when cold to be set up with proper irons to one smooth, even, plain surface all round the pipe, and  $\frac{1}{8}$  inch within socket of same.

**Setting up lead joints.** 198. The setting up of all lead-joints to be made with a proper set of setting irons, commencing from outer surface of spigot end with  $\frac{1}{8}$  inch thick setting irons, and continuing towards outer edge of lead-joint, with setting irons advancing gradually by  $\frac{1}{8}$  inch in thickness at the time. Special setting irons to be used for setting up expansion joints. After the pipes have been laid and the joints of every description made, examined, and approved, they are at once to be covered up, but in no case are they to remain longer than twelve hours uncovered after they have been approved of.

**Faulty joints.** 199. Faulty and objectionable lead joints to be immediately and carefully chiseled out (they are not allowed to be burnt out) and fresh lead joints to be made and set up until approved of. Attempts to repair defective joints are under no consideration to be permitted.

#### *Road-making.*

**Width, slopes, gradient, formation.** 200. The different roads shown on drawings are to be formed 30 feet wide between edges of slopes, whether on embankments or in cuttings. The longitudinal gradients of approaches to be at an inclination of 1 in 20, or as shall be directed. All roadways to be formed with a crown, which at the centre line is to be 6 inches higher than the edges.

**Boxing-out.** 201. After the roadway has been formed and approved, it is to be carefully boxed out along centre line, if ordered, for the reception of the road material, 8 inches deep for ballast, and 4 inches deep for metal—12 inches in all, by a width of 24 feet.

**Ballasting and metalling.** 202. After the boxing-out has been completed, its bottom surface to be covered by a layer of 4-inch gauge sandstone ballast, spread 8 inches thick throughout, and then covered with bluestone metal spread 4 inches thick throughout.

**Blinding.** 203. After the metalling has been completed and approved, the whole of its surface to be covered with about one-eighth of its own bulk of bluestone chippings of a uniform thickness, after which the whole road surface to be watered and rolled until approved.

**Quality of metal, size.** 204. The stone used for metalling to be basalt or other similar hard stone of approved quality ; to be broken to angular fragments of a size to pass freely with their largest dimensions through a ring  $2\frac{1}{2}$  inches diameter, and to be free from dirt, quarry refuse, &c.

The prices per cubic yard for bluestone metal and sandstone ballast for road surface to include the cost of providing and spreading blinding.

#### *Tarred Metal Deck.*

205. After the tarring of upper surface of metal flooring, and after the sand-filling over arches and abutments of aqueducts has been completed, levelled, and approved, or in any other situation in the construction of these works, the whole of these surfaces as shown on drawings, to the thicknesses figured or ordered at the time, to be covered with the tarred metal decking, as follows :—

**Stone for tar.** 206. The stone to be basalt, broken to a 2-inch gauge, free from dirt ; the screenings to be crushed from the same stone, and to pass through a  $\frac{1}{8}$ -inch sieve. All stones and screenings to be perfectly clean and

and dry, to be heated before admixture with tar. The tar to be coal-tar, free from all adulterations, and boiled a sufficient time to get rid of the light oils before being used.

The stones and screenings to be mixed with the boiled tar separately; to be then stacked where directed, so as to allow the surplus tar to drain away for at least three weeks before being laid in position. Tarring and stacking.

207. The 2-inch stone to be spread over the whole bridge, upon the concrete filling of roadway, and upon the 7-inch thick sand layer of footpaths, between kerb-logs, to such thicknesses and surfaces, and with such curvature to roadway, when rolled, as shown in drawing, and to be then covered with about one-eighth of its own bulk of screenings. Both layers to be well rolled and cross-rolled with a 30-cwt. roller, having not less than a 3-foot width of face, until they form solid compact surfaces to the required levels and curvature. Laying and rolling.

208. The sides along kerb-logs and all places where the roller cannot work, to be well punned by hand with a flat-faced 42-lb. iron rammer. When approved by the Engineer, the whole of the surfaces to be brushed over with a coat of hot coal-tar, and a layer of heated fine bluestone screenings, with dust left in, spread over it. Punning.

#### *Coke Concrete Deck.*

209. Coke concrete to be provided, placed in position where directed in the manner specified for other concrete, and to be mixed as described in clause 143, but in the following proportions:—16 cubic feet of approved coke broken to a strict 1-inch gauge, 8 cubic feet of sand, and 1 cask of cement.

#### *Fencing.*

210. Fencing is to be erected in such line and situation, and of such description as shall be directed, and as marked out by the Superintending Officer, and of the form and to the dimensions marked on the drawings. Land to be fenced where required.

211. Ordnance fences to be provided, framed, fitted, and erected where ordered, of sawn hardwood timber, unless where otherwise specified, as viz.: Posts 6 in. x 4 in. x 6 ft. 6 in., top rail 4 in. x 4 in., intermediate and lower rails 4 in. x 3 in. Posts spaced 6 ft. 6 in. from centre to centre, sunk in rock not less than 18 in., and into other ground not less than 2 ft. 6 in. deep. On road embankments, where ordered, posts to be 7 ft. 9 in. long, mortised into sills 9 in. diameter x 5 ft. long, secured by 1-inch diameter hardwood tree-nail, stayed to posts by 4 in. x 4 in. struts, secured to posts and sills by  $\frac{3}{8}$ -inch screw-bolts, and  $\frac{7}{16}$ -inch diameter spikes,  $7\frac{1}{2}$  inches long. Angle and end posts, 10 inches diameter at smallest end x 8 feet long, to be sunk 3 feet deep in the ground, mortised 6 inches deep for reception of ends of rails. Tops of round posts to be protected by caps of 6-lb. sheet-lead, secured to posts by lead-headed nails 2 inches long, and wrought-iron 2-in. x  $\frac{1}{4}$ -in. rings, secured each by four 3-inch wood screws. Sawn posts to be notched at top for reception of top rail and halved out for reception of intermediate and lower rails, spaced as shown. Top rail to be laid aris uppermost into notches, secured to posts with 2-in. x  $\frac{1}{2}$ -in. hoop-straps, and four 2-inch long wood screws to each strap. Intermediate and lower rails to be fitted flush with inner faces of sawn posts, and secured to each with two 4-inch wood screws. All sawn timber above ground to be planed, all scarf-joints of rails to be made as directed, over posts only, and all sills, struts, and ends of posts under ground to be charred thoroughly. The ground round posts to be well rammed, and the clearing spaces round ends of posts stepped in rock holes, to be carefully filled in with cement grout. Ordnance fencing.

212. The split timber fencing may be of one or more of the three following descriptions:—

- 1st. Fence consisting of split hardwood posts, two split rails (wired if shown), and round posts where required.
  - 2nd. Fence, consisting of split hardwood posts, three split rails, and round posts where required.
  - 3rd. Fence, consisting of split hardwood posts, two split rails, covered with split hardwood palings, with round posts where required.
- Description of split timber fences.

213. Posts to be 6 ft. 6 in. long, 8 inches broad by  $2\frac{1}{2}$  inches thick, except those for the paling-fence, which shall be 7 feet long, with mortises 6 in. x 3 in., cut square to the gauge shown on the drawings. All posts to be charred for a length of 2 ft. 6 in. from the bottom, sunk 2 feet into the ground, set uniform and upright, and spaced 8 ft. 3 in. apart from centre to centre, and the earth well rammed in round them until the posts stand solid and firm. Posts.

214. Rails to be 9 feet long, the top rail not less than 7 in. x 2 in., and the bottom rail not less than 8 in. x 2 in. in the two-rail fencing, and in the three-rail fencing the centre rail to be not less than 8 in. x 2 in., and the bottom rail 7 in. x 2 in. Tenons to be 6 inches long, carefully adzed to fit closely into the mortises, shouldered square with the saw, and fitted so as to butt close up to the posts. Rails.

215. Palings are to be sound, straight, cleanly split, and free from sap, and of approved timber, 5 feet long, not less than 4 inches wide, and  $\frac{1}{2}$  inch thick. They are to be sawn off square, placed upright, close together, and to a straight line on top, and securely fixed by  $1\frac{1}{2}$ -inch strong wire nails, two nails to every paling in each rail. They are to be further secured along the rails by galvanised hoop-iron of 18-gauge, 1 inch wide, well nailed by  $1\frac{1}{2}$ -inch clout nails at intervals not exceeding 12 inches apart. Palings.

216. At all intersections with existing fences, and at all angles, a round post is to be provided and fixed, 9 inches in diameter, charred for a length of 3 feet from the bottom, and sunk 2 ft. 6 in. into the ground, and the earth well rammed in until the post stands solid and firm. These posts are to be of such length as to leave the top 6 inches above the upper rail. At existing fences the junctions are to be made good and connected with these posts, which are to be mortised for the rails to suit the fence in the same manner as shown on drawing. Round posts.

217. Where necessary, posts, either round or split, are to have a hardwood strut 6 in. x 3 in., checked at upper end into the post, and secured by a 6-in. x  $\frac{1}{2}$ -in. round spike. A hardwood stake, 3 ft. long x 8 in. x 3 in., to be driven close into the foot of the strut, as shown on drawing. Posts strutted where necessary.

218. The crossing of ditches, watercourses, or hollows in the ground, are to be made secure, either by supporting the fence on logs, extra long posts, or as may be directed. Crossing ditches or sudden depressions.

219. The fencing is to be erected to a true line on top, and is not to follow the minor irregularities of the ground.

Fencing wire and  
straining  
brackets.

220. The wire used in fences to be that known as No. 8 "best best annealed drawn," or other approved fencing wire; to be passed through the posts, which are to be bored for the purpose with a quarter ( $\frac{1}{4}$ ) inch auger, and strained tight by means of F. Morton & Co's. or other approved straining bracket, fixed to the straining posts by wood screws or spikes, so as to suit the gauge, as shown on the drawing.

The works and materials comprised in clauses Nos. 217, 218, and 220 to be included in the schedule rates for fencing.

*Wrought-iron Work.*

Wrought-iron  
work.

221. All wrought-iron spindles, bolts, L, T, and U irons, flat and round bar, plates, straps, axles, pins, anchor-bolts, rolled girders, nuts, washers, rods, rivets, holding-down bars, gratings, frames, keys, chains, &c., to be of the exact dimensions and forms shown on drawings. The greatest care to be taken in any welds to ensure perfect soundness, and the contractor to be at the expense of any test which the Engineer shall think fit to submit the welds to. All plates, bars, channel-irons, rods, &c., to be perfectly true and of even uniform thickness; all angle-irons and bars to be sound, uniform, and regular on edges; all joints and edges to be truly planed to the dimensions on drawings; all wrought-iron parts to be rolled or forged out of one piece, unless otherwise specified and directed. Ends of spindles, shackles, &c., to be forged with eye-holes, and holes for male and female joints of the exact forms. All bolts, handles, hand-rails, spindles, keys, chains, pins, axles, bars, crosses, &c., to be forged with protecting necks, and welded with ends of large diameters or otherwise for screw-ends, and made of the exact shapes, forms, dimensions, lengths, widths, and diameters shown on drawings, with angular and square threads, as the case may be, to all bolts, spindles, &c., with the correct pitch, angle, and depth. All portions fastened with screws, bolts, or rivets to fit close together. The chains attached to blades of penstocks, and the whole of the wrought-iron gratings, channel-irons, &c., connected therewith, wrought-iron girders to working platforms, hand-rails to platforms and stairs, to be galvanised before being fixed in the works.

Welds.

Joints.

222. All joints in plate, angle, T irons, &c., to be made only in such positions as shown on drawings and where directed; and all covering plates, wrappers, T, and angle irons to be truly cut at ends to insure a perfect fit.

Screw-bolts and  
screws.

223. All screw-bolts and screws to flanged pipes, penstocks, valves, all other castings and wrought-iron work of every description, to be of the exact diameters and lengths shown on drawings, with hexagon heads and nuts, and to be angular threaded with the correct pitch and angle of the Whitworth screw.

Joints of shafts,  
&c.

224. Joints of shafts, spindles for penstocks, axle shafts for strainers and traveller, engines, &c., to be made by said shafts being truly turned and cut at ends, and cast-iron flanged and turned sockets, with turned spigot and faucet, the internal diameter of socket to be turned exactly, and slightly of less diameter than ends of shafts. Sockets and ends of shafts to be grooved, as shown for steel key. Sockets to be heated and then fitted on to ends of shafts with keys, after which the flanges to be bolted together, forming coupling, as shown on drawings.

Joints and  
working parts.

225. All joints and working parts of wrought-iron on penstocks, valves, strainers, standards, engines, travelling cranes, travellers, gratings, troughs, louvre shutters, brackets, &c., to be turned, scraped, or ground and glazed bright, as the case may require, and as shall be directed.

Handles and  
levers.

226. All handles and levers for working penstocks, valves, strainers, travellers, travelling cranes, &c., to be ground and glazed bright.

Rivets and bolts.

227. The rivets throughout to be made from  $\frac{1}{2}$ -inch,  $\frac{5}{8}$ -inch,  $\frac{3}{4}$ -inch,  $\frac{7}{8}$ -inch, 1-inch, and  $1\frac{1}{8}$ -inch iron respectively, with heads and necks, as shown on drawings. The Engineer may require any holes to be drilled and the bolts turned for same, or he may order bolts to be substituted for rivets, or other changes of the kind, in such places as he may consider necessary, without extra charge.

Holes for rivets,  
bolts, &c.

228. All rivet, bolt, and screw holes to correspond as to diameter and position with the drawings, and to be carefully drilled parallel, and at right angles with face of work. All the holes in booms of main girders, bearing plates, lattice bars, wrought-iron aqueduct pipes, rolled L, channel, T, and flat bar irons to be drilled—the respective pieces being clamped in their proper positions and secured under drill and bored right through; holes in cylinder bracing, cross-girders, and wind bracing girders may be punched. No drifting or rhymering to be done without the consent of the officer in charge, and then rhymering only when the plates can in no other way be made to coincide. Holes which are directed to be punched or drilled at the building site to be about  $\frac{1}{8}$  inch narrower than the diameter of the rivet required, so as to insure a good fit after its being enlarged with the rhymer. Where several holes meet each other in the parts to be united, a horizontal dislocation of not more than 5 per cent. of the diameter of the hole is allowable, the hole then to be made perfectly equal with the rhymer, and not by filing on one side, and rivet-bolts of proportionately large size to be used in holes thus enlarged.

Riveting.

229. All rivets to be inserted at a bright heat, after being carefully freed from scales, into the duly cleared holes, to be quite firm after the head is completed. If not firm, rivets to be at once removed and replaced by others, and of larger size when directed. In putting together parts, care to be taken that none of them are forced into one-sided tension; any portions distorted in riveting the connections to be at once loosened and the faults remedied. All rivets to be finished with cup heads, and when countersunk the sinking to be drilled and the heads to be finished perfectly flush. All rivets and heads of bolts to be countersunk where plates, when fixed, will bear on other work, and where they form the inner surfaces of aqueduct pipes. All riveting to be done in the neatest and most workmanlike manner.

Wrought-iron  
gratings.

230. Wrought-iron gratings to be of the exact dimensions, straight or curved, as the case may be, the bars spaced and riveted as shown, all bars to have rounded-off top surfaces. All hooks, rings, and chains attached to flushing valves, &c., to be galvanised before being fixed in the works.

Wrought-iron  
ladders.

231. Wrought-iron ladders in lengths shown on drawing, and as may be ordered, consisting of  $2\frac{1}{2}$ -in. x  $\frac{5}{8}$ -in. uprights, spaced  $13\frac{3}{4}$  inches apart, and  $\frac{7}{8}$ -inch round bar rungs spaced 12 inches from centre to centre. Joints of uprights to occur only at supports, where directed. Supports, spaced as shown, to consist of two 6-in. x 3-in. x  $\frac{3}{8}$ -in. channel irons fixed to uprights with  $\frac{3}{4}$ -inch screw-bolts, stiffened off at ends, at top and bottom, with  $\frac{1}{4}$ -inch plates varying from 12 inches to  $13\frac{1}{2}$  inches in length, riveted on to top and bottom flanges of channel irons, as shown.

*Cast-iron Work.*

Castings.

232. The whole of the castings to be perfectly sound, free from all cold shuts, honeycomb, holes, or other defects; to be cast in dry sand moulds, unless where otherwise directed.

233.

233. All castings to be true in sectional form, straight longitudinally where shown to be so, or of such shapes, projections, curves, angles, and forms as shown on drawings; and each portion of such castings to be of equal strength and of the specified thickness throughout its respective length. Castings.
234. The external and internal surfaces of all castings to be perfectly clean and smooth and in strict accordance with sections.
235. All cylinders and pipes to be cast vertically, with the socket or flanged end downwards; to be straight longitudinally; all straight pipes with faucet, or flanged, and with spigot ends, to have the latter cast 9 inches longer than shown on drawings; all cylinders to be cast with such head of metal as shall be directed. After the castings have been cleaned and coated, the head of metal over the cylinders, and the 9 inches at spigot ends of pipes to be cut off, so as to leave same perfectly square on section and true and equal in circumference, so as to fit the socket, leaving an equal space all round of the exact thickness shown on drawings for lead joints. Casting cylinders and pipes.
236. The faucet of each pipe or casting to be perfectly square and true, of the exact dimensions shown on drawings, and to be cast with a groove of the size and depth as required by the Engineer. The faucet of large circular and oval pipe for expansion joints to be cast as shown with an inner narrower faucet and projecting rim, and both inner sides of narrower faucet and of projecting rim to be truly turned and polished. Faucet ends.  
Faucet for expansion joint.
237. The feathers and flanges, where such are shown, to be of the exact widths, forms, and thicknesses, and all surfaces of contact to be planed and turned to true and even faces. Feathers and flanges.
238. All spigot ends for expansion joints, where shown on drawings, to be cast with a recessed end for reception of wrought-iron ferrule on inner face, and a corresponding projecting face on the outside; said recessed inner and projecting outside faces to be truly turned and polished to the exact cross-section for reception of lead joint, gun-metal packing ring, and wrought-iron cover-plate, as the case may be. Spigot ends for expansion joints.
239. The thimbles for expansion joints for large, circular, and oval pipes, to be cast with faucets as described in clause 236, and with web-plates, ribs, and bed-plates cored out, with bosses truly bored for heads of anchor-bolts; the whole to be of the exact shapes, forms, and dimensions, as shown on drawings. Thimbles for expansion joints.
240. The flanges of gas-check frames to be provided with a projecting face, planed and turned to true and even faces, of the exact dimensions shown on drawings. Gas-check frames.
241. All holes in hinge-brackets at top of gas-check frames to be truly bored to the diameter required for the reception of hinge-bolts. Boring holes.
242. All bolt-holes to be of the exact sizes, spaced as shown, and to be truly bored and turned. Bolt holes.
243. All flange-joints, unless where otherwise directed, to be made tight with red lead. Flange joints.
244. Frames of penstocks to be of the different parts, and of the exact shapes, forms, and dimensions, with all screw and bolt holes, and the exact circular valve openings, with flanged end at back, projecting rim round opening in front and at sides of same, with cap-pieces on top, upright slide frames, flanged, bolted together, cored out with bosses and web-plates between, to receive front guide-plate, with inner projecting faces screwed into bosses of upright frames. Guide-pieces, with flange and web, faced on surface of contact, with boss in centre, the latter truly bored and turned for reception of brasses and spindle to pass through, fitted with bolt-holes, and screwed on to guide-plates. Penstock frames.
245. All landing and other plates and grates to be complete with ribs, flanges, hinged and other lids, close or ventilating covers, girders of the exact shapes, forms, dimensions, projections, recesses, &c., as shown on drawing. Landing grates and plates.
246. Valve blades to be of the exact diameters, forms, shapes, and dimensions, with circular projecting faces back and front, and vertical projecting faces corresponding with and bearing on projecting faces of guide-plates and framing, and vertical racks or brackets, with eye-holes truly bored for fixing foot of valve spindle, as the case may be. All seatings to be truly faced and bored out to receive gun-metal faces, and all stuffing boxes, glands, foot-step bearings, and journal-boxes, to be bored and turned and polished where directed. Valve blades for penstocks.
247. All girders, brackets, standards, wheels for chains, and balance weights, tubes, boxes, glands, plummer-blocks, and boxes for lifting or turning spindles, as the case may be, foot-brackets for upper spindles, flanged pipes for spindles, street-boxes, &c., of the different parts, and of the exact lengths, forms, and dimensions, to be truly faced, turned, and polished at all joints, bored and turned for reception of screws, nuts, and brasses, with all bolts and screw-holes of the sizes shown, bolted at all joints, and all faces of flange-joints and working parts and other faces, where directed, to be truly planed, turned, faced, and scraped, to the necessary surfaces. Sundry ironwork to be turned and bored.
248. All penstocks, scour-valves, &c., to be carefully and truly fitted and fixed together, with all lifting and turning gear, gun-metal facings, spindles, wrought-iron work, street-boxes, screws, bolts, nuts, &c., complete, in strict accordance with drawings and dimensions figured thereon, and all valves to close watertight. Penstocks, scour-valves to be fitted.
249. The frame and flap-valve of flushing valve, with bracket, pulley, &c., to be complete, with wrought-iron galvanised chain, to be cast of the exact diameter, shapes, forms, and dimensions; the flushing valves to have a projecting rim all round, the inner face truly faced and turned to a "V shape" of the exact dimensions, so that when the flap is placed in position the edge of the V rim to lie exactly against the centre line of the square tuck or lead-packing of opposite groove in frame, planed out to a dovetail for the purpose. Flushing valve.
250. Couplings, flanged, turned, bored, faced, with turned and bored spigot and faucet, and bolt-holes of the exact diameters, to be of the exact forms and dimensions for making joints of valve-spindles, &c. Couplings.
251. Cast-iron frame with 22-inch diameter opening, with non-ventilating lid fitting easily into frame, complete with sawn and tarred ironbark wood-bricks fitted into panels, the whole to be in strict accordance with drawings and dimensions shown thereon. Cast-iron frame.
252. Scupper-pipes, with cistern-heads, and grating-cover for inlets of scupper-pipes, and plain cover-plates over inlets of scupper-pipes, as shown, to be cast to the exact shapes, forms, with the exact openings, and to the dimensions figured on drawings. Scupper-pipes, grating-covers, and cover-plates.
253. All grooves for stop-boards to be cast with a connecting ledge at top, to be cut off when casting is completed. All grooves to be cast true, of the exact dimensions, shapes, and forms; and all working parts of frames and slide-valves, grooves, and stop-plates, to be truly planed and faced so as to fit, but not too tight. All stop-plates to be complete with wrought-iron shackles, 12-foot galvanised chain, hook, and rings. Stop-board grooves.
- Gun-metal*

*Gun-metal Work.*

- Gun-metal tinted yellow. 254. All portions tinted yellow on drawings, as in nuts, bolts, shackles, bearings, and working parts, nuts and naves of wheels, seatings of valves, penstocks, standards, hangers, and brackets, and all other brasses in working and lifting gear, &c., to be made of gun-metal. The gas-check flaps to be of Muntz or delta metal.
- Gas-check flaps. 255. The whole of the castings to be solid and perfectly sound, and free from all honeycomb, holes, or other defects.
- Castings. 256. All spindles to be cast on end, having a riser on top of each not less than 3 feet in height, after which they are to be turned and finished to the exact lengths and diameters; to be straight, and work true in stuffing boxes, nuts, glands, &c.
- Spindles. 257. All screw ends and nuts, unless where otherwise specified and directed, to be angular, threaded with the correct pitch and angle; and all naves of wheels, nuts for lifting gear in standards and for off-let valves, bearing nuts of end brackets for shafts, &c., where shown, to be turned with the square thread and correct pitch, and angle of the Whitworth screw.
- Nuts and screws. 258. All nuts, naves, pins, lubricators, shackles, eyeholes, sockets, hinges, hinge-bolts, guide and other brasses in plummer blocks, brackets, standards, valves, penstocks, &c., to be truly bored, turned, faced, and finished to the exact lengths and diameters, shapes, and forms, and to be straight and work true on all bearings and working faces.
- General directions for finished work. 259. All projecting rims, straps, eye-hole brackets, &c., to be provided and fitted on to gas-check flaps, to be cast of the sizes, shapes, and forms as shown on drawings, to be faced on surface of contact, and to be soldered on to the flaps with zinc, after having been placed truly in position, and then riveted as shown. All gas-check flaps to be of the exact thickness shown on drawings. When the rims and straps for each flap are not cast in one casting, then they are to be cast in parts as shall be directed; and prior to fixing such parts in position, they are to be truly fitted and jointed together. All such joints to be scarfed and braced, as, viz., the edges filed or scraped clean and bright, covered with spelter and powdered borax, and exposed in a clear fire to a heat sufficient to melt the solder, which, for all scarf-joints, to be an alloy composed of four parts of copper to three of zinc. All scarf-joints to be placed where directed. All hinge axles to be truly turned. All links of shackles to be made with one joint, scarfed, brazed, and riveted together.
- Gas-checks. Soldering. 260. At expansion joints of large cast-iron pipes, where shown, a gun-metal packing ring of the size specified, to be provided, placed, and fitted round spigot end of pipe, carefully set up flush with end face of inner recess of faucet.
- Packing ring. 261. All portions of castings, as exposed surfaces of nuts, hinge-bolts, hinges, shackles, rims, straps, brackets, hooks, links, &c., are to be cleaned as they leave the mould, and all irregularities to be removed. All other portions of gun-metal work to be truly faced on all surfaces. All gun-metal facings and fittings to be truly turned and faced on all surfaces, to fit exactly, to be forced into positions, screwed where shown, and to sit perfectly firm and true.

*Wrought-iron Work, Gun-metal Work, and Cast-iron Work.*

- Quality and workmanship. 262. The whole of the wrought-iron, cast-iron, and gun-metal work to be of first-rate quality and workmanship, in strict accordance with the specification and the dimensions and patterns shown on the drawings, and any details which the Engineer may provide during the progress of the contract.
- Weights. 263. Wrought and cast ironwork and gun-metal work not to be more than 3 per cent. below the scheduled weight, and the contractor shall only be entitled to payment of the weights as per schedule, at the various prices set forth therein, and payment will not be made for any excess on such weights.
- Contractor to give a receipt for ironwork supplied. 264. All ironwork and gun-metal work supplied by Government to the contractor to be delivered free of charge at the various sites of the works where they are required. For each article so delivered the contractor shall give a written receipt, after which he shall be held solely responsible for same; and shall, if any such article be lost, stolen, damaged, or destroyed, refund the cost to the Government.
- Surplus iron-work. 265. All ironwork and gun-metal work, &c., provided by the Government, which, at the completion of the contract, by direction of the Engineer, has not been built or permanently fixed in the works, shall be conveyed by the contractor to the site of the Field Office, or to the iron store at Camperdown, as may be directed.

*Painting.*

- Wrought-iron work. 266. All wrought-iron work (except where otherwise specified and directed) before leaving the foundry to be scraped and cleaned, and well coated with boiled linseed oil; and, prior to being fixed in position (excluding internal surfaces of circular and oval wrought-iron tubing, and excepting all working parts) after it has been cleaned and scraped free from scales, &c., and inspected, to receive two coats of anti-corrosive paint over all surfaces, and after being fixed in position, to be finished with two coats of best oil-colour, in approved tints.
- Cast-iron work. 267. All bolt-heads, washers, nuts, straps, and all other exposed ironwork of timber bridges above level of kerbs, ordnance fencing, &c., to be finished with two coats of black varnish instead of oil-colour.
268. The whole of the cast-iron work to be properly cleaned immediately after completion; and, after being inspected, except where otherwise specified, to receive over all surfaces two coats of anti-corrosive paint (except working parts and joints), and to be finished afterwards with two coats of best oil-colour, in approved tints.
- Carpenter's work. 269. All carpenter's work of timber bridges above level of kerbs, and all ordnance fencing above ground, handrails, travelling cranes, &c., to be properly prepared, knotted and primed, and painted with four coats of best oil-colour, finished with approved tints. All tenons, mortises, notches, halvings, joints, scarfs and butting surfaces, to receive two coats of approved paint before being fixed in position.
270. No paint to be applied during or immediately after wet weather, or while surface of timber or metal work is wet; and an interval of forty-eight hours must elapse between each application.

*Tarring.*

- Castings. 271. All cast-iron cylinders, pipes, short lengths, bends, junctions, and any other castings, &c., which will be placed or laid under water, or which are to be covered up in earth, concrete, &c., and all non-ventilating man-hole covers, street-boxes, flushing-flaps and frames, scupper pipes, precipitating tanks, grooves,

grooves, landing plates and frames, grates, cover-plates, gully grates, &c., as soon they have been cast and inspected, to be properly cleaned and then heated, and whilst hot to be dipped or coated twice in hot gas-tar.

272. All flat, segmental, and buckled plates, rolled girders, bulb T irons, &c., before being placed in position, unless otherwise ordered, to receive one coat of tar, and after erection is completed, to receive a second coat; the tar to be coal tar, mixed with kerosene in the proportion of three of tar to one of kerosene, and applied hot. Wrought-iron work.

273. Kerbs, flooring planks, timber in girders, longitudinal stringers, cross-girders, corbels, capsills, sills, piles, pier-bracing, abutment platforms, ends of handrail posts below level of tops of kerbs, to receive three coats of tar and composition; the first coat to be all tar laid on hot, the second and third coats to be composed of seven parts coal tar, four parts of Stockholm tar, and one part of pitch thoroughly melted together and applied hot, the last coat on top of deck to be well sprinkled with a layer of clean sharp sand and lime. All joints and butting surfaces to be well payed with the hot composition before fixing, and in finished work the composition to be poured into interstices and joints. Any timber inaccessible for tarring when fixed, to receive three coats before being placed in position. Timber work.

274. No tar to be applied during or immediately after wet weather, or while surface of iron or timber is wet; and an interval of forty-eight hours to elapse between each application.

#### *Tar Varnish.*

275. The whole of the interior surfaces (working parts and joints excepted) of the wrought-iron circular and oval tubes, cast-iron thimbles, expansion joint castings, short lengths of cast-iron circular and oval pipes, &c., after having been placed in position in the works, to be thoroughly cleaned of all scales, rust, and previous coating of linseed oil or paint, &c., and then to be coated twice with a tar-varnish composed of 30 gal. of coal tar, fresh, with all its naphtha retained, 6 lb. tallow, 1½ lb. resin, 3 lb. lamp-black, and 30 lb. freshly-slacked lime finely sifted; all materials to be approved of, and then to be intimately mixed as shall be directed, and applied hot, like paint. Interior surfaces of wrought-iron work.

#### *Day Labour.*

276. When "day labour" is required by the Superintending Officer to execute any works other than those for which a special price is given in the schedule of quantities and prices, the contractor shall provide the same at the several rates for "day labour" inserted in said schedule. Prices given in schedule.

The price for day labour is to include supervision as well as all tools, lighting, and implements of every kind necessary for carrying on the work, and shall be returned in the usual monthly progress certificate. To include.

277. The accounts for this "day labour" shall, however, be rendered by contractor to the Superintending Officer in half-weekly intervals, that is to say, during the forenoon of every Monday and Thursday, failing this he shall lose all claim to payments for the "day labour" performed by him during the preceding three days. Accounts to be sent in half-weekly.

278. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work. Length of day.

#### *Measurements and Payments.*

279. The contractor shall be present at all measurements, and, if required, assist in making the same. If he fail to attend after twenty-four hours' notice in writing has been delivered to him of the Superintending Officer's intention to take measurements, and clearly setting forth the locality of such intended operation, the measurements made by the Superintending Officer shall be binding on the contractor. Contractor to be present.

280. On satisfactory completion of any portion of the works, and at all other suitable times, the dimensions of such work shall be measured by the Superintending Officer, as specified, and recorded in a book kept for that purpose; and these quantities shall serve as the basis for arriving at the contract sum on completion of contract. When and how measurements are to be made.

281. For the purpose of making progress payments, the dimensions of still unfinished portions of the work will be measured in a summary way monthly, or as near as may be, but without prejudice to the ultimate acceptance or rejection of such unfinished portion of work. Progress payments.

282. The contractor shall sign the measurement book each month, before the monthly progress payments are made, accepting the detailed quantities, prices, and amounts. Should he, however, disagree with the detailed quantities, prices, and amounts, he is at once to state in the measurement book in what particulars he disagrees, and the grounds of his disagreement; and unless this is done it is to be distinctly understood that the detailed quantities, prices, and amounts, as recorded in the measurement book, shall be binding. Contractor to sign measurement book.

283. The final measurements, based upon the measurements made during the progress of the works, will be prepared within thirty days, or as nearly as may be after the completion of the work; and the contractor will be required to accept such measurement before the fixed deposit is returned. Final measurements.

#### *Junction with other Contracts.*

284. If two different contractors execute simultaneously two adjoining sections of the works, they shall be held jointly and severally responsible for effecting a proper junction of the sections.

#### *Suspension of Works.*

285. The contractor shall suspend the whole or any portion of the works, on receiving a written notice to that effect from the Engineer. He shall have no claim for loss or damage on this account, and such suspension shall in no wise vitiate the contract, but a commensurate extension of time for completing the works will be granted to the contractor, as set forth in clause 24 of the General Conditions.

#### *Duties.*

286. In the event of any materials being imported by contractor for use on this contract, no refund will be made of any duties which may be legally chargeable on such materials; and the contractor shall bear and pay all duty-stamps, licenses, building or surveyor's fees or other charges or fees whatsoever legally demanded by any municipal or other authorities. Testing

*Testing the Whole of the Works.*

287. It is to be distinctly understood that, on completion of the works, the Engineer shall have the power of ordering, and having the sewers, or portions of same, &c., closed in such order as he shall direct, and the whole of the sewers and aqueduct tubes, &c., filled with water for such a time as he may deem necessary for the purpose of testing the works; and any injuries, faults of whatsoever description, caused by or detected in consequence of such testing, to the work, shall be at once repaired, replaced by new work, and made good, the whole expense being borne solely by the contractor; and, after the completion of these repairs, replacing with new works, and making good any damages, injuries, faults, &c., the whole of the works shall again be tested, as before described, until they shall be satisfactory to the Engineer.

This is the schedule to specification marked "C" referred to in our annexed agreement with Her Majesty the Queen, dated the 15th day of June, A.D. 189 .

JOHN CARTER.  
F. M. GUMMOW.  
D. G. SNODGRASS.

Witness,—HAROLD F. NORRIE.

"D."

## SPECIAL CONDITIONS.

*Rates of Wages to be Paid.*

NOT less than the several rates of wages as set out in the schedule herein shall be paid by the contractor (or—in the event of the Minister approving of the sub-letting of any portion or portions of the works—by the sub-contractor) for the various services to be performed under this contract, and, in case of dispute as to the classification of workmen, the decision of the Engineer shall be final; the rates, however, do not include those to be paid to apprentices or boys.

With respect to overtime, the recognised rules of the particular trade then prevailing in the district where the work is situated shall be observed.

If it shall at any time be proved to the satisfaction of the Minister that the contractor or any approved sub-contractor is paying or has paid a lesser rate of wage for services rendered during the progress of the works to any workman employed thereon than is set out in the following schedule, the Minister shall have the option and full power and authority to cancel the contract, as if such breach was and is one of the events mentioned in clause 32 of the general conditions. Any permission to sub-let shall not discharge the contractor from any liability in respect of the rate of wages to be paid under this contract.

In all classes of labour, forty-eight hours shall be considered as a week's work. This rule, however, shall not apply to those workmen, the necessities of whose employment demand that longer hours shall be worked, as in the case of firemen, who usually have to get up steam in readiness for the day's work. The necessity for longer hours of labour in special cases shall be determined by the Engineer, whose decision shall be final.

The following is the schedule referred to :—

Trade.	Rate.
	s. d.
Carpenters .....	8 0 per day.
Masons .....	10 0 "
Bricklayers .....	9 0 "
Plasterers .....	9 0 "
Blacksmiths .....	8 6 "
Boilermakers and riveters .....	9 0 "
Fitters .....	9 0 "
Painters .....	7 6 "
Plumbers .....	8 6 "
Shipwrights .....	9 6 "
Copper and brass workers .....	9 0 "
Moulders .....	7 0 "
Engine drivers .....	7 6 "
Workmen not included in the foregoing list .....	6 0 "

These are the special conditions marked "D" referred to in our annexed agreement with Her Majesty the Queen, dated the 15th day of June, A.D. 1895.

JOHN CARTER.  
F. M. GUMMOW.  
D. G. SNODGRASS.

Witness,—HAROLD F. NORRIE.

"E."

## GENERAL CONDITIONS.

*Interpretation of Terms.*

1. WHENEVER the terms hereafter explained in the present clause occur in these or any special conditions, or in the contract or specification, they shall be held to mean, and shall mean, as follows :—

"Government" shall mean the Government of New South Wales promoting this undertaking.

"Minister" shall mean the Secretary for Public Works of the Colony of New South Wales for the time being.

"Engineer" shall mean the Engineer-in-Chief having the principal charge of the works, or the person acting as such for the time being.

"Superintending Officer" shall mean any person or persons who may from time to time be entrusted with the superintendence of the works on behalf of the Government.

"Contractor" shall mean the person or persons who contracted to execute the works

"Special

"Special conditions" shall mean any "special conditions" hereto attached and forming part of the contract; and such special conditions shall be read with the general conditions as part and parcel of the contract.

"Schedule of prices" shall mean the rates at which the contractor has offered or agreed to execute the contract, where the same is based on a schedule of prices; and be the basis on which the value of any extra works or of any deductions shall be calculated, and progress payments made, whether the contract be one of a schedule of prices or a bulk sum.

"Plans" shall mean and include all drawings referring to the works and explanatory of, or supplementary to, the specification.

"Works" shall mean the works set out in the specification and plans, or, in the event of there being no plans, in the specification only.

"Net claim" shall mean the sum claimed by the contractor after deducting therefrom the sum acknowledged by the Department to be due.

"Net award" shall mean the sum awarded on arbitration, after deducting therefrom the sum acknowledged by the Department to be due.

*Supply of Labour, Materials, and Plant.*

2. The contractor shall, except in so far as the specification may expressly state to the contrary, provide at his own cost and expense all labour, materials, and plant, and everything which the Engineer may consider necessary for the proper and complete performance of this contract. No materials or plant placed on the site of the works shall be removed therefrom, or otherwise disposed of, without the consent of the Engineer.

*Plans, Specifications, &c.*

3. The plans and specifications represent generally the form, dimensions, and description of the several works. Where any discrepancy exists between the dimensions as indicated by the scale and those marked in figures, the figures are to be considered as correct, and are to be taken in all cases in preference to the measurements by scale. Or if there be any discrepancy between the figures or dimensions, or the form of construction, or the material as indicated in the plans, and the dimensions and materials given in the specification, the directions of the specification shall be adopted; and in all cases of defective description, or any ambiguity, the explanation given by the Engineer shall be binding upon the contractor. Also, anything contained in the plans, and not in the specification, or anything contained in the specification and not shown in the plans, shall be equally binding as if it were contained in both. If neither specification nor plans contain any mention of minor parts, which, in the opinion of the Engineer, are reasonably and obviously necessary for the satisfactory completion of the works, such parts are to be provided by the contractor without any extra charge, as if they were specially mentioned, and shall be deemed to be, and hereby are, included in this contract.

All works described in, or implied by, the specification or shown in any of the plans, or set forth in any lists or tables thereon, or attached thereto, as well as those expressly provided for, are to be made and executed in every detail conformably to the several plans already prepared or which may be prepared hereafter for the purpose of this contract, in strict accordance with the provisions of the specification and conditions, and to the entire satisfaction of the Engineer.

*Copies of Plans, &c.*

4. A copy of all plans and specifications required by the contractor for carrying on the works will be provided by the Government, but must be returned before a final certificate for the work can be given. Any additional copies which may be required and are supplied by the Department shall be paid for by the contractor at a rate to be fixed by the Engineer.

*Setting out Works.*

5. The works will be set out—that is to say, all necessary centre lines and levels will be given to the contractor—except in the case of buildings, when, in the absence of setting out, a block plan will be supplied, from which he must work; but the contractor must satisfy himself of the accuracy of the setting out, as no work incorrectly set out or improperly executed will be paid for.

*Protecting and maintaining Signals and Marks.*

6. All bench marks, pegs, and signals on the surface, and all alignments, and level marks underground put in by the Engineer or Superintending Officer for the purpose of checking the contractor's work, will be confided to the care of the contractor. He shall, at his own expense, take all proper and reasonable precaution and care to preserve and maintain them in their true position; in the event, however, of their being disturbed or obliterated by accident or from any other cause whatever, they may, if necessary, be replaced by the Engineer or Superintending Officer at the contractor's expense, and the cost thereof deducted from any moneys then due or thereafter becoming due to the contractor.

*Possession of Ground.*

7. In giving the contractor possession of the site it shall not be deemed that he is to have the exclusive possession, but only a limited possession—that is to say, such possession as will enable him to perform the works comprised in this contract. The Minister may at any time take possession of any portion of the works or ground or intended site of the works for the purpose of carrying on any other works or for any purpose whatsoever. The contractor must procure for himself all other land which he may deem requisite for any temporary purposes, or for his own convenience.

*Access to Works.*

8. The Engineer, or any other person authorised by him, shall have free and uninterrupted access at all times to the works, and during working hours to any workshop or premises, not on the site of the works, where materials may be in preparation or stored for the purpose of this contract. The contractor shall give the Engineer all particulars as to the mode and place of manufacture of any of the materials proposed to be used in connection with this contract, and shall facilitate in every way the inspection of the same.

*Contractor's Risk.*

9. The contractor shall take upon himself the whole risk of executing the works to the satisfaction of the Engineer, and in accordance with the plans, sections, and specifications.

*Contractor to be represented.*

10. The contractor at all times during the progress of the works, when he is not personally superintending them, must have a responsible agent or overseer in charge to receive instructions from the Superintending Officer or Engineer, and to represent the contractor for all purposes of this contract.

Any notice or any written instructions to be given or delivered to the contractor under this contract shall be deemed to have been so given or delivered when given or delivered to the contractor or his representative at the work, or left at the contractor's usual or last-known place of abode or business.

*Order of Procedure.*

11. The Engineer shall have full power to decide in what order in point of time the various parts of the work or works comprised under this contract shall be carried out.

*Power of Entry.*

12. The Engineer shall have the power, at his discretion, without vacating this contract, to enter upon, by himself or his agents, and make use of any part or parts of the work comprised under this contract, and his doing so shall in no wise be held as a waiver of the responsibility of the contractor in respect of this contract, except in so far as any injury may accrue to such work so entered upon, by reason of any proved carelessness, to the satisfaction of the Engineer, of any employee of the Government, in which event the contractor shall be free from liability on account thereof, but not otherwise.

*Instructions to be obeyed.*

13. Should the contractor refuse or neglect to carry out the instructions of the Engineer or the Superintending Officer, the Engineer shall have the power of suspending the usual monthly certificate until such instructions have been complied with.

*Power to Dismiss Men.*

14. The Engineer may require the dismissal, within twenty-four hours by the contractor, of any agent, overseer, foreman, workman, or other person employed on the works, and in the event of the contractor refusing or neglecting to comply with such requisitions, all further payments on account of the work may be stopped until such dismissal is effected.

*Bad Materials or Improper Works to be removed.*

15. The contractor shall be bound to remove, within twenty-four hours, if written notice from the Engineer or Superintending Officer to that effect be given, any materials or work, whether fixed or not, which may appear to the Engineer to be of an inferior or improper description; and, in case of refusal, the Engineer shall have the power to get such materials or work removed at the contractor's expense, and to withhold all payments until such instructions have been complied with.

*Extra Works—Omissions of Works.*

16. If at any time whilst the works are in hand it shall be deemed expedient by the Engineer to order material or work of a different description to that specified, or to increase or diminish the dimensions or extent of any works to be done under this contract, or to alter their situation or vary the form or dimensions of any of the said works, or of any part thereof, or to make any deviation or to substitute one class of work for another, he shall have full power to do so, and to order and direct any such increase, diminution, alteration, deviation, or substitution, and the works involved in any such increase, alteration, deviation, or substitution, shall be executed by the contractor if of the class of works provided for in the schedule of prices, at such schedule prices; and no such increase, diminution, alteration, deviation, or substitution of works shall in any way annul or set aside this contract, or extend the time for the completion thereof, unless the Minister shall see fit to grant such extension; but such additions or alterations shall be measured and paid for, or deducted from the contractor's account, as the case may require, according to the schedule of prices. Provided that if any portion of the works so ordered to be done shall not be, in the opinion of the Engineer, of the same value or class of works provided for in the schedule of prices, the same shall be executed by the contractor at such prices as may be agreed upon with the Engineer; but if the contractor and Engineer cannot agree as to the price to be paid, the Engineer may order and direct the same to be done by such person or persons as he may think fit. Before any extra work, or work of an altered value or class, is undertaken by the contractor, it shall be imperative for him to procure an order in writing from the Engineer for carrying out such extra or variation of work, and the contractor shall not be entitled to any payment for such extras or variations unless he produce the written order for the same, as aforesaid, and he shall not be entitled to plead that the Engineer omitted to give such written order, as it is to be distinctly understood that the onus of obtaining such order shall be on the contractor. The contractor shall not be entitled to any other rate than the schedule rate on any plea that the work was in a different position or of a different class from, or in a more difficult position than that shown on plan or specification, or carried out under circumstances not contemplated in the specification, unless an agreement entitling him to payment by other than the schedule rates shall have been previously made and signed by the Engineer and the contractor.

*Valuation of Omissions.*

17. The Engineer shall have the power to direct the omission of the carrying out of any part or parts of the said works, but not amounting to the omission of the whole; and the value of such work so omitted in such case, calculated at the schedule rates, or in the event of there being no schedule rates, calculated on the basis of the proportionate value which such work bears to the lump sum, as ascertained by the Engineer, whose decision on that point shall be final, shall be deducted from the contract sum, subject, however, to arbitration clauses Nos. 36 to 41.

*Net Measurements.*

18. The whole of the work shall be executed and paid for according to the contract dimensions, and no allowance will be made for any excess of dimensions above those found on the working plans now exhibited, or which may be afterwards supplied, notwithstanding any general or local custom to the contrary, unless such excess has been expressly ordered. In the case of dressed masonry all cubic measurements will be taken at the extremes, and in the case of rock-faced masonry all measurements will be taken to the draft. With regard to timber, all framed work will be paid to extremes, but in no case will scarfs in hewn or round logs be paid for.

*Contractor liable for injury to adjoining Lands, Properties, &c.*

19. The contractor shall not commit any act of trespass, and shall effectually protect all adjoining properties and owners thereof against any loss, damage, or injury that may occur through the carrying on of the works, whether to buildings, goods, property of any kind, or to persons; and in case any such trespass be committed, or any such loss, damage, or injury occur, the contractor shall make full compensation, and shall make good all or any such loss, damage, or injury; and if any such compensation for trespass, or any such loss, damage, or injury be recovered against the Government in the first instance, it may be deducted from any money due or coming due to the contractor under this contract, or may be recoverable from the contractor or his sureties as liquidated damages in that respect incurred.

*Damages, &c., to be paid for by the Contractor.*

20. All damage, injury, or loss that may happen to the works from any cause whatever during their progress must be made good by the contractor at his own expense; and the whole of the works must be delivered up, complete in every respect, according to this contract, and the care and maintenance of all works under this contract shall remain with the contractor until the Engineer shall, by notice in writing under his hand, inform the contractor that he has taken charge thereof; and until such notice shall have been given, the contractor shall be responsible for all accidents, from whatever cause arising, and shall make good all damages thereto.

*Contractor not to Sublet Works or Assign Moneys.*

21. The contractor shall not assign or underlet this contract, or any part thereof, or assign or mortgage, charge or encumber all or any of the moneys payable or to become payable under this contract, or any other benefit whatsoever arising, or which may arise, under this contract, to any person without the consent in writing of the Minister being first obtained. The contractor for each and every breach of this condition shall be liable to pay to the Government the sum of £50 as and for liquidated damages; and the sum or sums payable as such damages may be deducted from any sum or sums due to the contractor under this or any other contract with the Government. And any permission to assign or underlet works to be done under this contract shall not discharge the contractor from any liability in respect of this contract, and shall extend only to the permission actually given, but not so as to prevent any proceedings for any subsequent breach of this condition; and all rights under these conditions shall remain in full force, and shall be available as against any such subsequent breach.

*Truck System not allowed.*

22. The workmen and labourers of every class employed on the works shall be paid their wages in full, in money, current coin of the Colony, at least once in every month, and no ticket or other system of payment by provisions, liquors, or goods will on any pretence be allowed; nor shall the contractor, or any person or persons employed by him, or in any way connected with him, establish any shop for the supply of provisions, liquors, or goods; nor shall the contractor oblige his workmen to take provisions, liquors, or goods of any kind from any person in particular. The workmen and labourers of every class shall be paid on the works if it be possible, or in some building in the vicinity; and in no case shall they be paid at a public-house or other place where liquors or refreshments are sold. The contractor, for each and every breach of this condition, shall pay to the Government the sum of £50 as and for liquidated damages; and the sum or sums payable as such damages may be deducted from any sum or sums due to the contractor under this or any other contract with the Government.

*Power of the Government to pay Workmen and Tradesmen.*

23. Before the payment of any money to the contractor, the Engineer may require from him a statutory declaration that the tradesmen supplying materials for or incidental to the works, and the workmen and labourers of every class employed on the works, have been paid their claims of every kind in full, in current coin of the Colony, and to the latest date at which such wages or claims are due; and the Engineer may withhold the payment of any money that may be due or become due to the contractor until such declaration has been made and delivered to him.

If the contractor shall fail or omit to pay the claims of any such tradesmen, workmen, or labourers, in the current coin of the Colony, it shall be lawful for the Minister or the Engineer, as often as the same shall happen, upon complaint of such failure or omission made by any such tradesman, workman, or labourer, and upon proof to the satisfaction of the Minister or Engineer of such failure or omission to pay the amount of such claim to such tradesman, workman, or labourer, and to deduct the same amount from any money then due or owing, or thereafter to become due or owing, to the contractor under this contract.

*Delay by Minister.*

24. If the contractor shall not be able to obtain possession of any portion of the ground required for the execution of the works to be done in connection with this contract, or if from the non-delivery, or any delay in the delivery to the contractor, of any materials which under this contract the Minister is to supply, or from any cause whatever arising out of the acts or defaults of the Minister, or any officers or servants in his employment, or from any accident happening to the said works during their progress not arising from the neglect or default of the contractor or his servants or workmen, the contractor shall be delayed or impeded in the execution of his contract, the contractor may from time to time within seven days of the happening or occurring of such act, default, or accident, apply in writing to the Engineer for an extension of time on account of such act, default, or accident, setting forth the cause of such application, and the Engineer shall, if the Minister think the cause sufficient, but not otherwise, allow by writing

writing under his hand such an extension of time as the Minister shall think adequate ; and the penalties, sets-off, and deductions to which under this contract the contractor is liable shall not attach until the expiration of such extension of time, but shall attach, and the contractor shall become liable to the same from the date of the expiration of such extended time or times. And unless the contractor shall make such application within the time and in the manner aforesaid, and unless and until the Minister shall allow such extension or extensions of time as aforesaid, the contractor shall not by reason of any delay arising from the cause or causes aforesaid, or any of them, be relieved in any way or to any extent of his liability to finish and complete the works within the time in this contract specified ; and in default of his so doing, to pay and be subject to the liquidated damages, deductions, and sets-off as in these conditions provided ; nor shall the Minister be deprived in any way or to any extent of his right to deduct or recover any sum or sums as liquidated damages, and not as or in the nature of a penalty or to make deductions or sets-off which under this contract he is entitled to make, deduct, set-off, or receive from the contractor for or by reason or on account of any delay in the completion of the work or any portion of the same, nor shall the rights, powers, and authorities by these conditions given to or vested in him be in any way affected.

*Patent Rights to be included.*

25. The contractor is to include in his tender the amount of all patent rights and royalties which may be claimed by any patentee or patentees for the manufacture and use of any portion of this work, and must undertake to liquidate the same when required to do so.

*Free Passes, &c.*

26. No free passes on any of the Government Railways will be granted either to the contractor or his agents, nor will any materials or articles of any description be conveyed free of charge.

*Conditions not to be Waived.*

27. None of the conditions of this contract shall be varied, waived, and discharged, or released, either at law or in equity, unless by the express consent of the Minister, testified in writing under his hand.

*Progress Payments without Prejudice.*

28. No progress payment given to the contractor shall prevent the Engineer from at any future time before the final settlement rejecting all unsound materials and improper workmanship discovered subsequently to the giving of any previous payment ; and notwithstanding any approval given or made by the Superintending Officer that portions or the whole of the works have been satisfactorily performed, the Engineer may require the contractor to remove or amend at any future time previously to the final payment on account of the work, any work that may be found not in accordance with this contract ; and the contractor must remove and amend at his own cost all such work when so required ; and if he refuse or neglect to do so, the Engineer shall have the power to carry out such work, and to deduct the whole cost thereof from any moneys that may be due, or that may become due, to the contractor.

If, in the opinion of the Engineer, further inquiry is necessary or desirable before any progress payment is made, he shall have the power to withhold the certificate on which such payment would have been made, for any period which he may consider necessary for the purpose of such inquiry.

*Security.*

29. Within fourteen days after the notice of the acceptance of his tender shall have been given to the contractor, or posted to the address of his last-known place of business or residence, he shall deposit with the Minister, or at the option of the Minister, in some bank or banks in Sydney, upon fixed deposit in the name of the Minister, a sum calculated at the rate of £5 for every £100 or part thereof on the amount of his tender up to the sum of £100,000, and at the rate of £1 for every £100 or part thereof in addition, for any amount over that sum, to be held by the Minister as security for the due and proper performance and completion of this contract until the Engineer has certified that the whole of the work in the said contract has been completed to his satisfaction, or until this contract has been cancelled by the Minister under the power given to him in that respect under clause 32 of these conditions, in which last-mentioned event happening the money so deposited shall become forfeited to the Crown, and shall be held by the Colonial Treasurer, for and on behalf of Her Majesty the Queen, as liquidated damages. If, however, this contract shall not have been cancelled under the said clause, and if the works comprised in this contract are not completed within the time mentioned in clause 34 of these conditions, the liquidated damages which under the last-mentioned clause are made payable to the Minister may be deducted and taken from the money so deposited.

If the contractor fail to deposit the sum as hereinbefore provided within fourteen days from the acceptance of the tender, or if he fail to execute the contract for the due performance of the works mentioned in the said tender, the Minister shall have the option of and full power and authority to declare such acceptance to be annulled, in which case the amount of the preliminary deposit will be absolutely forfeited to the Crown, as provided by the Regulations of the Tender Board.

No tenderer will be authorised to proceed with the work tendered for until he has made the deposit as aforesaid, and has executed the required contract for the due performance of the said works, it being hereby declared that for all or any work done or materials found and provided by the contractor before the due execution of the said contract, or the said moneys being deposited as aforesaid, he shall not have any right of action, claim, or demand against the Minister.

The contractor will be entitled to receive any interest that may be payable upon the fixed deposit of the money, if the money be placed in a bank at fixed deposit, as such interest becomes payable ; but it is expressly declared that the Minister is not to be held liable or answerable in any way for any loss on the money so deposited, or for any loss of interest from the fixed deposit not being renewed.

*Payments.*

30. Progress payments may be made once in every month, unless the same shall become not payable by reason of anything contained in these conditions, on the certificate of the Engineer, as the work proceeds, in the proportion of 80 per cent. of the value of the work returned, until the sum retained reaches the amount of the deposit provided for in the preceding clause, when no further deductions will be made.

made. The amount of the retention money will be held by the Minister, in addition to the cash security, unless otherwise provided for in the specification, until the Engineer has certified that the whole of the works have been satisfactorily completed, and the period specified for the maintenance of the said works has expired, and all accounts finally adjusted, when the retention money, in addition to the cash security, will be paid to the contractor; and it is expressly declared that until a certificate has been given by the Engineer to the Minister that the work done by the contractor has been executed and completed to his satisfaction, the contractor shall have no right or claim in respect of any work done or materials provided, nor to the payments from time to time to be made under this contract, or to the final payment upon the whole of the works being finished.

*Delay or Bad Work, Bankruptcy, &c.*

31. In case the Engineer shall be at any time dissatisfied with the mode of proceeding, or at the rate of progress of the works or any part thereof, or in case the contractor shall at any time neglect or omit to carry out the instructions of the Engineer, or to dismiss any person employed when required, or shall neglect or omit to remove any materials or work which he is required to remove under condition 15, or in case the contractor shall assign or underlet this contract, or any part thereof, or assign or mortgage, charge or encumber, or attempt to assign, mortgage, charge or encumber, all or any of the moneys payable or to become payable under this contract, or any other benefit whatsoever arising or which may arise under this contract, without the consent in writing of the Minister being first obtained, or in case the contractor shall make default in insuring and keeping insured, in cases where insurance is specified, and depositing the policies and receipts for premiums in accordance with these conditions, or in case the contractor shall become bankrupt, or shall make an assignment of his estate for the benefit of creditors, or shall make an arrangement or composition with his creditors, then and in every such case the Minister shall be at liberty, without vitiating this contract, and without prejudice to any right that may have accrued to liquidated damages under any of these conditions, to take the works wholly or partially out of the hands of the contractor and to employ or contract with any other person or persons to execute the same, and for that purpose to take possession of and use all horses, materials, plant, tools, implements and things on or about the said works, without making any allowances for the same, and all damages and expenses thereby incurred shall be ascertained and certified by the Engineer, and together with any sum payable as liquidated damages under these conditions shall be deducted from any money that may be then due or may thereafter become due to the contractor or may have been deposited by him; and if the money then due, or thereafter becoming due to the contractor, or deposited by him, be not sufficient for that purpose, the balance remaining unpaid shall be a debt due by the contractor to the Minister, and may be recovered accordingly.

*Cancellation of Contract.*

32. In any or either of the events mentioned in the last preceding clause of these conditions, the Minister shall have the option and full power and authority in lieu of proceeding under such clause, and without prejudice to any right that may have accrued to liquidated damages under any of these conditions, to cancel this contract whether there are any works remaining to be done or not; and in such case the moneys which shall have been previously paid to the contractor on account of the works executed, shall be taken by him as full payment for all works done under this contract; and upon notice in writing under the hand of the Minister that he, under the authority of this condition, cancels this contract, being given to the contractor, this contract shall be cancelled, and thereupon all sums of money that may be due to the contractor, or unpaid, together with all implements in his possession, and all materials provided by him, upon the ground upon which the work is being carried on, or adjacent thereto, shall be forfeited, and all sums of money held as security or named as liquidated damages for the non-fulfilment of this contract, within the time specified, shall also be forfeited and become payable to the Government, and the said implements and materials shall become and be the absolute property of the Government, and with the moneys so forfeited and payable as aforesaid shall be considered as ascertained damages for breach of contract.

*Insurance.*

33. The contractor shall from time to time, when required to do so by the terms of the specification, insure the works against loss or damage by fire, in an office to be approved in the name of the Minister for the amount of the full value of the work completed, as determined by the Engineer, and shall lodge with the Engineer the policies and receipts for the premiums for such insurance, and shall continue such policies until possession is given up to the Government; in default of which the Minister shall be at liberty to insure and deduct the amount of the premiums paid from any moneys payable to the contractor, and may refuse payment of any certificate until such policies and receipts are handed in as aforesaid; but this insurance is to be no limit or bar to the liability and obligation of the contractor to deliver up the works to the Minister completed in all respects according to the contract. In case of loss or damage by fire the moneys payable under any such insurance shall be received and retained by the Minister until the works are finally completed, and shall then be credited to the contractor in the final settlement of accounts in the event of the contract not having been previously cancelled under these conditions.

*Time of Completion, &c.*

34. The contractor shall complete the whole of the works comprised in this contract within seventy-eight weeks from the date of the acceptance of his tender, and in the event of their non-completion at the specified times, should the Engineer not have proceeded under clauses Nos. 31 and 32 of these conditions, or either of them, the contractor shall pay, by way of liquidated damages, and not as or in the nature of a penalty, the sum of twenty pounds sterling for every week, or for every part of a week, that shall elapse after such specified time, until their completion, and which sum or sums may be deducted from any money payable to the contractor under this or any other contract. The contractor shall have no right to a certificate for payment after the date specified in these conditions for the completion of this contract until the whole of the works shall have been properly completed to the satisfaction of the Engineer, unless the time for the completion of this contract shall have been extended by the Minister, in which case such extended time shall become the time for the completion of this contract, and it is to be expressly understood that the fact of the time having been so extended shall not in any way be taken as a waiver of this contract,

or

or as annulling or setting aside this contract in any respect, nor be taken as releasing the contractor from any of the responsibilities or obligations of this contract, which, in all other respects, shall remain the same as if the time had not been extended.

The like liability also shall hold good as to the obligation of the contractor in the event of any advance being made to him from the retention money, or on material on the ground and not *in situ*.

#### Maintenance.

35. The contractor will be bound to maintain the works for a period of three months after their final completion and use by the Government; and if any part should within that period show signs of weakness, or of giving way, or if any defective workmanship or materials be detected, the contractor, when called upon to do so, shall make good the same at his own expense, to the satisfaction of the Engineer, before any moneys held by the Government on account of this contract will be paid. It is also to be distinctly understood that the Government shall have the full, free, and unrestricted use of the said works, without any interference whatever on the part of the contractor during the currency of this period of maintenance; and such use of the said works on the part of the Government shall not be held as relieving the contractor of any liabilities or obligations whatever in respect of his contract.

#### Arbitration.

36. The following matters shall be decided by the Engineer, whose decision shall be absolute and final:—(1) All questions or disputes which shall arise respecting the true construction or meaning of the plans or specification, or the quality of the workmanship, or quantity or quality of materials necessary for the whole or any part of the contract. (2) All questions and disputes when the net claim shall not amount to the sum of £500.

37. All questions and disputes not hereinbefore provided for shall, if the net claim be £500 or upwards, upon the completion of the works under the said contract, and before payment of the retention money and the money deposited as security for the due carrying out of the contract, be fixed and determined by arbitration as hereinafter provided.

38. If either party consider that he has claims in respect of any matter in which arbitration may be claimed, he shall, within one month of the date of the final certificate, furnish to the other party full particulars in writing of such claims, breaches, doubts, disputes, and differences in respect of which he desires arbitration, giving distinct and separate items, and the amount, if any, claimed under each item; and the other party may thereupon furnish particulars of all claims he has in respect of such matters, irrespective of the aggregate amount of such claims; and the party furnishing the same shall be bound by such particulars; and no claim not included in such statement shall be taken into consideration at such arbitration, or become subject of arbitration or action; and the claim or respective claims so made as aforesaid shall be determined by arbitration, in the manner as hereinafter provided.

39. If both parties concur in the appointment of a single arbitrator, then the reference shall be to such single arbitrator; but if the parties for twenty-one days after the particulars first mentioned in the last preceding clause shall have been furnished, cannot concur in the appointment of a single arbitrator, the reference shall be to two arbitrators, one to be appointed by each party, or their umpire to be appointed in writing by such arbitrators before they commence the business of the reference; and the arbitration shall, subject to the express provisions herein contained, be made and held pursuant and subject to the Arbitration Act of 1892, or any statutory modification or re-enactment thereof for the time being in force.

40. The costs of and incidental to the arbitration shall be paid or borne by or between the parties in manner hereinafter mentioned, that is to say:—

1. If the sum awarded does not exceed the amount acknowledged by the Department to be due, the contractor shall pay all the costs of and incidental to the arbitration.
2. If the sum awarded shall amount to the sum claimed by the contractor, the Government shall pay all the costs of and incidental to the arbitration.
3. If the sum awarded exceeds the amount acknowledged by the Department to be due, but is less than the sum claimed by the contractor, the costs of both parties shall be added together and the total cost so ascertained shall be paid by the parties in the proportions following, namely:—The Government shall pay such sum as bears the same proportion to the total cost as the net award bears to the net claim, and the balance shall be paid by the contractor.

The award shall direct to, and by whom, and in what proportions the costs shall be paid, in accordance with the provisions hereinbefore contained; but the award need not specify the amount of such costs. Such amount shall, in the event of disagreement, be taxed or settled by the arbitrators or umpire, as between party and party, after the award is made. No costs shall be allowed as between solicitor and client. If either party shall be dissatisfied with the costs allowed by the arbitrators or umpire, the same may be taxed by the Prothonotary or other proper officer of the Supreme Court.

41. It is to be distinctly understood that all claims by either party to have any of the matters which may be submitted to arbitration so dealt with, must be made upon the whole of the work being completed, and before payment to the contractor of the retention money, or of the money deposited as security for the due performance of the contract, and that the acceptance by the contractor of payment of the retention money in cases where a bond to secure the completion of the works has been given, and in other cases of the retention money, or of any balance thereof, and of the money deposited as security for the due performance of the contract, shall be conclusive proof that the contractor has no such claim or claims.

Department of Public Works, Sydney.

ROBT. HICKSON,  
Engineer-in-Chief for Public Works.

These are the general conditions marked "E," referred to in our annexed agreement with Her Majesty the Queen, dated the 15th day of June, A.D. 1895.

Witness,—HAROLD F. NORRIE.

JOHN CARTER.  
F. M. GUMMOW.  
D. G. SNODGRASS.

"F."

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"F."

## TENDER FORM.

In pursuance of advertisement in the *Government Gazette*, we, the undersigned, do hereby tender to provide the material and perform the various works required in and about the full and proper construction, erection, and completion of Johnstone's Creek Stormwater Channel from Parramatta Road to about 10 chains north of the Balmain Tramline (Contract No. 118), agreeably to the plans, specification, schedule to specification, special condition, and general conditions, which have been inspected by us, at 20½ per cent. below the prices affixed to each item in the schedule of quantities and prices annexed hereto, and to complete the same within eighteen months from the date of the acceptance of this tender; and we do hereby agree that any additions to or deductions from the said works shall be paid or allowed for, as the case may be, at and after the rate quoted above, or, if not in schedule, at a price to be agreed upon at the time; and we hereby undertake that we will, within fourteen days from the date of notification of the acceptance of the said tender, execute and deliver to the Minister for Public Works, a valid legal contract with Her Majesty the Queen, embodying the terms and conditions above mentioned, and to provide the security required by clause 29 of the said general conditions; and we enclose herewith our cheque for the sum of £120 as a preliminary deposit; and we agree that such sum shall be absolutely forfeited if we at any time within thirty days after the said tender is opened withdraw the same, or if, in the event of this tender being accepted, we fail to complete the above-mentioned contract within fourteen days thereafter; and further, that this tender is made subject to the conditions contained in the Tender Board Regulations, printed on the back hereof, and by which we agree to be bound.

Dated this 24th day of April, 1895.

JOHN CARTER,  
F. M. GUMMOW,  
D. G. SNODGRASS,  
Alfred-street, North Sydney.

Witness,—EDWARD M. CLARK.

## TENDER BOARD REGULATIONS.

No tender shall be received after eleven a.m. on the day named for the receipt of such tender, unless there are circumstances which, in the opinion of the members of the Board then sitting, render it desirable to do so.

It shall be the duty of the President, Vice-President, or the senior member present, as the case may be, as soon as the tenders shall have been opened and the necessary particulars ascertained, to publicly announce the number of tenders received for each work and the name of the lowest tenderer; but no tender shall be accepted until the head of the branch, under whose directions the work is to be carried out, has reported upon the whole of the tenders received.

The Secretary shall, as soon as practicable after the Board has adjourned, exhibit in a conspicuous position, in the Public Works Office, a full statement of the tenders received, showing the work, the name of the tenderer, and the amount of each tender.

All envelopes containing tenders must be addressed to the President of the Board, and have legibly endorsed upon them the name of the work for which the tender is submitted.

Every tender must, as a guarantee of good faith, be accompanied by a preliminary deposit, calculated according to the following scale, viz. :—

For amounts up to £500 inclusive ... ..	£5 0 0
For amounts exceeding £500 and not exceeding £1,000... ..	£10 0 0

For all sums over £1,000 one per cent. on the amount of tender up to a maximum deposit of £500. Such deposit to be in the form of a cheque in favour of the President of the Board, endorsed by the Manager of the Bank upon which it is drawn, or a bank draft.

All deposits, with the exception of that of the successful tenderer, shall be returned by the Secretary to the person entitled thereto, as soon as possible after the Board shall have adjourned, and the deposit made by the successful tenderer shall be returned to him on his executing the bond for the fulfilment of the contract. When the contract is for a less sum than £200 the deposit with tender shall not be returnable until the service is satisfactorily completed.

Any tender which may be received without such preliminary deposit shall, unless otherwise directed by the Board, be deemed to be informal, and rejected accordingly.

In the event of any tenderer failing to take up his tender, complete the bond, and proceed with the contract, within the time specified, or withdrawing his tender after it shall have been opened, whether such tender shall have been accepted or not, all moneys deposited by him on account thereof or in connection therewith, shall be forfeited to the Crown, and in such case be paid to the credit of the Consolidated Revenue of the Colony.

Whenever a tenderer shall fail to proceed with a contract as aforesaid, fresh tenders shall be invited at short notice for the work, unless in the opinion of the President there are circumstances which make it desirable for another tender in the same series to be accepted; but the tenderer by whose default such a course has been rendered necessary shall be excluded from the competition, and from any competition for other works, at the pleasure of the President.

In submitting a tender, the full Christian name of the tenderer must be given, or when the offer is in the name of a firm, the names in full of each member. When bondsmen are required, the names in full, occupations, and addresses must be stated in the tender. The omission of this information will render the tender liable to be declared informal.

The Board shall not be bound to accept the lowest or any tender.

The Board-room shall be open for the admission of the public while the tenders are being opened and declared.

This is the tender marked "F," referred to in our annexed agreement with Her Majesty the Queen, dated the 15th day of June, A.D. 1895.

Witness,—HAROLD F. NORRIE.

JOHN CARTER,  
F. M. GUMMOW,  
D. G. SNODGRASS.

"G."

CONTRACT No. 118.—This is the Schedule of Quantities and Prices hereinbefore referred to.

No. of Item.	Description of Work.	Unit.	Probable Quantity.	Rate per Unit.
	Excavation in open trenches, in more or less hard materials, and in hard rock for main storm-water channel and branches, including removing any pipes, concrete, brickwork, woodwork, and drains, &c., met with, as specified in clauses 3, 6, 8, 9, and 10:—			£ s. d.
1	Excavation in surface soil, mud, sand, clay, ballast, soft rock, only .....	cubic yard	15,800	0 2 0
2	Excavation in hard rock, where guttering and gadding only is permitted .....	"	250	0 8 6
3	Excavation in hard rock, where charges of powder 2 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed, only, are permitted	"	250	0 7 6
4	Excavation in hard rock, where charges of powder 4 in. in length by 1½ in. in diameter, and such depth of bore-holes as shall be directed, only, are permitted	"	1,000	0 6 6
6	Filling in over and at sides of pipes, drains, main and branch storm-water channels, in open cuttings, &c., including all quarry filling and sand filling where ordered, as specified in clauses 4, 5, 6, 8, 9, and 10 .....	"	9,000	0 1 0
6	Removal of surplus materials to such places as may be directed, as specified in clause 7 .....	"	8,300	0 0 9
7	Sandstone concrete in any situation, as specified in clause 11 .....	"	6,800	1 8 0
8	Cement coating in any situation, as specified in clause 12 .....	square yard	20,900	0 2 3
9	Brickwork in cement in 4½-in. lining to invert of storm-water channel, as specified in clauses 2 and 13 .....	cubic yard	60	2 10 0
	Providing, laying, and jointing glazed stoneware plain pipes, junctions, and bends, in trenches, including providing and fixing dies, as specified in clause 14:—			
10	24 in. internal diameter .....	lineal foot	280	0 12 6
11	18 in. " .....	"	120	0 6 0
12	12 in. " .....	"	10	0 3 0
13	6 in. diameter and smaller .....	"	600	0 1 0
14	Receiving, placing, building in, fixing and jointing any metal-work, as cast-iron frame and gully grating supplied by Government, at the site of the works, as specified in clauses 264 and 265 of the schedule to specification .....	cwt.	75	0 4 0
15	Providing, dressing, and setting in cement mortar, freestone curbing, as shown, and as specified in clause 188 of the schedule to specification .....	cubic foot	2	0 4 0
16	Providing, dressing, and setting squared freestone pitching and channelling, as shown, and as specified in clause 187 of the schedule to specification .....	square yard	15	0 8 0
17	Special bluestone concrete in any situation, as specified in clause 141 of the schedule to specification .....	cubic yard	Rate only	3 0 0
18	Permanent puddle .....	"	"	0 10 0
19	Bluestone metal, 1½-in. gauge, stacked .....	"	"	0 13 0
20	Bluestone metal, 2½-in. gauge, stacked .....	"	"	0 12 0
21	Sand, stacked .....	"	"	0 8 0
22	Oregon timber .....	cubic foot	"	0 2 0
23	Wrought-iron in bolts, screws, nails, spikes, and straps .....	lb	"	0 0 4
24	Portland cement .....	cask	"	0 13 0
25	Artisan or mechanic .....	day	"	0 11 0
26	Skilled labourer .....	"	"	0 10 0
27	Ordinary labourer .....	"	"	0 8 0
28	Cart, horse, and driver .....	"	"	0 11 0
29	One additional horse .....	"	"	0 5 6

The quantities are not guaranteed as correct, and are merely for the guidance of tenderers, being subject to omissions, deductions, alterations, and additions.

All work herein enumerated shall be understood as being placed in position where specified and ordered, and in complete working condition, in accordance with the specification.

The above schedule prices include, in every case, continual maintenance of the works during the whole time of construction, and up to the day of their being formally taken over by the Engineer.

Prices for items Nos. 25, 26, 27, 28, and 29 are to be for such as are able-bodied and efficient. The schedule rates per day are for the day of eight hours. In the event of overtime and night-work being ordered, it is to be paid for at 25 per cent. advance on the time rates set down for day-work.

The whole of the foregoing prices to include all labour, tools, implements, plant, machinery, shoring, timbering, centering, concrete boxes, unwatering, coffer-dams, fluming, temporary bridges, roads, pumping, gasket filling, diverting water-courses and surface water, diverting and maintaining the traffic along roads, crossing over pipe-sewers, disposal and removal of surplus materials on completion of contract, reinstating all roads and other surfaces, &c., and any other thing necessary in executing and completing each respective item, in accordance with plans and specification.

This is the schedule of prices marked "G" referred to in our annexed agreement with Her Majesty the Queen, dated the fifteenth day of June, A.D., 1895.

JOHN CARTER.  
F. M. GUMMOW.  
D. G. SNODGRASS.

Witness,—HAROLD F. NORRIE.

"H."

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"H."

Sirs,

Department of Public Works, Sydney, 16 May, 1895.

I have the honor, by direction of the Secretary for Public Works, to inform you that your tender, dated the 24th ultimo, is accepted for construction of the Johnstone's Creek stormwater channel, Contract No. 118, at twenty and one half per cent. (20½ per cent.) below the rates set forth in the printed schedule of prices.

It is to be distinctly understood that the work is only to be proceeded with on the part from Booth-street towards the harbour when you have written instructions to proceed therewith, subject to the following special conditions, viz. :—

That if it shall be represented to the Secretary for Public Works at any time during the progress of this contract that an undue number of men are being employed thereon who have not been domiciled in this Colony for six months previously to such employment, and such allegation be proved to his satisfaction, the Minister shall have the power to call upon you to discharge any or all such men, and on such direction being conveyed to you, under the hand of the Under Secretary for Public Works, you shall discharge such men forthwith; and in the event of your non-compliance with any such direction, the Minister shall have the power to declare this contract to be cancelled as if this stipulation had been expressly set out in the cancellation clause of the general conditions relating to this contract.

The work is to be carried out in strict accordance with the several contract exhibits relating to this contract, and to be completed within eighteen months from this date.

The security required on this contract will be a fixed deposit receipt, in favour of the Secretary for Public Works, for the sum of £605.

I have to refer you to the Engineer-in-Chief for Public Works for further information, and to request that you will call upon the officer in charge of bonds and contracts at this office for the purpose of executing the necessary documents for the due observance of your contract.

I have, &amp;c.,

J. BARRLING,

Under Secretary.

Messrs. Carter, Gummow, &amp; Co., Alfred-street, North Sydney.

This is the copy acceptance, marked "H," referred to in our annexed agreement with Her Majesty the Queen, dated the fifteenth day of June, A.D. 1895.

JOHN CARTER,  
F. M. GUMMOW,  
D. G. SNODGRASS.

Witness—HAROLD F. NORRIE.

No. 8.

Voucher for £1,308 15s. 3d.

(No. 410.)

NEW SOUTH WALES.

Sydney, 13 September, 1895.

Date.	Name.	No. of Voucher.	Amount.	Total.
1895. Sept. 2...	Carter, Gummow, & Co .....	7512	£ s. d. ... ..	£ s. d. 1,308 15 3

I certify that the amount charged in this voucher as to computations, castings, and rates, is correct, that the service has been faithfully performed, and that the expenditure is duly authorised in terms of the Audit Act.

R.H.

JOHNSTONE'S CREEK—91.

CONTRACT No. 118.—Progress Return No. 1, showing quantity and value of work executed or fixed, and material advanced on, on the 2nd day of September, 1895.

Date for completion, as per contract, 16th day of November, 1896; estimated cost of work, £16,646. Present advance, £1,308 15s. 3d.; total, £1,308 15s. 3d.

Schedule Rate No.	Description.	Unit.	Quantity.	Rate.	Amount.	Total.
1	Excavation.....	cubic yard	4,620	2/-	£ s. d. 462 0 0	£ s. d. 2,057 16 0
5	Filling .....	"	4,000	1/-	200 0 0	
7	Sandstone concrete .....	"	997	28/-	1,395 16 0	
	Less 20½ per cent., as per tender .....	.....	.....	.....	.....	421 16 11
	Total.....	.....	.....	.....	.....	1,635 19 1

Recapitulation.	Amount.	Total.
Value of work executed to date .....	£ s. d. 1,635 19 1	£ s. d. 1,635 19 1
<i>Deductions to be made:—</i>		
Retention money .....	327 3 10	327 3 10
Amount of 1st progress payment now recommended .....	.....	1,308 16 3

I hereby certify that the above return is a fair and correct statement of the contract to which it refers, and that the above measurements were made by me with Messrs. Carter, Gummow, & Co.

W. J. MILNER,

Officer-in-Charge of the Work.

I certify that the amount charged in this voucher as to computations, castings, and rates, is correct, that the service has been faithfully performed, and that the expenditure is duly authorised in terms of the Audit Act.

T. PRIDHAM,

For Head of the Department.

{Plans.}

1895.

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

HUNTER DISTRICT WATER SUPPLY (PARTIAL  
DUPLICATION) BILL.

(MESSAGE No. 15.)

*Ordered by the Legislative Assembly to be printed, 24 September, 1895.*

FREDK. M. DARLEY,  
*Lieutenant-Governor.*

*Message No. 15.*

In accordance with the provisions contained in the 54th section of the Constitution Act, the Lieutenant-Governor recommends for the consideration of the Legislative Assembly the expediency of making provision to meet the requisite expenses in connection with a Bill to sanction the procuring and laying of a second pipe-line from Walka to Buttai in connection with the Hunter District Water Supply; to provide for transferring to, and vesting in, the Hunter District Water Supply and Sewerage Board the property in and the control and management of the said work; and for purposes incidental thereto.

*Government House,  
Sydney, 24th September, 1895.*



1895.

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LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

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**WATER RIGHTS BILL.**  
(MESSAGE No. 25.)

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*Ordered by the Legislative Assembly to be printed, 13 November, 1895.*

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FREDK. M. DARLEY,  
*Lieutenant-Governor.*

*Message No. 25.*

In accordance with the provisions contained in the 54th section of the Constitution Act, the Lieutenant-Governor recommends for the consideration of the Legislative Assembly the expediency of making provision to meet the requisite expenses in connection with a Bill to regulate and license the construction and use of works for water conservation, water supply, and drainage; to confer certain rights on the holders of those licenses and on the Crown; to authorise the taking and acquiring of certain lands; and for purposes incidental thereto.

*Government House,*  
*Sydney, 13th November, 1895.*

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1895.

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

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**WATER SUPPLY FOR WYALONG.**

(PETITION FROM RESIDENTS IN THE TOWNS OF WYALONG, WYALONG WEST, AND THE WYALONG GOLD-FIELDS, PRAYING FOR.)

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*Received by the Legislative Assembly, 11th September, 1895.*

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To the Legislative Assembly of the Colony of New South Wales in Parliament assembled.

GREETING :—

The Petition of the Residents of the towns of Wyalong, and Wyalong West, and the Wyalong Gold-field generally, humbly sheweth—

1. That owing to the absence of a supply of water it is impossible to satisfactorily carry on the mining operations of this gold-field.
2. That great distress has been and still is caused to your Petitioners by the want of water, in sufficient quantity and of suitable quality, for domestic purposes.
3. That the tanks excavated at Wyalong and Wyalong West, by order of the Government, are useless, as not sufficient rains have fallen to cause water to flow into them.
4. That Petitioners have reason to believe, from the results obtained in sinking shafts for mining purposes, that a plentiful supply of water would be obtained by artesian boring.
5. That there is a large and we believe permanent supply of water in the Bland River about 20 miles from Wyalong.
6. That the rainfall in the Wyalong District is uncertain and droughts are frequent.
7. That a population of about 5,000 souls is resident in or in the vicinity of the towns of Wyalong and Wyalong West.
8. That there are now on the field eight complete quartz-crushing plants, which have all been erected by and at the expense of private individuals and firms, and that in addition to these very extensive chlorination works are now in course of erection for the treatment of stone not only from the Wyalong mines but also from other mines in this Colony and elsewhere.
9. That a large number of the reefs at Wyalong have been proved to be payable at a depth of from 160 to 200 feet, with every indication of continuing payable to great depths, and that in the opinion of eminent geologists and mining experts the field will be a permanent one.
10. That your Petitioners respectfully invite the fullest inquiry into the accuracy of the foregoing statements.
11. That in consideration of the state of affairs as set out herein, your Petitioners pray that immediate steps be taken by the Government to provide a supply of water for the Wyalong gold-field, either by artesian boring or by bringing it from the Bland River, or otherwise as may appear most advisable to the expert advisers of the Government, as such a supply is indispensable if the present population is to be maintained on the field, and if no such supply is provided a large number of the residents will be driven away and deprived of the means of subsistence which they may obtain here.

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

[Here follow 875 signatures.]



1895.

NEW SOUTH WALES.

## STATE CHILDREN'S RELIEF BOARD.

## REPORT

OF THE

PRESIDENT, THE HON. SIR ARTHUR RENWICK, K.B., M.L.C.  
&c., &c., &c.,

FOR THE

YEAR ENDING 5 APRIL, 1895.

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Presented to Parliament, pursuant to Act 44 Vic. No. 24, sec. 121.

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SYDNEY: CHARLES POTTER, GOVERNMENT PRINTER.

1895.



The President of the State Children's Relief Board to The  
Colonial Secretary.

Charitable Institutions of New South Wales,  
State Children's Relief Board,  
Central Home, Paddington, 5 April, 1895.

Sir,

In accordance with the provisions of Act 44 Vic. No. 24, I have the honor to submit for the information of the Honorable the Colonial Secretary my Report upon the operations of the State Children's Relief Board for the official year which closed on the 5th April, 1895.

Fourteen years have passed since Parliament adopted boarding-out as the national policy of dealing with State children in this Colony, and the lapse of time has only afforded stronger proof of the wisdom of the system under which the family method of training our dependent children was substituted for that technically known as the "barrack system," under which all the essential conditions of family life and true home influences were, of necessity, ignored. It is not, however, necessary to deal with that phase of the subject here, because boarding-out has long ago passed its tentative stages; but I may fitly refer briefly to the economical aspect of the matter, to which too little public attention has hitherto been directed. From returns recently carefully prepared, it is estimated that since the initiation of the boarding-out system in this Colony, and comparing the annual capita-tion cost of the children dealt with under it with that of the inmates previously trained in the public asylums, it has saved not less than £100,000 to the State, apart altogether from the physical and moral advantages to the children which it has undoubtedly secured. This satisfactory result has only been obtained by careful administration and sustained enthusiasm on the part of the Board and its officials, and the fact that after the first three years of the system the average cost seldom exceeded £14 per child is proof of the closeness of the supervision exercised over every item of expenditure.

The following table shows the rate at which the number of children under the care of the Board has increased annually since the initiation of the boarding-out system in 1881:—

Under control on	Supported by Govern- ment.			Adopted without payment.			Apprenticed.			Total under control.		
	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.
5 April, 1881.....	24	35	59	...	...	...	...	...	...	24	35	59
5 " 1882.....	40	60	100	...	3	3	...	...	...	40	63	103
5 " 1883.....	118	174	292	1	10	11	...	4	4	110	188	307
5 " 1884.....	221	289	510	6	15	21	5	16	21	232	320	552
5 " 1885.....	523	363	886	15	35	50	26	64	90	564	462	1,026
5 " 1886.....	614	411	1,025	28	65	93	137	111	248	779	587	1,366
5 " 1887.....	741	473	1,214	49	74	123	309	156	465	1,099	703	1,802
5 " 1888.....	793	485	1,278	52	84	136	357	189	546	1,202	758	1,960
5 " 1889.....	815	526	1,341	61	93	154	440	238	678	1,316	857	2,173
5 " 1890.....	805	543	1,348	62	96	158	513	265	778	1,380	904	2,284
5 " 1891.....	807	566	1,373	67	91	158	543	295	838	1,417	952	2,369
5 " 1892.....	776	613	1,389	69	94	163	545	299	844	1,390	1,006	2,396
5 " 1893.....	821	643	1,464	61	97	158	590	325	915	1,472	1,065	2,537
5 " 1894.....	955	786	1,741	59	106	165	592	311	903	1,606	1,203	2,809
5 " 1895.....	1,167	927	2,094*	56	91	147†	599	334	933‡	1,822	1,352	3,174

\* This total includes 9 children in Hospital, 140 in Cottage Homes, 10 in Depot, 14 under 3 years paid for at 7s. per week, 45 delicate children at 6s., 1 delicate child at 7s. per week, 16 infants paid for at 8s. per week, and 20 infants paid for at 10s. per week.

† This total includes 29 children who are classed as "Boarders without subsidy," that is, placed with guardians who, as in the case of adopted children, do not receive payment for maintenance.

‡ This total includes 16 absconders, whose names still appear on the books, and 12 children classed as unofficial.

It

It is only possible to account for the very large increase that has taken place in the numbers of young children who have been placed under the control of the Board during the year—as shown in the foregoing table—by attributing it wholly to the continued want of employment, and the consequent depression and poverty of the working classes. There were, in 1895, just 365 more children under control than in 1894, when the numbers were 272 in excess of the previous year. Totalling these two years, it will be seen that the net increase has been 637—the largest increase occurring in any two years since the initiation of the system. Children are not, in any case, boarded out without due care being taken to ascertain that they are in really destitute circumstances, so that there can be no doubt whatever of the necessity for affording relief in every instance. In 1894 there were 1,741 children supported by the State, while there are now 2,094—an increase of 353 in the division for which payment is made. In 1894 there were 2,809 children placed out—there are now 3,174, comprising 1,822 boys and 1,352 girls, for whom suitable homes and approved occupations have been provided under the auspices of the Board.

The total number of children under the care of the Board during 1894 was 2,809, which was an excess of 272 over the previous year, and was made up of 1,606 boys and 1,203 girls. It is gratifying to find that in the great majority of cases satisfactory progress and improvement are being made, and that, with few exceptions, no ground for complaint existed against either the guardians or the children. During the official year now closed there were 1,822 boys and 1,352 girls under control, or a total of 3,174, showing an increase of 365 upon the operations of 1894. The ages of the children varied from a few days—in some cases from the time of birth—up to the age of 17 years, when they are released from control, and being paid the money which has accumulated in the Savings Bank to their credit during the period of their apprenticeship, are permitted to go out into the world and earn their own livelihood. Generally speaking, they are well inclined and well equipped to do so successfully. There were 601 boys and 452 girls, or a total of 1,053 children boarded out during the year, as against 398 boys and 297 girls, or a total of 695 children, so dealt with in 1894, showing an increase of 358 in this branch alone. Nine boys and 10 girls died, in addition to 5 boys who were accidentally drowned in various parts of the country; 140 boys and 111 girls were discharged to relatives, after due inquiry and upon the recommendation of the officers of the department; 4 girls were transferred to the Deaf and Dumb and Blind Institution; 3 uncontrollable boys were sent on board the training ship "Sobraon"; 49 boys were sent to the Boys' Home at Dundas; 5 boys and 5 girls were handed over to the Benevolent Asylum, Sydney; 3 girls were sent to the Newington Asylum; 2 boys were sent to the Imbecile Asylum at Newcastle; 41 boys and 90 girls were sent to the Shaftesbury Receiving Home; 4 boys were transferred to the St. Aloysius' Home; 1 boy was sent to the Ashfield Home; 2 boys were transferred to the St. Joseph's Provident Society; 1 girl was sent to the Consumptive Home at Thirlmere; 18 boys and 2 girls absconded; and 95 boys and 77 girls were discharged from control, they having reached the age of 17 years. Of the 2,094 children who are paid for by the State, 9 are in hospital; 146 are in the Cottage Homes for Invalids at Parramatta and Mittagong; 10 at the Central Home, Paddington; 20 delicate infants are paid for at the rate of 10s. a week; 16 at 8s. per week; 15 at 7s. a week; and 45 at 6s. a week, whilst the whole of the remainder who come into the subsidy division are paid for at the rate of 5s. a week. The other classes are dealt with further on under their distinctive headings.

The expenditure has been carefully supervised and judiciously curtailed wherever an opportunity presented itself of effecting economy without interfering with the usefulness of the system. Deposits amounting

amounting to £36,182 1s. 8d. were received from the Treasury, and to this amount must be added a sum of £1,507 13s. 11d. carried forward to the credit of the Board from the previous year's transactions, making a total of £37,689 15s. 7d. When provision was made for the payment of all accounts due up to the closing of the books, the gross expenditure was £37,475 4s. 10d., which left a credit balance of £214 10s. 9d. to be carried forward to the official year 1895-6. The gross cost of boarding out was £26,859 0s. 4d., or an increase of £3,247 13s. 6d. over the previous year. The daily average number of children placed out as boarders during the year was 1,982, an increase of 326, and the gross average cost per head was £14 6s., as against £14 5s. 2d. in 1894 and £14 5s. 10d. in 1893, or an increase in the capitation cost of 10d. The gross receipts from those parents who contributed something towards the maintenance of their offspring amounted to £1,253 2s. 8d., and after deducting this amount from the gross capitation expenditure, the actual cost per head to the State during 1895 has been £13 18s. 2d., or a decrease of 4d. upon the previous year's transactions. These results are most satisfactory. Full details of the receipts and expenditure will be found among the Appendices. As an indication of the systematic economy which is practised in all divisions I may mention that this capitation charge seldom varies from year to year.

The following is the classification of the guardians' occupations:—  
 Architects, 1; agents, 2; apiarist, 1; attendants, 7; bakers, 7; boot-makers, 9; bricklayers, 2; boot-finisher, 1; butchers, 4; builders, 2; boilermaker, 1; blacksmiths, 5; bank managers, 3; clergymen, 3; carters, 2; coach proprietors, 2; clerks, 8; cook, 1; cabinet-makers, 3; carpenters, 22; contractors, 3; commercial travellers, 2; chimney cleaner, 1; coachbuilder, 1; civil servants, 3; confectioners, 2; chemists, 3; cordial makers, 2; collectors, 2; caretakers, 3; compositor, 1; cooper, 1; cabman, 1; dairy farmers, 65; domestics, 328; dress-makers, 29; dealers, 3; doctors, 3; draper, 1; engine-driver, 1; electrician, 1; engine-smith, 1; engineers, 3; farmers, 983; fruiterers, 2; fishermen, 3; fettler, 1; gardeners, 16; grazier, 41; gunsmith, 1; gatekeeper, 1; grocers, 23; gasfitter, 1; independent, 30; instrument maker, 1; importer, 1; journalists, 2; joiner, 1; labourers, 11; laundresses, 7; lighterman, 1; librarian, 1; miners, 43; merchants, 2; milkmen, 10; moulders, 1; master mariners, 3; messenger, 1; music teacher, 1; monumental masons, 1; nurses, 6; orchardists, 64; organist, 1; plumber, 2; pastoralists, 5; painters, 6; plasterer, 1; poultry farmer, 1; policemen, 3; photographer, 1; pig farmer, 1; postmasters, 2; picture framer, 1; quarrymen, 3; railway employces, 20; school teachers, 27; shopkeepers, 22; shipwright, 1; solicitors, 2; smelter, 1; surveyor, 1; seamstresses, 4; stonemason, 1; settler, 1; storeman, 1; sawyer, 1; selectors, 2; squatter, 1; shipmaster, 1; tailor, 2; upholsterer, 1; undertaker, 1; vigneron, 1; warders, 2. Total, 1,925 guardians.

Under the thorough system of inspection that now prevails, and upon which the present comfort and future welfare of the children mainly depend, the circumstances and condition of the guardians continue to improve. The guardians have been changed in a great many instances during the year, in a few instances because of neglect, but mainly because the homes and localities were found upon experience to be unsuitable, but as a rule no very serious grounds for complaint existed, and wherever it was found necessary to make a change practical experience has shown that it was in the interest of the children. There was an increase of 214 in the number of children placed out with well-to-do farmers throughout the healthy country districts, the total number for 1895 being 983, and the number of girls placed in domestic employ has increased from 287 to 328, whilst in all the other useful trades and occupations by which the children might in time be expected

expected to earn a livelihood satisfactorily, increases have taken place. The number of foster parents has increased during the year from 1,747 to 1,925—that is to say, there are now 178 more guardians than there were in 1894. When all the various classes of useful occupations and callings are taken into account it will be seen that there are now 2,993 children being trained in the hope that when they arrive at years of discretion and maturity they will be equipped for the battle of life and provided with the means of becoming earnest, useful, and contented citizens.

Children are placed out in the undermentioned districts in the numbers stated:—Ashfield, 10; Arncliffe, 2; Annandale, 13; Auburn, 31; Albury, 4; Albion Park, 3; Adamstown, 7; Armidale, 9; Aberdeen, 3; Balmain, 133; Bowning, 1; Berrima, 10; Botany, 6; Burwood, 15; Boggabri, 1; Bexley, 1; Balmoral, 4; Bowral, 23; Ballina, 3; Bundanoon, 4; Bungonia, 1; Braidwood, 10; Bulli, 39; Berry, 19; Bungendore, 6; Bega, 1; Binalong, 2; Brogo, 2; Bathurst, 27; Brewongle, 2; Blacktown, 5; Branxton, 42; Croydon, 17; Camperdown, 13; Canterbury, 3; Campbelltown, 4; Castle Hill, 4; Canowindra, 1; Candelago, 1; Collector, 3; Coraki, 1; Crookwell, 18; Canley Vale, 8; Camden, 27; Cootamundra, 15; Cambewarra, 8; Cargo, 5; Cooma, 3; Cessnock, 1; Coolac, 3; Cudal, 2; Coolaman, 1; Clarencetown, 7; Cooranbong, 2; Deniliquin, 1; Dapto, 11; Dungog, 6; Denman, 1; Douglas Park, 2; Dundas, 3; Dural, 1; Dubbo, 6; Eastwood, 1; Forbes, 13; Glebe, 19; Gladesville, 17; Goulburn, 299; Grabben Gullen, 13; Granville, 76; Guildford, 17; Gunning, 12; Gerringong, 13; Girilambone, 1; Glen Innes, 3; Gosford, 4; Greta, 6; Gunnedah, 1; Gundagai, 1; Gulgong, 3; Hunter's Hill, 16; Hurstville, 8; Hexham, 3; Helensburg, 1; Hinton, 3; Hartley, 1; Hawkesbury, 92; Illabo, 1; Islington, 3; Jugiong, 1; Junce, 8; Jamberoo, 21; Kogarah, 13; Kellyville, 3; Kangaloon, 8; Kiama, 17; Kangaroo Valley, 25; Leichhardt, 76; Liverpool, 9; Lambton, 11; Lismore, 2; Lawson, 1; Manly, 5; Maitland East, 13; Maitland West, 74; Marrickville, 65; Macdonaldtown, 16; Mummel, 14; Menangle, 1; Minmi, 5; Mittagong, 97; Moss Vale, 8; Marulan, 11; Murrumburrah, 7; Milton, 29; Moruya, 5; Mulgrave, 4; Mudgee, 5; Molong, 5; Miller's Forest, 19; Mount Hope, 1; Morpeth, 4; Muswellbrook, 6; Manning River, 2; Macleay River, 2; Murrurundi, 1; Nevertire, 1; Newbridge, 2; Newtown, 55; Nowra, 20; Newcastle, 78; Nelson's Plains, 6; Narrabri, 2; Narrandera, 1; North Sydney, 60; Oberon, 2; Orange, 7; Ourimbah, 3; Pyrmont, 10; Paddington, 38; Parramatta, 175; Petersham, 17; Parkesbourne, 5; Patterson, 24; Picton, 44; Pitt Town, 28; Penrith, 12; Pyree, 1; Parkes, 7; Prospect, 7; Queanbeyan, 7; Quirindi, 1; Rockdale, 11; Rookwood, 33; Redfern, 43; Rydalmere, 2; Ryde, 12; Randwick, 9; Riverstone, 27; Richmond, 2; Rooty Hill, 2; Raymond Terrace, 11; Raglan, 1; Summer Hill, 8; Sydney, 18; Singleton, 19; Surry Hills, 40; Shellharbour, 4; St. Mary's, 5; St. Alban's, 1; Sassafras, 2; Stockton, 1; Scone, 3; Taralga, 4; Tarago, 6; Tumut, 6; Thirlmere, 6; Tilba Tilba, 1; Tamworth, 4; Tirranna, 5; Waverley, 18; Woolloomooloo, 13; Woollahra, 18; Waterloo, 36; Wheeo, 19; Windellama, 3; Watson's Bay, 4; Wagga Wagga, 2; Wollongong, 27; Windsor, 27; Wallerawang, 1; Wentworth, 3; Waratah, 8; Wilberforce, 25; Wellington, 4; Wallsend, 12; Wickham, 2; Woodville, 4; William Town, 3; Wombat, 1; Wilcannia, 1; Warren, 1; Wollombi, 5; Wyee, 1; Yass, 8; Yarra, 5; Young, 2; out of Colony, 4. Total children, 2,993.

A marked illustration of the popularity and success of the boarding-out system is to be found in the very large increase which takes place every year in the number of persons who desired to obtain the control of State children, and the illustration is the more gratifying when it is remembered that the applications are unsolicited in any way and come from all parts of the country. The most careful examination

examination is made by the official visitors into the circumstances of each applicant, in order that only really suitable homes may be selected. The number of applications received during the year just closed was 1,705 as against 1,097 in 1894, or an increase of 608. Of the total, 1,246 were from Protestants and 459 from Roman Catholics. In the former division 1,763 children were applied for as boarders, 228 as apprentices, and 16 for adoption; while in the latter 459 Roman Catholics sought 656 children as boarders, 73 as apprentices, and 6 for adoption. A total number of 2,742 children of all religions were applied for in 1895 as against 1,713 in 1894, or an increase of 1,029 for the year. 1,200 of the total new applications were inquired into and reported upon by the inspectors attached to the Department, with the result that 908 were approved, and 292 refused on a variety of grounds that were considered sufficient by the Board to warrant their approving of the recommendations of the trusted officers of the Board.

There were eleven sittings of the Board during the year, at which the members attended as follows:—The Hon. Sir Arthur Renwick, Kt., M.D., M.L.C., President, 11; Mrs. Garran, 11; Lady Windeyer, 10; Mrs. Goodlet, 10; Lady Manning, 8; Mrs. McMillan, 8; Mrs. Slattery, 4; The Hon. W. J. Trickett, M.L.C., 3; The Hon. L. F. Heydon, M.L.C., 3. Mrs. McMillan was absent in Europe during portion of the year.

The following is the usual list of lady visitors, under whose supervision the homes are placed in various parts of the Colony, and whose voluntary services are so valuable a factor in the working of the system:—Armidale, Mrs. Allingham, Mrs. K. A. Donnelly, Mrs. S. A. Kearney, Miss E. Wormersley; Annandale, Mrs. Arguimbau; Ashfield, Mrs. Holland, Mrs. Wilson; Bowral, Mrs. J. C. Bagot, Mrs. D'Arcy Irvine; Bega, Mrs. Evershed; Balmain, Mrs. J. Dixon, Mrs. Pole; Branxton, Mrs. J. A. Tullock, Mrs. Bercini, Mrs. E. Smith; Bundanoon, Mrs. Osborn; Bathurst, Mrs. Marriott, Mrs. Musgrave, Miss Newman; Berrima, Mrs. G. Shephard, Mrs. Wilshire; Bethungra, Mrs. M. Sawyer; Baulkham Hills, Mrs. W. M. Best; Berry, Mrs. E. Morris, Mrs. English; Boolong, Miss Grant; Burrowa, Mrs. C. Robinson, Mrs. J. H. Boucher; Barraba, Mrs. Kidd; Bulli, Mrs. J. B. Nicholson; Braidwood, Mrs. O'Brien; Cootanundra, Mrs. E. Barnes, Mrs. W. H. Matthews, Mrs. E. G. Webster; Camden, Mrs. Chas. Furner; Cassilis, Mrs. Maria Traill; Cooma, Mrs. Byrne, Mrs. King; Carlingford, Mrs. H. Cox, Mrs. Neil Harper; Cambewarra, Mrs. Brennan; Collector, Mrs. Best; Cessnock, Mrs. M'Donald; Campbelltown, Mrs. J. Kidd, Mrs. J. Loney; Croydon, Mrs. Wilson, Miss Bowman; Deniliquin, Mrs. H. M'Cullough, Mrs. A. H. Noyes, Mrs. Holt; Dungog, Mrs. M. Day; Dalton, Mrs. H. T. Beresford; Forbes, Mrs. Raymond, Mrs. Edwards; Goulburn, Mrs. Ross, Mrs. Oliver, Mrs. Knowlman, Mrs. Arthur Chisholm, Mrs. Spencer, Mrs. Hancock-Burkitt, Mrs. William Chisholm, Mrs. De Lauret, Mrs. M'Killop, Mrs. E. Gillespie, Mrs. Jessop, Mrs. Craig, Mrs. L. Barber; Glebe, Mrs. Munro, Mrs. Graham; Gladesville, Mrs. Lumsdaine; Guildford, Mrs. Gurney; Granville, Mrs. E. B. Docker; Gunning, Mrs. Saxby; Gresford, Mrs. Logan; Gerringong, Mrs. Heighway; Hunter's Hill, Mrs. Bailey; Hay, Mrs. Johnson, Mrs. Lavender; Junee, Mrs. Studds; Kangaroo Valley, Mrs. Samuelson; Kogarah, Mrs. P. Lacey, Mrs. M. Grosvenor; Kempsey, Mrs. Minnet; Kurrajong, Mrs. Garland; Lane Cove, Mrs. P. F. Richardson; Liverpool, Mrs. Tillett, Mrs. Shearman; Maclean, Mrs. M'Innes; Moss Vale, Mrs. Gale; Maitland, Mrs. J. D. Prentice, Mrs. M. Smith, Miss Annie Wolfe, Mrs. W. G. Lipscombe, Miss Alice Hyndes; Menangle, Mrs. Onslow; Morpeth, Mrs. Goddard; Murrumburrah, Mrs. G. Barnes, Mrs. Cutcliffe; Mittagong, Mrs. F. C. Williams, Miss Burke, Mrs. Beaumont; Mudgee, Mrs. Loneragan; Moruya, Mrs. Archibald; Milton, Miss Kendall; Marrickville, Mrs. W. W. Clarke; Molong, Mrs. Alldis, Mrs. Dr. Browne, Mrs. Panton;

Panton; Muswellbrook, Miss Luke; Newcastle, Mrs. Weatherill, Mrs. J. Harris, Mrs. Ireland, Mrs. M'Donnell, Mrs. Cuthbertson; Nowra, Mrs. Morton, Mrs. Wotton; North Sydney, Mrs. T. O'Sullivan; Orange, Mrs. James Dalton; Parramatta, Mrs. Gunther, Mrs. Taylor, Miss Codrington; Penrith, Mrs. F. E. Lethbridge, Mrs. Ewans, Mrs. F. Woodriffe; Picton, Mrs. Gibson, Mrs. W. R. Antill, Mrs. Sheppard; Prospect, Mrs. Remmington; Petersham, Mrs. Dwyer; Pyrmont, Mrs. Gelding; Queanbeyan, Mrs. G. Campbell, Mrs. G. P. Smith, Mrs. Willans, Mrs. Emery; Quirindi, Mrs. Mary Patrick; Redfern, Mrs. Boyce; Raymond Terrace, Mrs. J. Richardson; Ryde, Mrs. Collingridge; Richmond, Mrs. Onus, Miss Onus; Rooty Hill, Mrs. Mackay; Rouse Hill, Mrs. M. Pearce; Randwick, Mrs. Hellicar; Sutton Forest, Mrs. A. G. Stoddart; Stroud, Mrs. Rushforth; Scone, Mrs. A. C. Thomas; Surry Hills, Mrs. Hargrave; Stockton, Mrs. S. W. Smith; Summer Hill, Mrs. W. E. Shaw, Mrs. Holland, Mrs. G. E. Rodd; St. Peters, Mrs. E. D. Madgwick; Stanmore, Mrs. W. Clarke; The Burrier, Mrs. Thompson; Tamworth, Mrs. Middleton, Mrs. Wiseman; Tumut, Mrs. A. M. Brown; Tenterfield, Mrs. Armstrong; Windsor, Mrs. J. B. Johnston, Mrs. Hall, Mrs. W. Dean, Miss Hall, Mrs. Fitzpatrick; Wollongong, Mrs. Finlayson; Woollahra, Mrs. Newton, Mrs. Gerber; Wallsend, Mrs. Neilson; Waverley, Mrs. W. H. Simpson, Mrs. Best, Miss Walker; Wallerawang, Mrs. Abbott; Wagga Wagga, Mrs. G. Coleman; Windeyer, Mrs. Mallon; Wiseman's Ferry, Miss Laughton; Woodville, Mrs. Graham; Wybong Creek, Mrs. Cox; Yarrunga, Mrs. Throsby; Young, Mrs. Dr. Heeley.

The inspections of the homes under the control of the Board—both by the voluntary visitors and the official inspectors—numbered 8,156, which was 166 in excess of the previous year. The voluntary visitors made 1,305 inspections, as against 1,666 in 1894; whilst the official inspections numbered 6,851, as against 6,323 in 1894, or an increase of 528 official visits. There was a falling off of 361 in the visits made by the honorary lady visitors.

The subjoined are the details of the visits:—Honorary Lady Visitors—1889, 1,356; 1890, 1,292; 1891, 1,225; 1892, 1,383; 1893, 1,638; 1894, 1,666; 1895, 1,305; decrease of 361 on previous year. Official visits by Inspectors during year ending 5th April, 1893, 5,969; year ending 5th April, 1894, 6,323; year ending 5th April, 1895, 6,851; or an increase of 528 on the previous year's figures.

The average number of children under supervision for the year ended 5th April, 1895, was 3,044. The total number of visits of inspection was 8,156, or an average of  $2\frac{2}{3}$  visits to each child as against  $3\frac{1}{2}$  in the previous year.

Average number of children placed out during year ended April	
5th, 1895	2,890
Average number of children placed in Cottage Homes, year ended	
April 5th, 1895	154
Total daily average under control	3,044

The Board has as usual endeavoured to reduce the number of children in every house without separating families. The statistics of 1895 show:—

1,239	homes with 1 child.
398	" " 2 children, including 201 with children of one family.
197	" " 3 " " 60 " "
88	" " 4 " " 20 " "
3	" " 5 " " 1 " "

1,925 homes, containing 2,993 children (exclusive of 16 absconders, 9 in hospitals, 146 in cottage homes, and 10 in Dépôt); total, 3,174.

In

In consequence of the adoption of the principle of keeping families of children in the same home, as far as possible, there are thus 282 such families with separate guardians; and exclusive of homes of this character there are—

1,239	homes with 1 child.
197	“ “ 2 children each.
137	“ “ 3 “ “
68	“ “ 4 “ “
2	“ “ 5 “ “

1,643 homes, containing 2,326 children (a little over  $1\frac{1}{2}$  average); last year the average was  $1\frac{1}{4}$ .

#### NURSING CHILDREN.

The experience of years has now fully justified the practice of dealing with delicate young children in a manner distinct from the general run of those who have come under the control of the Board, and has satisfied me that it has been the direct means of saving the lives of a number of puny motherless infants, who would doubtless have succumbed had they not been at once placed in the care of specially selected wetnurses and other creditable matronly persons in healthy country districts, far removed from the often insanitary and nearly always undesirable and unsuitable localities in which they were brought into the world. Special precautions are taken in the selection, not only of the homes and the guardians, but of the districts in which these young children are placed; and it is gratifying to be able to state that so far no difficulty has been experienced in obtaining the services of really good, clean, healthy, wholesome, and experienced women to take care of weakly infants, and up to the present time no occasion has arisen to seriously complain of the way the little ones dealt with in this class are treated. Special payments, varying from 6s. to 10s. a week, are made to really good guardians for the care of very young and very delicate children; and the system of making these larger payments has induced a much better class of women to devote their time and attention to the work. As already explained in previous reports, when once young motherless children are sufficiently improved to be dealt with under the general Boarding-out System, the special payments cease, but the children are not necessarily removed from their old guardians. At the close of the twelve months now under consideration there were 96 such children under control as against 92 in 1894, whilst the daily average throughout the year was 104 and the total cost of their maintenance £2,080, or an average capitation cost of £20.

#### ADOPTED CHILDREN.

There was a small diminution in the number of children who had been adopted without remuneration by prosperous colonists in various parts of the country with the intention of bringing them up as their own children when the official lists closed on the 5th of April; but the falling-off was almost entirely due to the fact that they had, by reason of their increased age, been removed from the official registers, though still with the foster-parents in the great majority of cases. When the year closed there were 124 adopted children under the control of those guardians as against 144 in 1894, and their religious classification was as follows:—Protestants, 39 boys and 65 girls; Roman Catholics, 8 boys and 12 girls; total, 47 boys, 77 girls. At the very lowest estimate a saving of £1,612 was effected during the year by well-to-do citizens accepting the guardianship of these children without remuneration, and the experience of the past few years has shown that their material welfare is enhanced under this particular subdivision of the Boarding-out System. The total saving effected

effected during the last four years was £7,165, which is a substantial economy in considering the yearly increasing expenditure of the Department. The greatest care is taken with regard to the selection of these homes, and as a rule the guardians of adopted children are not only prosperous and respectable, but that precautions are taken under a mutual understanding by which the children are brought up to believe that they are part and parcel of the family circle, and by this means better discipline is maintained, and the little ones ultimately grow up with strengthened feelings of responsibility and self-respecting citizens.

#### APPRENTICED CHILDREN.

Satisfactory progress has been made in the difficult work of providing suitable trades, occupations, and callings for the children as they grow up to useful ages, so that they may be enabled to become artisans and handicraftsmen, and earn honest livelihoods when they reach the years of manhood and look forward to reputable citizenship. There were 905 children under this head when the books were closed at the end of the year, as against 854 in 1894, which shows the satisfactory increase of 51. The girls in this class, who number 327, are all at domestic service, while the 578 boys are apprenticed to the following trades:—Apiarists, 3; baker, 1; boilermaker, 1; blacksmith, 1; bootmaker, 1; brickmaker, 1; butchers, 2; builder, 1; carpenter, 1; carrier, 1; chemist, 1; coachbuilders, 4; clerk, 1; cordial manufacturer, 1; dairymen, 10; dealer, 1; draper, 1; farmers, 477; gardeners, 11; groom, 1; graziers, 4; grocers, 5; gunsmith, 1; lime merchant, 1; orchardists, 23; mason, 1; painter, 1; plasterer, 1; printers, 2; saddlers, 2; storekeepers, 11; sweep, 1; tailors, 3; vigneron, 1.

The number of apprentices discharged during the year was 95 boys and 77 girls, or a total of 172, as against 148 during 1894. The total cost of management in this division was £2,270, an increase of £137 10s., which brought the average cost of the whole of the apprentices under control up to £2 10s. per head—the same as the previous year, when the expenditure under this head was £2,132 10s. This expenditure is very small, when it is considered that the average daily number of apprentices under control was 908, and that 905 were still under control when the year closed. The whole of the total outlay was absorbed in clothing and inspection, the money received from the guardians under the regulations for the services of all apprentices having been paid into the Government Savings Bank to the credit of the children themselves. No complaints of a serious character have been received, either from the guardians or the apprentices, during the year, and the reports of the inspectors speak in a satisfactory way of the manner in which the children are treated.

#### CHILDREN CLASSED AS UNOFFICIAL.

There has been a still further increase—though a small one—in the number of children over the age at which they could be legally brought under the operation of the Act, who have surrendered themselves to the supervision and control of the Board, in the hope of being provided with suitable occupations, and their progress has been very satisfactory. There were 10 such children—4 boys and 6 girls—under control in 1894; there are now 12, and the expense of their care is so small an item in the general expenditure that it is out of proportion altogether to the very large amount of good that results, and is indeed too small a matter to deserve special mention. So far, some 47 children have benefited by the advantages which this particular section confers upon them.

## THE CENTRAL HOME.

The operations at the Central Home, where the children are only temporarily detained whilst the necessary preparations are being completed for boarding them out upon admission, discharging them from control, or transmitting them either to the reformatories, the hospitals, or the cottage homes at Pennant Hills and Mittagong, were nearly doubled during the year that has just closed, and the system is now working so smoothly and satisfactorily in all the branches that the increased work was dealt with without increasing the staff, and with appreciable saving in the item of expenditure. Some 1,703 children passed through the Home in 1895, as against 889 in 1894, or an unexampled increase of 814. The average daily admissions were 12, as against  $10\frac{1}{3}$  in 1894 and 10 in the previous year. The average cost of maintenance was £9 6s. 6d., whilst in 1894 it was £9 19s. 10d., showing a saving of 13s. 4d. per head in favour of 1895. The total cost of maintenance of the children at the Central Home was £111 18s. 1d. for the year, as against £103 4s. 11d. in 1894.

## COTTAGE HOMES FOR INVALID CHILDREN.

The most gratifying results have attended the continuance of the practice of placing invalided and delicate young children under the care of kindly, reputable, and matronly women in neat and comfortable cottages in healthy country districts, and the experience which the Board has gained from the experiments at Pennant Hills and Mittagong strongly emphasises the wisdom of the step, and urges the desirableness of extending the principle as an auxiliary to the crowded children's hospitals in and around the metropolis. The whole of the children sent to these Homes have not only materially benefited by the pure, fresh air and the clean, wholesome surroundings, but no less than 99 were so far recovered as to allow of their being boarded-out, and some 61 others were either discharged to their relatives or sent to other institutions. There were 146 in the Homes on the 5th April, 1895, namely, 44 boys and 109 girls, as against 153 at the end of the previous year. Much of the good results that were obtained was due to the gentle care and motherly attention of the medical and nursing staffs during the year.

The following is the usual table of particulars :—

	Boys.	Girls.	Total.
Total number of children admitted to Cottage Homes to 5th April, 1895	510	610	1,120
Total number of children discharged from Cottage Homes to 5th April, 1895	475	499	974
Number in Homes on 5th April, 1895	35	111	146
In Homes on 5th April, 1894	44	109	153
Admitted during year ended 5th April, 1895	42	111	153
Discharged during last year	51	109	160
In Homes, 5th April, 1895...	35	111	146
Discharged :—			
To relatives ...	3	24	27
Boarded out...	41	58	99
Died ...	0	2	2
Rydalmere ...	5	0	5
Newington Asylum...	0	1	1
Deaf and Dumb and Blind Institution ...	0	4	4
Shaftesbury ...	0	18	18
Moorecliffe ...	1	1	2
St. Aloysius' Home...	1	0	1
Thirlmere Consumptive Home ...	0	1	1
	51	109	160

The

The following return indicates the afflictions from which the children were suffering when they were admitted :—

Abscesses ... ..	3	Hip, accident to ... ..	1
Abscesses and swollen glands ... ..	1	Knee-pan, injury to ... ..	1
Bronchitis (chronic) ... ..	2	Kleptomania ... ..	3
" ... ..	4	Influenza ... ..	3
Chilled feet ... ..	1	Malformed feet ... ..	4
Croup ... ..	1	" hands ... ..	1
Contraction of leg sinews ... ..	2	Marasmus ... ..	3
Cripples ... ..	14	Malformed mouth ... ..	3
Chinese (half) ... ..	2	Necrosis of foot ... ..	1
Catarrh ... ..	7	One leg ... ..	2
Delicate ... ..	36	One eye ... ..	2
" and lame ... ..	5	Ophthalmia ... ..	250
" and ophthalmic ... ..	15	" and scrofulous ... ..	7
" and partial paralysis ... ..	5	" semi-idiotic ... ..	1
" and running ears ... ..	10	" ulcerated foot ... ..	2
" and scrofulous ... ..	12	" running ears ... ..	13
Debility (general) ... ..	215	" and scalp eruption, and general debility ... ..	18
" and turned eyes ... ..	1	Paralysis ... ..	12
" and measles ... ..	4	" of brain ... ..	1
Dysentery ... ..	4	" (partial) and spinal disease	1
Dirty habits and sore ear ... ..	6	Running ears ... ..	18
Dropsy and rheumatism ... ..	3	" and skin eruption ... ..	5
Deaf and dumb (change of air) ... ..	15	Rheumatism ... ..	3
Diarrhœa ... ..	11	Ring-worms ... ..	23
Defective palate ... ..	2	Spinal disease ... ..	10
Dirty habits ... ..	15	Strumous ... ..	1
Deformed and paralyzed ... ..	4	Semi-idiotic ... ..	5
Enemia ... ..	2	St. Vitus' Dance ... ..	3
Eruptions ... ..	37	Sore leg ... ..	5
" scalp and deformed chest	1	Sore foot ... ..	2
" and bad habits ... ..	4	Sore ear ... ..	10
" and scrofulous ... ..	5	Scrofulous ... ..	40
" of scalp ... ..	15	Scabies ... ..	11
Epilepsy ... ..	7	Teething ... ..	1
Eruptions of scalp and body ... ..	8	Typhoid ... ..	1
Fits ... ..	3	Ulcers ... ..	3
Fractured limb ... ..	1	Weak legs ... ..	2
Hip disease ... ..	7	Whooping cough ... ..	14
" and partial paralysis ... ..	1	Weak intellect ... ..	16
Heart disease ... ..	5	Water, incontinence of ... ..	7
Hip disease and running ears ... ..	5	Children who have passed through homes as apprentices ... ..	101
Half-caste ... ..	7		
Hand, accident to ... ..	1		
Hand, necrosis of ... ..	1		

The total expenditure upon the Homes during the year which has just closed was £3,652 12s. 5d., or £3,000 12s. 5d. for maintenance, management, medical expenses, salaries, &c., and £652, the value of clothing furnished to the inmates from the Central Store at Paddington, and the proportionate cost of inspection. The capitation cost has been £22, or a reduction of 2s. 2d. per head upon the operations of 1894.

#### CONCLUDING REMARKS.

In conclusion, I have much pleasure in conveying the thanks of the members of the Board to Mr. Critchett Walker, C.M.G., the Principal Under Secretary, and to Mr. Fosbery, the Inspector-General of Police, for the valuable assistance rendered to the Department during the year.

I have, &c.,

ARTHUR RENWICK,

President.



## APPENDIX E.

INSTITUTIONS from which Children treated at Cottage Homes for Sick Children have been received during the year.

Benevolent Asylum Sydney.	Central Depot, Paddington.	Industrial School, Parramatta.	Little Bay.	Ashfield Home	Randwick.	Sydney Hospital.	Glebe Hospital.	Newtown Asylum.	Goulburn Hospital.	Deaf, Dumb, and Blind Institution.	Shaftesbury Reformatory.	Total.
84	32	6	1	3	3	3	1	1	1	4	14	153

## APPENDIX F.

DISTRIBUTION of Children under control of State Children's Relief Department on the 5th April, 1895.

	Boarders.						Apprentices.	Adopted.	Boarders without Subsidy.	Absconded.	Unofficial.	In Hospitals.	In Cottage Homes.	In Depot.	Total at present under control.
	Infants, 10s.	Under 2 years, 8s.	Under 2½ years, 7s.	Under 3 years, 6s.	5s.	Total.									
Boys .....	8	9	10	23	1,073	1,123	578	47	9	14	7	5	35	4	1,822
Girls .....	12	7	5	22	760	806	327	77	14	2	5	4	111	6	1,352
Total .....	20	16	15	45	1,833	1,920	905	124	23	16	12	9	146	10	3,174

## APPENDIX G.

THE State Children's Relief Department in account with the Colonial Treasurer during year ending 5th April, 1895.

Dr.	1894—April 5.	£ s. d.	1895—April 5.	£ s. d.	Cr.
To Balance .....	1,507	13	11	By Maintenance ..	£24,781 16 3
„ Deposit from Treasury—				„ Clothing .....	2,236 5 0
3 July, 1894 .....	£6,000	0	0	„ Salaries .....	3,850 7 10
31 „ „ .....	2,000	0	0	„ Medical .....	405 5 3
12 Oct. „ .....	7,000	0	0	„ Gas .....	33 12 1
28 Nov. „ .....	2,000	0	0	„ Books .....	46 12 3
21 Jan., 1895 .....	3,000	0	0	„ Incidentals .....	539 6 2
1 Feb. „ .....	5,000	0	0	„ Conveyance .....	681 8 3
6 Mar. „ .....	1,000	0	0	„ Travelling .....	1,488 1 3
2 April „ .....	6,500	0	0	„ Cottage Homes ..	3,000 12 5
4 May „ .....	500	0	0	„ Depot .....	111 18 1
Salaries from Treasury	3,182	1	8	„ Travelling Advance	300 0 0
		36,182	1 8		37,475 4 10
				„ Balance .....	214 13 9
		£37,689	15 7		£37,689 15 7

## APPENDIX H.

## Parents' Maintenance Account.

1894.	£ s. d.	1894.	£ s. d.
30 April—To Collections .....	62 8 6	1 May—By Cash to Treasury .....	62 8 6
30 May „ „ .....	77 13 9	1 June „ „ .....	77 13 9
30 June „ „ .....	48 9 6	1 July „ „ .....	48 9 6
31 July „ „ .....	51 4 2	1 Aug. „ „ .....	51 4 2
30 Aug. „ „ .....	53 15 1	1 Sept. „ „ .....	53 15 1
27 Sept. „ „ .....	114 5 10	1 Oct. „ „ .....	114 5 10
30 Oct. „ „ .....	69 0 8	1 Nov. „ „ .....	69 0 8
29 Nov. „ „ .....	61 0 8	1 Dec. „ „ .....	61 0 8
31 Dec. „ „ .....	90 10 10	1895.	
1895.		1 Jan. „ „ .....	90 10 10
31 Jan. „ „ .....	48 9 6	1 Feb. „ „ .....	48 9 6
28 Feb. „ „ .....	34 12 0	1 Mar. „ „ .....	34 12 0
31 March „ „ .....	515 1 4	1 April „ „ .....	515 1 4
6 April „ „ .....	26 10 10	8 „ „ „ .....	26 10 10
	£1,253 2 8		£1,253 2 8



Father drunkard, mother destitute .....	49
"  "  "  deserted .....	9
"  "  "  dead .....	58
"  "  "  in gaol .....	8
"  "  "  prostitute .....	11
"  "  "  drunkard .....	24
"  "  and cripple, mother drunkard .....	6
"  "  mother in hospital .....	8
cannot work, blind, mother destitute .....	2
"  "  "  cripple, mother bad character (illegitimate) .....	2
"  "  "  "  "  in gaol .....	2
"  "  "  "  "  deserted .....	8
"  "  "  deformed, mother prostitute .....	3
"  "  "  destitute, mother ill .....	5
"  "  "  "  "  dead .....	6
"  "  "  in asylum, mother deserted .....	7
"  "  "  destitute, "  " .....	8
"  "  "  ill, mother ill .....	5
"  "  "  in hospital, mother insane .....	10
"  "  "  "  "  destitute .....	30
"  "  "  invalid, mother doubtful character .....	1
"  "  "  in hospital, mother unknown .....	4
"  "  "  paralysed, mother deserted .....	6
"  "  "  consumptive, mother in asylum .....	7
"  "  "  in asylum, mother bad repute .....	7
"  "  "  consumptive, mother dead .....	4
"  "  "  consumptive, mother has other children .....	1
"  "  "  one arm, mother drunkard .....	1
"  "  "  subject to fits, mother dead .....	5
"  "  "  hip disease, mother dead .....	2
"  "  "  mother dead .....	28
"  "  "  "  deserted .....	2
"  "  "  "  destitute .....	17
"  "  "  "  bad character .....	5
"  "  "  in hospital, mother in gaol .....	1
"  "  "  blind, mother deserted .....	4
"  "  "  in hospital, mother drunkard .....	2
"  "  "  consumptive, mother delicate .....	2
"  "  "  sickly, mother sickly .....	5
"  "  "  in hospital, mother in hospital .....	12
contributes, mother dead .....	145
"  "  "  deserted .....	23
"  "  "  drunkard .....	40
"  "  "  insane .....	3
"  "  "  in gaol .....	9
"  "  "  in gaol (illegitimate) .....	1
"  "  "  prostitute .....	21
"  "  "  unknown .....	14
"  "  "  sickly .....	6
"  "  "  illtreats child .....	10
cannot support, out of work, mother drunkard .....	14
"  "  "  unemployed, mother deserted .....	108
"  "  "  "  "  dead .....	189
"  "  "  "  "  in asylum .....	45
"  "  "  mother insane .....	22
"  "  "  "  cannot support .....	102
"  "  "  of dissolute habits, mother prostitute .....	7
"  "  "  French convict, mother dead .....	2
"  "  "  has 15 children, mother dead .....	2
"  "  "  has 7 children, mother dead .....	1
"  "  "  has large family .....	1
"  "  "  an actor, mother prostitute .....	1
"  "  "  keeps 2 children, mother insane .....	1
"  "  "  unemployed, mother in gaol .....	3
"  "  "  of dissolute habits, mother dead .....	9
"  "  "  children uncontrollable, mother dead .....	6
"  "  "  an Indian, mother unknown .....	2
at sea, mother in hospital .....	10
"  "  "  deserted .....	3
Mother contributes .....	3
"  "  has bad leg .....	1
"  "  in gaol .....	1
"  "  in asylum .....	5
"  "  insane .....	1
"  "  drunkard .....	3
"  "  half-caste .....	1
"  "  "  living with man at Narrabri .....	1
"  "  "  in service, another illegitimate child .....	1
"  "  "  confined of another illegitimate child .....	4
Parents keep a brothel .....	1
Child from Dublin Orphan Asylum .....	1
Father attempted to outrage child, mother in hospital .....	1
Parents acquitted of murder, mother in gaol for sheep-stealing .....	1
Parents unable to control .....	85
Father bad character, mother dead .....	6
"  "  "  "  bad character .....	2
"  "  "  killed child and stabbed wife .....	3
"  "  "  neglects child, mother insane .....	4
"  "  "  too old to work, mother unknown .....	2
"  "  "  in hospital, mother destitute .....	25
"  "  "  "  drunkard .....	5
"  "  "  "  dead .....	2
"  "  "  "  in gaol .....	1
Foundlings .....	88
Total .....	6,673

## APPENDIX J.

## LETTERS FROM LADY VISITORS.

Mrs. C. E. Archibald, Moruya :—

I am quite satisfied with the results of the boarding-out system here. The children on my list are living in christian homes, and have the advantages of good training, every opportunity of growing up respectable and respected members of the community.

Mrs. Arguimbau, Annandale :—

Has much pleasure in stating that all the children in her district have comfortable homes, are well cared for, and seem well and happy, and thinks the boarding-out system an excellent one. The guardians seem to treat the children as their own, and from my experience, which has been for twelve years or more, cannot speak too highly of them.

Mrs. E. J. Bailey, "The Vicarage," Hunter's Hill :—

I have much pleasure in testifying to the efficacy, as far as my own experience goes, of the boarding-out system for State children. I find, as a rule, a very good feeling prevailing between the guardians and the children, sometimes, on the part of the foster mothers, something nearly approaching maternal affection. The children often come from a class which is very difficult to deal with, and the careful and patient training in many instances bestowed on such children is highly satisfactory.

Mrs. L. Barber, Goulburn :—

My experience, after five years, is that, as a rule, the children are better off than in their parents' homes, and the guardians do well by the children.

Mrs. L. M. Beresford, Dalton :—

I have been again asked to give my opinion regarding the boarding-out system. My experience is limited, having still only one child under my supervision, who is now apprenticed to the farmer with whom he resides. He still attends the village Public School, is a fine healthy boy, and appears perfectly at home. I can only add that I consider the Institution an excellent one.

Mrs. Brennan, Cambewarra :—

I have much pleasure in bearing testimony to the satisfactory working of the boarding-out system in my district. The children and their foster-parents seem thoroughly satisfied with each other.

Mrs. A. M. Brown, Tumut :—

I have visited the children in this district regularly during the last twelve months. Found everything satisfactory; children healthy and happy. The greatest number have been with the same people for years, which speaks well for both parties.

Mrs. A. M. Brown, Tumut :—

I must apologise for not answering your note sooner. During the last quarter I have visited frequently; found everything doing well, except at one home. I was pleased to see the Inspector, who informed me an alteration was to be made there.

Mrs. D. Byrne, Cooma :—

I was asked my opinion on the boarding-out system, and from my experience I consider it works satisfactory. In a great many cases the boys learn useful trades, and from being continually employed they are kept away from bad companions which are to be found even in small country towns, and the girls learn house-keeping, which is very useful to them in after years.

Mrs. E. E. Cox, Wybong Creek :—

In reply to your circular re State children, I am very pleased to say that the two children under my supervision are in happy, comfortable homes, and I consider the system an exceedingly good one.

Mrs. M. Dalton, Orange :—

I have not been able to visit the homes of the boarding-out children as often as I would wish; but, as far as I can judge from surrounding circumstances, I think they have fairly comfortable homes. I know of many poor children in Orange who are living with their parents who are not nearly so well off. Therefore I have much pleasure in stating that it is an admirable thing to have such an institution to take care of those poor children who are left destitute.

Mrs. K. A. Donnelly, Armidale :—

I have much pleasure in stating that the children boarded out in this district are all doing well and giving satisfaction to their teachers and foster parents. The homes in all cases are clean and comfortable and presided over by good Christian men and women, and the children are most attached to their guardians, the latter in all cases fulfilling their duties faithfully.

Mrs. M. Ewan, "Glenleigh," Penrith :—

In reply to your circular of the 13th instant, I have pleasure in stating that I consider the boarding-out system a great success. The children in my district are well cared for and have most comfortable homes.

Mrs. C. Finlayson, Wollongong :—

In compliance with your request for an expression of opinion upon the system of boarding-out children as I find it in this district, I beg to state that in all the cases which have come under my notice the little ones have been most fortunate in the homes provided for them. Most of them are in the little mountain township of Balgownie, a mining community, where the wives are glad to be able to use their leisure in this way. The condition of the children in their care is abundant proof that they do their duty by them. Many of them are mere infants who came only a few months ago puny and ailing and now are looking so happy and well cared for. In the case of Mrs. A., the removal of the child caused almost as much grief as if it had indeed been their own, and I trust you will soon find it convenient to let her have another and for a longer period. In a district like Balgownie, where each one's affairs are more or less everyone's affairs, any kind of neglect or cruelty to these children would be no secret, and in this fact is safety. It is a healthy place—plenty of fresh air, good milk, fruit, and vegetables—and with a fine State school. Mrs. C's home is everything to be desired, and the lad seems happy. It is very cleanly, sleeping accommodation good, and all the influences such as tend to train him to be a useful member of society.

Mrs. Gerber, Woollahra :—

I am pleased to be able to say, from experience, that the boarding-out system is giving general satisfaction. The children are well cared, and their homes are comfortable.

Mrs. Gibson, Picton :—

I have great pleasure in recommending the boarding-out system. The children in my district are a credit to their foster parents.

Mrs. K. Hancock-Burkit, Goulburn :—

In reply to your notice, received this morning, I have much pleasure in informing you that, as far as my knowledge goes, the system of boarding-out State children is a great success, especially when contrasting it with the English barrack schools. The Colonies are far in advance of home in this respect. I speak from personal knowledge of both systems. The children in the homes I have under supervision seem happy and well fed. All the homes are of the respectable artisan class, and the children have good opportunities of growing into self-respecting and self-supporting men and women.

Mrs.

Mrs. S. Kidd, Campbelltown :—

I beg to inform you that the children under my supervision seem to be all in good health, and appear comfortable and well cared for. I visit the children about every two weeks, and always find them as above stated. The district of Campbelltown is exceedingly healthy, and well suited for the children.

Mrs. M. Lumsdaine, Gladesville :—

In reply to your request *re* my experience of the boarding-out system, I have much pleasure in saying that it appears to work admirably in my district. The guardians perform their duties towards the little ones faithfully, and the children seeming healthy and happy. I never hear any complaint either from child or guardian.

Mrs. E. Morris, Berry :—

I beg to state that the children under my control appear to be happy and contented in the homes allotted to them, which are of the very best kind obtainable in this portion of the district; and I feel confident that the guardians are, on the whole, faithfully performing their duties, in every respect, which they have undertaken. The system, in my opinion, works admirably.

Mrs. J. B. Nicholson, Woonona :—

I think the system of boarding out the children is proving in every way advantageous and satisfactory. I meet with no complaints, and all the homes selected have turned out to be happy and comfortable ones, and in many cases both foster-parents and children are sincerely fond of each other; and I know some instances where the guardians would rather forfeit the maintenance allowance than part with the children. I cannot close without a word of praise for the inspectors and all officers in connection with the institution. They are careful and conscientious in the discharge of their duties, having the welfare of the children thoroughly at heart.

Mrs. M. O'Brien, Braidwood :—

All of the children are doing very well, and are in good health. Those who are near the school attend very regularly, and those who have a long distance to go have home lessons. The children all appear well looked after, and are happy and contented.

Mrs. S. Oliver, Coulburn :—

I am very pleased with the homes under my supervision. The children seem cheerful and happy, and I believe the guardians do their utmost for the welfare of the little ones committed to their care. At school, also, I may say the State children, in neatness and cleanliness, compare favourably with others.

Mrs. D. Osborne, Bundanoon :—

In accordance with your request, I forward my statement *re* the boarding-out system, and, as before, cannot but speak very favourably of it. I have not had many for some time: but lately have three children (boys) on the boarding-out system, and on my last visit found them very clean and comfortable, and treated as their own children, and from what I can see are thoroughly cared for. The one that is apprenticed is still giving satisfaction, and treated the same as the guardians' own children. This lad is on a farm.

Mrs. T. O'Sullivan, North Sydney :—

My opinion is still unchanged with regard to the efficacy of the boarding-out system. The children in my suburb appear happy and contented; and I am happy to say that the guardians in most cases take a great interest in their charges.

Mrs. M. Pole, Balmain :—

In reply to your circular of the 14th instant, I have much pleasure in recommending the boarding-out system. The homes, as a rule, have a degree of refinement, and must tell beneficially on the future of the children. Their health is exceptionally good, showing strict attention to cleanliness and other necessary rules, and the almost universal kind motherly care and attention has greatly surprised me.

Mrs. M. Remington, Prospect :—

In reply to your circular of the 20th, I have much pleasure in saying the children under my supervision have comfortable homes. They attend church and school regularly. I often see them at play with their foster brothers and sisters, looking quite happy. They are kept clean and are in good health, also have good home influence. I think the system an admirable one, calculated to develop the affections in many poor little orphans that would otherwise know nothing but coldness and neglect.

Mrs. H. Taylor, Parramatta :—

Once again I have to report upon the "homes" under my supervision, and to say that, as far as I am aware, every kindness has been extended to the children under the care of their foster parents. The State Home is, as well as I can judge, excellently managed, and the whole system is, in my opinion, a most unmitigated success.

Mrs. L. Tillett, Liverpool :—

Owing to the long distances and bad roads to where the children are located, I have not been able to see them as often as I could wish; but those I have visited seem happy and well cared for. So far as I can judge, my opinion is that the boarding-out system is on the whole very successful, and could hardly be improved upon.

Mrs. D. Willans, Queanbeyan :—

It is with much pleasure that I say I cannot speak too highly of the boarding-out system. All the guardians in this district, I truly believe, are faithful to their trust, and some who come immediately under my notice are as fond of the children as if they were their own. It is a great pleasure to me to see how comfortable they are, and their happy faces when they come to see me—for I think you are aware that owing to my age and constant attendance on my dear husband I cannot go and see them; but I have many opportunities of hearing about them, and it gives me pleasure to be able to do anything for so valuable an institution.

Mrs. M. Woodriff, Penrith :—

In reply to your letter, although my experience of the boarding-out system has been both short and limited, I believe it to be most excellent for the children, and, in the generality of cases, most satisfactory. The boys under my supervision are very happy and well cared for.

Mrs. A. T. Simpson, and Mrs. M. A. C. Walker, Waverley :—

Beg to state their experience of another year's work. The classes of homes are sufficiently comfortable in all, but some have superior accommodation, and the children better attended to than in others. In most cases the guardians are really interested in their charges, and become fondly attached to them. We believe this system adopted by the Government to be the best ever planned, as the results are most satisfactory.

Mrs.

Mrs. G. E. Rodd, and Mrs. E. L. Holland :—

Our opinion regarding the boarding-out system is, that great care should be taken that the persons who take the children are not doing so to make a living by them, as we think that in these cases the children are not done justice to, nor always as kindly treated as they should be. Otherwise, we consider the boarding-out system a very good thing.

#### LETTERS FROM SCHOOL TEACHERS.

J.C., Superior Public School, Annandale :—

As far as I can judge, the boarding-out system has worked satisfactorily. The State children who have attended the school under my charge compare favourably with the other children under my supervision.

F.R., Public School, Australia-street :—

In answer to your circular as to result of the boarding-out system, we have State children boarding in two families only, attending this school, and with regard to them, I should say the system is a decided success. They appear to be well cared for, and compare favourably with other children of the school.

J.B.M., Auburn Public School :—

There are eight boarded-out children in my school, and in the majority of cases they compare favourably with other children. I think the system is good, as it brings the children under the direct care of "mother," and surrounds them with "home" influence, which cannot but have a beneficial effect when a judicious selection has been made in the home to which the child has been sent.

H.L., Public School, Auburn North :—

In reply to yours of 11th instant, I beg to state that of all systems yet introduced for the relief of orphans and fatherless children, none in my opinion will compare with the boarding-out system now in force in this Colony. The children lose the appearance of pauperism entirely. They mix with other children of their own age, enter into their pleasures and enjoyments, and seem to forget their unfortunate past. They feel an independence of character, and their equality with those about them. In attainments and the power of grasping knowledge of any kind, I have always found them to compare favourably with other children differently situated. In regard to cleanliness and care bestowed upon them by those whose care they are placed under, I have never had cause to complain.

M.C., Superior Public School, Annandale :—

In the cases of boarded-out State children under my charge, I can say that in both cases the children compare favourably with the other pupils, and appear to have good homes.

W.S., Superior Public School, Annandale :—

My experiences of the boarding-out system under your direction lead me to estimate very favourably its beneficial influences on the children affected by it who have come under my observation.

J.F., Public School, Balgownie :—

In reply to your letter dated 11th instant, inviting a statement of my opinion of the boarding-out system of this Colony, I have the honor to inform you that, as far as my opportunities of judging have enabled me to give an opinion, I think the persons in this locality to whom children have been entrusted are respectable and without exception are doing their duty to the children whom the State has placed in their care. With reference to the four boys attending the school, I am happy to report that they are well and neatly dressed and perfectly clean. With one exception they are regular and punctual in their attendance. In every respect they compare favourably with their fellow-pupils.

D.McL., Public School, Bankstown :—

In reply to yours of 11th instant, *re* State children attending my school, I may state that so far as I can judge they are fairly well cared for. They attend regular, are well behaved, and are generally very neat and clean, and in every way compare very favourably with the other children attending school. I also consider the operations of the system very satisfactory.

J.W., Public School, Baulkham Hills :—

In reply to your circular of the 11th instant, I have the honor to state that the system of boarding-out State orphans appears to have worked well in this district with one exception, and she has been removed from the objectionable people with whom she was living. She previously compared favourably with the other children. The other State child appears to be growing into a good boy.

W.H.T., Superior Public School, Birchgrove :—

In compliance with your request *re* the State children, I beg to state that, so far as I have been able to judge of it, the system appears to work well. The children appear well-fed, well and decently clad, and in all material comforts they compare very favourably with children attending school. The attendance is regular and the conduct of the children good.

J.M.S., Blacktown Public School :—

I have much pleasure in reporting again upon the conduct of the State children attending the school under my charge. I find them neatly dressed, and clean as boys go. Their behaviour is good as a rule, and they evidently are under firm but kind discipline at home.

R.B., Public School, Brawlin :—

In reply to your letter of 13th instant, I beg to state that those children from the Relief Board that have attended this school compared favourably with the other children. They came well dressed, looked clean, and appeared to be well fed, and as far as they were concerned the boarding-out system was to them a decided benefit.

E.B., Public School, Bulli :—

I have had but little experience of this boarding-out system,—but the lad who was enrolled here on the 26th ultimo, has attended with regularity since that date. He is well conducted, well clad, and apparently well cared for and contented. If he can be taken as a fair sample of the results of this system, then they must be all that could be desired.

P.N., Public School, Campbelltown :

In reply to your circular *re* State children, I have the honor to inform you that there are two State children attending this school. They attend very regularly, and have all the appearance of well nourished and well kept children.

T.W.H., Public School, Coomandura :—

Your letter *re* above reached me this morning, and I beg to inform you that during the period of my employment at Bowral Public School—a period of eight years—I considered the system an excellent one. The children in question were well cared for, and apparently lived comfortable and happy lives. They were continually under a teacher's observation at school, and I always found the officer direct from your Department most earnest in his endeavours to get at the real state of the children's home life. As far as mental calibre is concerned, I think the children that have come under my supervision compare favourably with their more fortunate companions. J.

J.C., Public School, Croydon :—

There are five State children attending this school ; they are well cared, and have every sign of comfort in their homes. They are well-behaved and content.

J.C.C., Superior Public School, Darlington :—

In answer to your circular of 13th inst., I beg to state that the children boarded out under the State Children's Relief Department, and attending this school, are clean, tidy, and fairly regular in their attendance, and will compare favourably with the other pupils.

J.W., Public School, Elderslie :—

According to your wish, I have the honor to most respectfully state that the boarding-out system, in so far as the children under my tuition are concerned, is, on the whole, satisfactory ; and their behaviour and appearance at school compare very favourable with the other children.

D.T., Public School, Gentleman's Halt :—

In reply to your memo. of 13th instant, soliciting my opinion on the boarding-out system of State children, I have the honor, most respectfully, to inform you that the results of the system in this district are very satisfactory, and the State children who are under my charge come to school neatly dressed and clean, and, judging from their appearances, I believe that they are well nourished and cared for, and generally kindly treated. At end of this quarter I will furnish you with report of their attendance.

P.L., Public School, Eastgrove, Goulburn :—

In reply to yours of the 13th instant, *re* my observations on the results of the boarding-out system, I beg to state that the children that have come under my notice, with few exceptions, compare favourably with the other children under my supervision.

J.L., Superior Public School, South Goulburn :—

In my opinion the boarding-out system is an unqualified success. It is a means of providing comfortable homes for the children, thus giving them the benefits of home influence and allowing friendships to be formed which may continue through life. The children attending my school come clean and tidy, are apparently well fed, and compare very favourably with the other pupils.

H.L.F., Public School, Gordon :—

In connection with the only State child at present attending this school, I have much pleasure in reporting that she attends very regularly and conducts herself in a very creditable manner. She is always well clad, and appears to receive every attention.

W.S., Superior Public School, Granville :—

There is not much to report further than that the children under your jurisdiction are on the whole as well or better cared for than the average working man's child. Exceptional cases—and they are truly exceptional—when reported to your office are always dealt with promptly, so that, as long as the teachers of the public or other schools which these children attend are in the least degree watchful, it is impossible for a child to be neglected or ill-used.

P.R., Gunning Public School :—

In compliance with your request contained in your circular of the 13th instant, I have much pleasure in making the following remarks in reference to the boarding-out system. At present there are only four State children attending this school. These four attend with great regularity and punctuality. They come comfortably and cleanly clothed and seem well-fed and otherwise cared for. Two live with Mr. A. F. B., and the others with Mrs. P. From their appearance I should say that they are better cared for than many at the school who are living with their parents.

L.H.W., Public School, Hinton :—

I have the honor to state that the present system of boarding-out State children is a distinct advantage to the children themselves. With one exception the pupils of my schools who are State children have been well fed and clothed and compare favourably with ordinary pupils.

W.A.C., Public School, Jamberoo :—

The children alluded to in your circular attend school fairly regularly, are clean and tidy, and on the whole compare favourably with the other children of the school. In one of two instances under my notice the child is exceptionally well cared for, and in the other I think there is nothing to complain of.

W.H.M., Public School, Kellyville :—

I have the honor to acknowledge the receipt of your circular, and, in reply, to state that my experience has been wholly favourable—the children being sent to school regularly in a clean and tidy state, and such children comparing favourably in these three items with others. I am decidedly a believer in the system.

J.R., Kelso Public School :—

*Re* your memo. dated 13th instant, I have the honor to notify you, that there is one State child attending the above-named school ; and I herein state, that he attends school regularly, and is always clean and tidy.

J.M., Superior Public School, Kogarah :—

So far as the boarding-out system has come under my observation, I should infer that the results were satisfactory. The child now in attendance compares favourably with other children in every respect. Up to the present his regularity of attendance has been satisfactory.

C.A.B., Public School, Lambton :—

Only one family are State children. They are clean, tidy, and regular in attendance, and are, in appearance, equal to the other children.

R.H., Public School, West Leichhardt :—

Twenty-four State children attend the above school. They are, without exception, clean and tidy, in good health, and regular in attendance. In these respects they compare most favourably with the other pupils. So far as my experience goes, I have no hesitation in stating that, owing to the boarding-out system, the environment of these children is so changed as to warrant reasonable hope of their developing into useful citizens.

A.J.O., Public School, Maroola, Pitt Town :—

With reference to your memo. of 13th inst., I have the honor to inform you that what I have seen of the boarding-out system, I must speak favourably of. The present system must lead to good results, because the children, distributed as they are throughout the country districts, are less liable to be influenced by bad children with whom they would be brought in contact if necessarily kept at one home. The children under my charge compare favourably with other children under my supervision ; and the majority manifest by their appearance and cheerful dispositions, that they receive that care and love which should be given by parents.

W.B.G., Public School, Mittagong :—

*Re* appearance of State children attending this school, I beg to state that they compare very favorably with the other children in cleanliness and dress, and can hold their own with them in school work.

W.

W.J.A., Public School, Lower Mittagong :—

In answer to your communication of the 13th, I have the honor to report that there are no children under the boarding-out system at present attending the school under my charge; but from my observation of those attending other schools, I feel that I am safe in stating that they compare very favourably with the children of parents of independent means. In my opinion the boarding-out system is a very great success in this Colony.

T.A., Public School, Murrumburrah :—

In reference to your circular of 13th instant, I have the honor to state that from my experience, I believe that the boarding-out system is a great success, and great improvement on the old system. The children who have and are attending the school have always compared favourably with other pupils, and similarly I have noticed in other schools in the district, and I think your system of inspection an excellent one.

E.B., Public School, Macquarie-street, South :—

In reply to your letter of the 13th ultimo, respecting State children attending this school, I beg leave to state that there are three who attend this school, and they compare most favourably in intelligence, appearance, and general conduct with the other pupils of this school. I am of opinion that the boarding-out system is a great improvement on the old or barrack-system, as it is more in accordance with the training and comforts of home life.

J.E., Public School, North Newtown :—

We have only two State children, I believe, in this school at present; we have had a good number from time to time. Such children compare very favourably with others. My impressions are entirely favourable of the boarding-out system, as judged by the children that have come under my notice.

T.E.C., North Rocks, Public School :—

I beg leave to state that the State children under my charge are progressing satisfactorily.

E.G.W., Superior Public School, Nowra :—

In reply to your circular, dated 13th instant, I wish to state that, as far as I can judge, the children under the control of your Department are as well fed and clothed as most children, and that those attending this school come with fair regularity.

J.J.G., Superior Public School, Orange :—

I have only one boy from your Department attending the Orange Superior Public School. He is apparently a very healthy and well-cared for boy. He says he is happy, well fed, and not over-worked. I think he is in excellent hands. His appearance is quite equal to that of other boys attending this school.

J.E.H., Superior Public School, Parramatta North :—

In reply to your memorandum of the 13th instant, I have the honor to inform you that the State children attending this school appear to be well cared for, and compare favourably with the other children.

J.H.S., Superior Public School, Penrith :—

The children under State guardianship attending this school compare not unfavourably with the rest of the pupils. I consider the boarding-out system the best ever invented for supplying the training and amenities of home life to orphans and children deprived from any cause of parental care.

M.P., Superior Public Infants' School, Penrith :—

The State children attending in my department are well clothed, clean, and regular. They will in every respect compare favourably with the other scholars.

D.L., Public School, Pitt Town :—

I have much pleasure in testifying to the neatness and good behaviour of the State children attending this school.

J.D., Half-time Schools, Glen Hill, Oakdale, Picton :—

With reference to the boarding out of State children in New South Wales, I hold a very high opinion. For those with whom I have come in contact compare favourably with other children, and I feel confident, are better, in every respect, in their country homes, where, as a rule, they are well cared for, than they would be were they living all together, for there they, one and all, quickly learn the bad qualities of the other. Whereas, by boarding them out among different classes of people, the bad qualities, if they possess any, often die in them.

J.D., Public School, Queanbeyan :—

One State child attends this school. He is always clean and tidy, and seems to be well cared for. His conduct is good, and he is a very apt pupil.

J.J.W., Public School, Redfern :—

The State boys attending this school seem neat, tidy, intelligent, and well cared for. Generally speaking, I should think they are well fed, and come to school neatly and suitably clothed.

M.A.A., Superior Public School, Redfern :—

In reference to your letter *re* State children, I beg to state that I consider those attending the school under my charge to be well fed, well cared for, and well clothed for the most part, and have no fault to find with their general appearance and behaviour.

B.F.L., Public School, Rouse Hill :—

Your circular of 13th instant is to hand. In reply, I can only restate that which I have written on two previous occasions. The children (State) at Rouse Hill are fortunately situated; they could not be better cared for by loving parents; they are well fed, well clad, and are sent regularly to school, so that, with very few exceptions, they make the best average attendance. If all the other neglected children were as happily placed, they might well wish for no other parents.

F.E.R.C., Public School, Rookwood :—

In answer to your circular dated 13th March, I beg to state that the children attending this school under the boarding-out system are well behaved, tidy, and cleanly in appearance, mostly attend school regularly, and more than favourably compare with many children who have parents to take care of them.

G.H.H., Ryde Superior Public School :—

In reply to your letter of the 13th instant, I have pleasure in stating that the State children who have attended, and who do attend my school appear to be well cared for, and seem to be very happy and contented. In general appearance and regularity at school, they will compare very favourably with most of the pupils. From what I have seen I should pronounce the boarding-out system of this Colony a success.

J.C., Public School, North St. Leonards :—

In reply to your circular of the 13th instant, I beg to inform you that the State children attending the above school seem happy and contented. They are punctual and regular in their attendance; clean and tidy in appearance, and in all respects compare favourably with the other pupils of the school.

A.S.B., Superior Public School, Singleton :—

In reply to your communication respecting the boarding-out system, I beg to state that two children belonging to the State Relief Department are in attendance at this school. They are fairly regular in their attendance, neat and tidy in appearance, and compare favourably with the other pupils.

T.D., Albion-street Public School, Sydney :—

In reply to your letter of 11th instant, in which I am requested to give my views as to the State children under my care, I have the honor to state that there are five State children attending this school, from four different homes; and, as far as I am able to judge, they compare very favourably with any other children in the school. They are, in general, clean, cheerful, regular, and seem quite at home in the families in which they live.

R.A.P., Public School, Taralga :—

I beg to state that my opinions as to the operations of the boarding-out system are very favourable to the Institution. By the system many children will doubtless be made useful citizens; and I am pleased to state that the children with whom I am brought into contact, attend school regularly, clean and tidy as a rule, and that their general appearance will compare favourably with that of the other children attending this school.

W.C., Tighe's Hill Public School :—

In reply to your circular of the 13th instant, requesting a report on the general appearance of the State children in attendance at this school, I have the honor to report that, of six pupils, five are very regular and punctual, the other is fairly regular. They are all neat and tidy in their dress, and also appear well cared for and fed. On the whole they will, in their general appearance, compare very favourably with the bulk of the children in attendance at school.

W.M., Superior Public School, Wallsend :—

In reply to yours of the 13th instant, I have the honor to inform you that the children under the Relief Department, in attendance at the school, are well cared for, well behaved, attend school regularly and punctually, and they compare favourably with the other children under my supervision.

G.L., Public School, Williamstown :—

I have only one State child in my school, and he compares very favourably in every respect with the other children attending school.

N.R.P., Public School, Wilberforce :—

The State children's relief system works well. The State children here compare favorably with other children. They are well cared for and well looked after at Wilberforce.

A.E.C., Public School, Wiseman's Ferry :—

Re the above, I beg to state that the majority of the State children who have come under my personal notice in this locality appear to be as well looked after as the children of those with whom they are placed. They are decently clothed, they appear to be well fed, and they certainly behave at school as though they were quite happy, while in attainments they compare favourably with the average child and in a few instances surpass the average.

H.N.S., Superior Public School, Woollahra :—

In reply to your letter of the 13th instant, desiring an observation of the results of the boarding-out system as exemplified in this school, I have the honor to report that there are four children attending this school who belong to the boarding-out system. They are all regular in attendance and clean in appearance, and bear evidence of good home-treatment.

J.K., Public School, Wollombi :—

I have the honor to inform you that the State children who have come under my notice are well cared for and have good homes; also, that they compare favourably with the other children under my supervision.

1895.

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

CHARGES AGAINST DEPARTMENT OF CHARITABLE  
INSTITUTIONS.

(CORRESPONDENCE RESPECTING.)

*Ordered by the Legislative Assembly to be printed, 24 September, 1895.*

The Director of the Government Asylums to The Principal Under Secretary.

Charitable Institutions of N.S.W., Government Asylums Branch,

Sir,

Oxford-street, Paddington, 18 September, 1895.

I notice from the public press this morning, that, in connection with the debate on the Loan Estimates last night, Mr. O'Reilly, M.P., made a number of charges against me which are described in one newspaper as being of "a very grave character." The details are not published; and I am consequently quite unaware of what the charges may be in any particular.

This matter, in my opinion, reflects the greatest censure upon me as the Administrator of the Department under my control, and involves not only the comfort and happiness of upwards of six thousand dependent persons, but also a very large annual expenditure of public funds. May I, therefore, request that on these grounds, and also in common fairness to myself, Mr. O'Reilly may be invited to formulate his charges in writing, in order that they may be dealt with immediately. As this gentleman may hesitate to do so because statements made in such a manner might not be considered privileged, I now undertake to waive any legal rights I may possess, in so far as they may relate to my official administration, in order that there shall be no obstacle to a very full and prompt inquiry.

I have, &c.,

SYDNEY MAXTED,  
Director of Charities.

Mr. O'Reilly, M.P., to be asked to formulate his charges against the Director of Charities in writing, and to be informed in terms of the last paragraph of the Director's letter.—J.N.B., 18/9/95.

The Principal Under Secretary to Dowell O'Reilly, Esq., M.P.

Sir,

Chief Secretary's Office, Sydney, 18 September, 1895.

Adverting to your speech in the Legislative Assembly last night, during the debate upon the Loan Estimates, when you made a number of charges against the Director of Government Asylums, I am directed by the Chief Secretary to request that you will be kind enough to formulate your charges in writing.

2. I am, at the same time, desired to add that, as it is considered you may possibly hesitate to adopt this course, because statements made in such a manner might not be considered privileged, Mr. Maxted has given an undertaking to waive any legal rights he may possess, in so far as they may relate to his official administration, in order that there may be no obstacle to a very full and prompt inquiry.

I have, &c.,

CRITCHETT WALKER,  
Principal Under Secretary.

Dowell O'Reilly, Esq., M.P., to the Chief Secretary.

Dear Sir,

Parliament House, 18 September, 1895.

In reply to a communication from your Under Secretary, I can only refer you to my speech as reported in *Hansard*, which seems to me sufficiently explicit.

I am, &c.,

DOWELL O'REILLY.

[Parliamentary Debates, 17 September, 1895.]

Mr. O'REILLY (Parramatta): I have very great pleasure in endorsing every word which has fallen from the lips of the Colonial Secretary with reference to the scandalous state of our charitable institutions so far as Parramatta is concerned. At the result of the last election, I come back with the fullest local authority to advocate the removal of those plague spots—for so they are regarded there—from the old town. We feel it a personal disgrace that there should be 1,100 old men confined in a building of five storeys—a deserted woolshed, whose old wooden floors are saturated with oil. There are only 10 feet of space between the floor of one flat and the roof, and I have no hesitation in saying that in the event of a fire not 1 per cent. of the inhabitants would escape. When the Colonial Secretary first took office he visited Parramatta.

Mr. O'REILLY: \* \* \* \* \*  
I am here to support every word that the Colonial Secretary has said in regard to the utter inadequacy of the present accommodation; but I am going to oppose the vote—for a reason which I think has not been placed by the Committee.

Mr. McELHONE: [*Inaudible.*]

Mr. O'REILLY: I call the attention of the chairman to the conduct of the Hon. Member for Fitzroy. I may point out to the Committee a singular inconsistency in the charitable administration of the colony. We do everything we can for the proper accommodation of lunatics of all sorts. You will find that at the lunatic asylum at Parramatta, the hospital for insane—I think that the change of name is significant—the inmates are no longer prisoners. They are regarded solely as patients, and they have every luxury of accommodation. I attribute that mainly to the excellent supervision and the splendid control of the Inspector-General of Insane. I regard him as the main cause of the excellent management of these institutions. It is with reference to the control of the asylums that I wish to say a few words now. The necessity of a change is clear to the Committee. No one can doubt that. When the leader of the Opposition assures us that he is not opposing the proposed expenditure, I am convinced that he knows nothing about the real condition of these old men; men whose only fault in many cases is their age and their poverty. If he could see them, as I have seen them, camped on the floor, without any regard for order, his tone would have been different. When the Colonial Secretary visited the institution he found thirty or forty men living on the fifth floor who had been there for some weeks, because they were too feeble to get downstairs and go outside.

Mr. BRUNCKER: Some of them had been there for three years!

Mr. LYNE: I do not know what the condition of the Parramatta Asylum is; but I have been through the Liverpool Asylum!

Mr. O'REILLY: No one with any feeling for suffering could oppose the vote on the ground of the expense; but I will give the Committee a fact which will set Hon. Members thinking. I am going to put from my shoulders, as the representative of the town in which these institutions exist, a large measure of responsibility which will rest upon the shoulders of the Committee and the Government from this day. I will oppose any measure to increase the present accommodation for these old men while Sydney Maxted is at the head of the Charities Department. I think that it is absolutely necessary, in dealing with this matter, to consider the question of management. For some years past allegations, more or less vague and incapable of proof, have been made respecting the administration and the management of the Charities Department. I am here to make no vague accusation. I am here to advance nothing I cannot support, and nothing I cannot challenge a trial upon, and I am perfectly ready to adduce evidence.

Mr. EWING: I would like to ask your ruling, sir, as to whether the Hon. Member is in order. The management of the Charities Department is not now under consideration; we are only considering the erection of buildings of which at some future date the present Director of Charitable Institutions may possibly be the manager. I ask, then, if the Hon. Member is in order in bringing the character of this officer before the Committee?

Mr. O'REILLY: On the point of order, I wish to say that the construction of these buildings is advocated on the distinct recommendation of the officer to whom I am alluding, and I think that the character and ability of that gentleman is open to discussion. I am, of course, speaking of his character in his public capacity. I never attack any man in his private capacity. I have no more to do with a man's private character than he has to do with mine. But it is my right and my duty to discuss his character in his public capacity, inasmuch as the administration and management of this department very closely concerns the wisdom or unwisdom of voting this money.

The CHAIRMAN: I do not think the Hon. Member will be out of order in discussing the management of these institutions. It might be shown that with better management this expenditure would not be required.

Mr. O'REILLY: I think the Hon. Member who raised the point of order, and other Hon. Members also, will sympathise with the stand I am taking on the present occasion, when they have heard me out. I know perfectly well that the Colonial Secretary has no sympathy with —

An HON. MEMBER: This is not the right time to raise the question!

Mr. O'REILLY: The present is always the right time for the correction of a public abuse. I know that I am only strengthening the hands of the Colonial Secretary by publicly calling attention to this officer, and that he will in the future, as I have known him to do in the past, fearlessly follow up any information which is brought before him. I come now to the point upon which I shall leave the Committee and the Government to act. I can bring absolute evidence to prove that the Director of Charitable Institutions, knowingly or unwittingly, has, for years past, had in charge of twenty-four old couples in Parramatta, a woman who is constantly drunk, a woman who has been guilty of the foulest language, and who has been seen coming home in the train alone, and in a state of intoxication, at 12 o'clock at night.

Mr. McELHONE: I rise to order. I should like to know whether the Hon. Member is in order in discussing the question whether the woman to whom he refers is generally drunk or sober?

Mr. HOGUE: I do not think the Hon. Member is in order in making an attack on a public servant upon this motion. It is grossly out of place, and very unfair.

Mr. CHANTER (Deniliquin): I would suggest to the Hon. Member that a proper time at which to bring forward the matters to which he is referring would be when the salary of the Director of Charitable Institutions is under consideration. We are now voting money for a public work with the management of which this officer may, after all, having nothing to do,

Mr.

Mr. DICK (Newcastle East): I think it would be much better if the last speaker kept his advice to himself as to the course Hon. Members should pursue. It would certainly be more in keeping with the Hon. Member's position in this House. This expenditure is a matter which concerns the Director of Charitable Institutions and his administration of his Department, and I submit that the Hon. Member for Parramatta is strictly in order in showing that the Director of Charitable Institutions is not capable of administering the department, and that if he be incapable, it would, perhaps, be inexpedient not to vote this money.

Mr. BRUNKER (East Maitland), Colonial Secretary: I would point out that if the Hon. Member is at liberty to attack the reputation of the Director of Charitable Institutions he has an equal liberty to attack the reputation of every officer in connection with them. Although it is not strictly pertinent to the point of order, I may, perhaps, at this stage, be permitted to say that if these charges had been made to me as the head of these institutions they would have been dealt with in a different manner from that in which they are likely to be dealt with now. I think it is derogatory to the Hon. Member's position that he should make charges against a public servant, whatever may have been his conduct in the management of these institutions, under circumstances when he is utterly unable to defend himself.

The CHAIRMAN: I do not think the Hon. Member for Parramatta would be in order in making specific charges against the Director of Charitable Institutions. He might, perhaps, be in order in showing that the management of the institutions generally was not good; but I think he would be out of order in going into details of the conduct of individuals.

Mr. O'REILLY: I readily bow to the Chairman's ruling, and, at the same time, I, as a young man, can with honesty say that I feel the rebuke of one for whom I have so great a respect as for the Colonial Secretary. My only object in bringing the matter before Parliament was to place it in the hands of Hon. Members, and to take out of the Colonial Secretary's hands individually and personally the grave responsibility of dealing with an officer of the public service.

Mr. BRUNKER: I do not hesitate to deal with anyone if I am called upon to do so, and if they deserve it!

Mr. O'REILLY: With due deference to the opinion expressed by the Hon. Member for Newcastle East, I think there is something in the suggestion put forward by the Hon. Member for Deniliquin, and I can assure Hon. Members that when the salary of the officer to whom I have alluded comes before us I shall have something to say about him. I am sure that in this House any member who fearlessly brings forward a question of this kind will not have his motive misunderstood. I am no personal enemy of the Director of Charitable Institutions.

Mr. GARRARD: Would it not have been fair-play to give the Minister in charge of the department notice of the Hon. Member's intention to refer to the subject?

Mr. O'REILLY: That is a matter of etiquette with which Hon. Members who are older members than myself are probably better acquainted. I, at all events, had no intention to offend the hon. gentleman. I shall oppose this vote at every stage while this unhealthy mushroom growth of charitable institutions, regulated by a boarding-out officer appointed by Sir Henry Parkes a few years ago, remains in its present deplorable state.

Mr. HOGUE (Glebe): I am surprised that the Hon. Member for Parramatta should attack one of the ablest officers in the public service. I venture to say that in the whole service there is not a more able or conscientious officer.

Mr. McELHONE: Is not the Hon. Member out of order in replying to the observations of the Hon. Member for Parramatta which were interrupted by the point of order?

The CHAIRMAN: The Hon. Member is out of order.

Mr. HOGUE: I merely rose to express my surprise at the Hon. Member announcing his determination to vote against this item, and at the same time giving the best of reasons why it should be passed.

Mr. O'REILLY: Not under the present management of these institutions.

Mr. HOGUE: The Hon. Member would drive me into a line of argument in which I should be out of order. The Hon. Member is going to oppose this vote although he knows perfectly well that the expenditure would tend to improve the condition of the old men in these asylums, and that the scheme which is to be carried out had the sanction of the late Government. The arrangement will tend to the comfort and health of these unfortunate persons, and at the same time will relieve the district which the hon. member represents of a condition of things of which it is much ashamed. If the Hon. Member opposes this vote, how will he face his constituents?

Mr. O'REILLY: I will face them?

Mr. HOGUE: The Hon. Member may have to do so. He came here, he says, with full authority to do away with these institutions as they now exist in Parramatta. The Government propose to move them to some other place, and this vote is intended to effect that object. Yet the Hon. Member is opposing it. The Hon. Member for the Belmore Division mentioned the Randwick Asylum. That asylum has altogether outlived its usefulness. It is now practically a private boarding-house. There was really no reason for its continued existence after the State Children's Relief Department came into existence, and it ought to have been wiped out altogether. The persons who are responsible for the management of the institution are carrying it on upon their own responsibility, and they would no doubt be glad to be rid of it now that the institution has become a white elephant. It might be wise on the part of the Government to take over the institution if they can get it at a fair price. The buildings are among the best in the Colony, but they are altogether unsuited to the purpose to which they are now put. I think the hon. gentleman might consider the advisableness of entering into negotiations for their purchase, although of course the proposal made by the Hon. Member for Belmore Division cannot be regarded exactly in the light of an offer. The site is a good and healthy one, and it would be fairly suitable for the purpose suggested.

## Minute of the Chief Secretary.

THE seriousness of the charge preferred by Mr. O'Reilly, M.P., during last night's sitting in Parliament against the Director of Charities demands an explanation.

A further charge is formulated in direct terms against the caretaker of the Cottage Homes at Parramatta, which necessitates immediate investigation for the purposes of testing the truth of the allegations, and determining whether the services of that officer should be any longer retained.

The Director of the Government Asylums.—C.W., P.U.S., B.C., 18/9/95. J.N.B., 18/9/95.  
Explanation and report herewith.—S.M., 19/9/95.

## The Director of Government Asylums to The Principal Under Secretary.

Charitable Institutions of New South Wales, Government Asylums Branch,  
Cleveland-street Rodforn, 19 September, 1895.

Charges made by Mr. O'Reilly, M.P.

## MEMORANDUM.

It appears from *Hansard* report that, apart from Mr. O'Reilly's innuendoes relating to myself, which I have requested may be reduced to distinct charges for the purpose of a prompt inquiry, the only direct charge he has made is that I "knowingly or unwittingly for years past have had in charge of twenty-four old couples at Parramatta a woman who is constantly drunk, a woman who has been guilty of the foulest language, and who has been seen coming home in the train alone, and in a state of intoxication, at 12 o'clock at night." I have ample proof that this charge is without foundation.

I have myself seen the matron on innumerable occasions, and I have never observed anything in her appearance that would justify me in supposing she drank to excess, nor have I ever heard her use foul words. I have questioned the Secretary to the Department, who has frequently seen her at the Cottage Homes and at the head office, and he positively affirms that he has never seen her under the influence of drink; other inspectors, who have visited the homes at uncertain periods, make the same statements; and the Medical Officer who visits the homes on three days a week, and also when specially sent for, and who has seen her at all times of the day and night, gives similar testimony. I may state that Mrs. Gilmore was also for nearly twelve months housekeeper at the head office, where I saw her daily, and she always appeared to be a steady, sober woman. It therefore seems impossible that she could drink to excess without being detected.

During the seven years she has been connected with the Department there have been three occasions on which it was stated to me that she overindulged in stimulants. Twice, at very long intervals, the charges were made by inmates whom she had reported for misconduct. In one case, a man and his wife were expelled for theft and drunkenness; in the other, an inmate, who is still at the home, would have been expelled on several charges\* but for his blindness and other infirmities, which caused his offences to be overlooked; on the third occasion a cabman told me he had been informed that the matron came home late one night in the train under the influence of drink.

On the first occasion I personally held a very searching inquiry, and could not find any evidence whatever to sustain the charge beyond the bare statement of the expelled inmate; on the second, Mr. Wing, then an Inspector in the Department, and now Assistant Superintendent at George-street Asylum, held an inquiry with a similar result; and on the third occasion, Inspector Allen, who is a shrewd and capable officer, could not obtain any proof. I had also questioned Mrs. Gilmore with reference to the occasion on which she was alleged to have come home late in the train. She stated she had been to the theatre with a friend, and was so exceedingly ill that she thought she would have been unable to reach her home, which is only a few yards distant from the railway station. I know that she was in bad health at that time.

My position as a civil servant precludes me from making any comments in this matter, and I therefore have nothing more to say than that I hope the evidence I have presented will be sufficient to convince the Chief Secretary that there has not been any neglect of duty with reference to the only definite charge Mr. O'Reilly has made, and that the charge itself is groundless.

SYDNEY MAXTED,  
Director of Govt. Asylums.

P.S.—I append a medical certificate from Dr. Violette, who to-day verbally stated to me that it was quite impossible for Mrs. Gilmore to be addicted to drink without his knowing it, and that he was sure she was a perfectly temperate woman.—S.M.

[Enclosure.]

Memorandum from the Government Medical Officer, Parramatta, to Sydney Maxted, Esq., Director of Government Charitable Institutions.

Sir, Parramatta, 19 September, 1895.

I have been, on and off, the medical attendant to the inmates of the Cottage Homes, Parramatta, for about six years. During that time I have seen Mrs. Janet Gilmore, the Superintendent, at all hours of the day and night, and I have never seen her suffering from the effects of drink, nor have I observed anything in her conversation or demeanour to lead me to believe that she was addicted to habits of intemperance.

Yours faithfully,  
W. BRADLEY VIOLETTE, M.B.

\* I may state that it is common for inmates to make charges of this character against officials without foundation.

1895.

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

**MRS. JANET GILMORE, MATRON SUPERINTENDENT  
OF THE COTTAGE HOMES, PARRAMATTA.**

(CORRESPONDENCE RESPECTING, AND REPORT AND EVIDENCE TAKEN BY THE BOARD OF  
INQUIRY.)

*Ordered by the Legislative Assembly to be printed, 14 November, 1895.*

Dowell P. O'Reilly, Esq., M.P., to The Inspector-General of Police.

Sir,

Sydney, 9 October, 1895.

On the authority of the Chief Secretary, I have to request that you will at once obtain for me from Constables West, Carpenter, and Torpy, a full and explicit statement of all they know in respect of (1) the alleged intemperance of Mrs. Gilmore, and (2) her use of bad language in public places.

I am, &amp;c.,

DOWELL O'REILLY.

I wish Mr. Brennan to obtain these constables' statements as promptly as possible for transmission to the Chief Secretary.—E.F., 9/10/95. Inspector Brennan. Forwarded to Mr. Latimer for prompt attention. I wish to receive the statements referred to by first post to-morrow morning.—MARTIN BRENNAN, Supt., 9/10/95. Statements from Constables West, Carpenter, and Torpy, *re* Mrs. Gilmore, herewith.—R. LATIMER, Sub-Insp., 9/10/95.

POLICE REPORTS.

Police Station, Parramatta, 9 October, 1895.

CONSTABLE JAMES TORPY, No. 6,336, respectfully reports *re* the above. The constable begs to state that he was on duty at the railway-station in April last from 6 p.m. to 2 a.m. for the purpose of meeting all trains. The constable saw Mrs. Gilmore arrive by the 12:10 a.m. train one night in that month very much under the influence of drink. She was asleep when the train stopped. She was woke up by Guard Morrison.

JAS. TORPY,

Constable.

Police Station, Parramatta, 9 October, 1895

CONSTABLE WEST, No. 3,711, respectfully reports that he has on several occasions, when on duty at the Parramatta railway station, seen Mrs. Gilmore leave the train in a state of intoxication, the last occasion being in June last, when the night-officer, John Lord, assisted Mrs. Gilmore from the railway carriage to her home. The constable has never heard Mrs. Gilmore make use of bad language.

F. H. WEST,

1st Class Constable.

Police Station, Parramatta, 9 October, 1895.

CONSTABLE WILLIAM CARPENTER, No. 4,304, begs to report that he was on duty at the Parramatta railway station during the month of July last. The constable on two occasions saw Mrs. Gilmore get out of the train in a state of intoxication, but has never heard her make use of any bad language.

W. CARPENTER,

1st Class Constable.

Minute of The Inspector-General of Police.

I beg to submit the attached reports to the Chief Secretary, who will perhaps decide whether or not they should be transmitted to Mr. O'Reilly, M.P.—EDMD. FOSBERY, I.-G.P., 10/10/95. Principal Under Secretary.

The statements are *ex parte*, and, in justice to Mrs. Gilmore, ought to have been taken on oath in her presence, or in the presence of her representative. To afford Mrs. Gilmore an opportunity to defend herself, and in the interests of the institution, a full inquiry must be held. The charges preferred by Mr. O'Reilly, M.P., are serious, and require to be investigated without delay.—J.N.B., 11/10/95.

I would suggest the appointment of two persons who, I think, should be Magistrates, as a Board to inquire into this matter.—C.W., 11/10/95. Dr. Manning and Dr. Goode may be asked to undertake the duty of inquiring into this matter.—J.N.B., 11/10/95.

The Principal Under Secretary to W. H. Goode, Esq., M.D., J.P.

My Dear Sir, Chief Secretary's Office, 11 October, 1895.  
I am desired by the Chief Secretary to ask whether you will, in conjunction with Dr. F. N. Manning, undertake the duty of inquiring into certain allegations affecting Mrs. Gilmore, Matron of the Cottage Homes at Parramatta, which were recently made by Mr. D. P. O'Reilly, M.P., in the Legislative Assembly.

Yours, &c.,  
CRITCHETT WALKER,  
Principal Under Secretary.

The Principal Under Secretary to F. N. Manning, Esq., M.D., J.P.

My Dear Sir, Chief Secretary's Office, 11 October, 1895.  
I am desired by the Chief Secretary to ask whether you will, in conjunction with Dr. W. H. Goode, undertake the duty of inquiring into certain allegations affecting Mrs. Gilmore, Matron of the Cottage Homes, Parramatta, which were recently made by Mr. D. P. O'Reilly, M.P., in the Legislative Assembly.

Yours, &c.,  
CRITCHETT WALKER,  
Principal Under Secretary.

W. H. Goode, Esq., M.D., J.P., to The Principal Under Secretary.

My Dear Sir, 150, Macquarie-street, 11 October, 1895.  
I am willing to undertake the duty mentioned in your letter of to-day, in conjunction with Dr. F. N. Manning.

I am, &c.,  
W. H. GOODE.

F. N. Manning, Esq., M.D., J.P., to The Principal Under Secretary.

My Dear Sir, Gladesville, 14 October, 1895.  
I shall be glad if the Chief Secretary can kindly see his way to excuse me undertaking the duty of inquiring into the charges against Mrs. Gilmore. I have been very much engaged in duties extraneous to my office during the last few months, and my office staff is short-handed. I gather, too, that the charges against Mrs. Gilmore do not involve any purely medical questions, so that there will, perhaps, be no difficulty in entrusting the inquiry to some other officer.

Very faithfully, &c.,  
F. NORTON MANNING.

The inquiry should not occupy more than one day. I shall, therefore, be glad if Dr. Manning reconsiders the matter. Although the subject to be inquired into appears to be at present only of minor importance, I am anxious that it should be placed in capable hands.—J.N.B., 15/10/95.

The Principal Under Secretary to F. N. Manning, Esq., M.D., J.P.

My Dear Sir, Chief Secretary's Office, 15 October, 1895.  
With reference to your letter of the 14th instant, asking to be relieved of the duties of inquiring into certain charges against Mrs. Gilmore, Matron of the Cottage Homes, Parramatta, I am desired to say that the inquiry should not occupy more than one day, and that the Chief Secretary will be glad if you could reconsider the matter.

Although the subject to be inquired into appears at present to be only of minor importance, Mr. Bruncker is anxious that it should be placed in capable hands.

Yours, &c.,  
CRITCHETT WALKER,  
Principal Under Secretary.

The Principal Under Secretary to F. N. Manning, Esq., M.D., J.P.

Sir, Chief Secretary's Office, 15 October, 1895.  
I am directed to inform you that the Chief Secretary has been pleased to appoint you, in conjunction with W. H. Goode, Esq., M.D., to inquire into certain charges preferred by Mr. D. P. O'Reilly, M.P., in the Legislative Assembly, on the 17th ultimo, reflecting on the conduct of Mrs. Gilmore, Matron of the Cottage Homes, Parramatta.

2. I am at the same time desired to forward herewith for your information certain papers in the case.

I have, &c.,  
CRITCHETT WALKER,  
Principal Under Secretary.

The Principal Under Secretary to W. H. Goode, Esq., M.D., J.P.

Sir, Chief Secretary's Office, 15 October, 1895.  
I am directed to inform you that the Chief Secretary has been pleased to appoint you, in conjunction with F. N. Manning, Esq., M.D., to inquire into certain charges preferred by Mr. D. P. O'Reilly, M.P., in the Legislative Assembly on the 17th ultimo, reflecting on the conduct of Mrs. Gilmore, Matron of the Cottage Homes at Parramatta.

I have, &c.,  
CRITCHETT WALKER,  
Principal Under Secretary.

Report

## Report of the Board of Inquiry.

Sir,

Sydney, 4 November, 1895.

We have the honor to report that, in accordance with instructions contained in the letter of the Principal Under Secretary, dated 15th October, we have inquired into certain charges preferred by Mr. Dowell Phillip O'Reilly, M.P., in the Legislative Assembly, on the 17th ultimo, reflecting on the conduct of Mrs. Gilmore, Matron of the Cottage Homes, at Parramatta.

The charges referred to are not stated in the letter of instructions, and we have therefore referred to *Hansard*, and find—1st. That on the 17th September last, Mr. O'Reilly stated that "The Director of Charitable Institutions, knowingly or unwittingly, has for years past had in charge of twenty-four old couples at Parramatta a woman who is constantly drunk, a woman who has been guilty of the foulest language, and who has been seen coming home in the train alone, and in a state of intoxication at 12 o'clock at night"; and 2nd, on the 2nd of October, Mrs. Gilmore is referred to by Mr. O'Reilly as follows: "Over these twelve old couples there is this woman Gilmore. I repeat that it is known to every resident in the neighbourhood, and now it is known to the Government—not to the Colonial Secretary, but to the Government officials who have printed this report against it—that this woman has been repeatedly drunk. She has been seen coming home at 12 o'clock at night in a state of hopeless intoxication, and she has been heard to use the foulest language by numerous residents in the neighbourhood."

In inquiring into these charges we have held seven meetings and examined fifty-six witnesses.

At our first sitting application was made that Mrs. Gilmore might have the assistance of a solicitor to attend the meetings of the Board, and, subject to the directions of the Board, examine and cross-examine witnesses, and as it was further represented to us that Mrs. Gilmore had no friend capable of undertaking this office, and was herself so distressed in mind at the charges levelled against her that she could not properly defend herself, we acceded to the application. Mr. Neville W. Montagu was therefore present at the sittings of the Board at which evidence was taken, and on one occasion the sitting was adjourned as Mr. Montagu was unfortunately unable to attend.

It soon became evident to us that Mrs. Gilmore, from her peculiarities of temperament, was quite unable to conduct her case for herself, and that it was only by means of assistance that the evidence could have been placed fully before us. As it was, the inquiry involved more than one painful scene due to Mrs. Gilmore's excitability, and on one occasion, in an interval between our sittings, Mrs. Gilmore took the very unwise course of visiting the dwelling of an adverse witness and threatening him with violence.

It appeared from the evidence, and from our personal observation, that Mrs. Gilmore is a highly nervous woman, in indifferent health, hysterical, excitable, impulsive, and, in consequence, difficult to deal with officially and otherwise.

It appeared further that she lived in a condition of domestic dissension with her husband, who is at present and has for some time past been without employment, and that these domestic broils and the noise and disturbance attending them were known to Mr. Maxted and Mr. Green, the superior officers of the Department of Public Charities, and had on more than one occasion been the subject of remonstrance by these officers as tending to scandal, and to the subversion of discipline in the Cottage Homes.

The evidence brought before us showed that on the whole Mrs. Gilmore had performed the duties of her office in a satisfactory manner. Dr. Violette, the Visiting Medical Officer, stated that she had "given him all the assistance in her power, been kind to the inmates, and done all she could to make them comfortable. She had looked after them regularly, seen that things were done in a regular manner, and that cleanliness was enforced." This testimony was supplemented by that of other witnesses, and we had ourselves an opportunity of seeing that the cottages were well kept, and that the inmates appeared comfortable and contented. The Director, however, whilst agreeing in the generally satisfactory character of Mrs. Gilmore's supervision, criticised her conduct in several matters of management and discipline; and her ill-health and excitable temperament, which seemed in a measure to unfit her for the duties of her office, appear to have occasioned him so much anxiety, that on more than one occasion he has thought it necessary to discuss the matter with the Chief Secretary.

We have considered it advisable to set forth these particulars as a preliminary to our report on the specific charges.

No evidence was offered that Mrs. Gilmore had ever been seen in any way intoxicated or the worse for drink in the daytime or whilst on duty; indeed the evidence of numerous witnesses, including the officers of the Department of Charities, the Visiting Medical Officers and other medical practitioners was distinctly to the effect that she showed no signs of indulgence in drink.

We are inclined to attach considerable importance to the evidence of the four medical practitioners examined as witnesses, since they saw Mrs. Gilmore at all hours, and were often in close attendance on herself or her children. They all stated unequivocally that they had seen no signs whatever at any time of indulgence in intoxicants, and this would seem to show that over indulgence in drink could not have been habitual.

We regret, however, that we could come to no other conclusion but that Mrs. Gilmore on several occasions within the last eighteen months had been seen more or less intoxicated when returning from Sydney to Parramatta by late trains. The evidence of officials of the Police and Railway Department, given in the first instance reluctantly, and only with the permission of or at the actual request of their superior officers, and supported as it was by other evidence, was to our minds conclusive on this point.

The evidence as to the use of bad language is by no means so convincing. The four members of the Police Force, who give strong evidence as to the charge of intoxication, have not a word to say on this charge, and it is difficult for us to believe that witnesses who gave strong testimony on this point, can remember the exact expressions used months ago, especially as two at least of them admit that they were in the habit of hearing bad language pretty constantly.

Dr. Violette, the present medical officer of the Cottage Homes, who was called on behalf of Mrs. Gilmore, stated, however, that her language was sometimes "not the most refined," and that it was "coarse," though not "indecent and blasphemous." Dr. Walter S. Brown, who had for about three years attended the Cottage Homes as Visiting Medical Officer, and whose general testimony was entirely in Mrs. Gilmore's favour, stated that Mrs. Gilmore's language was "not altogether what it might have been," and that he had heard her use epithets which she should not have used.

On the whole, we are of opinion that Mrs. Gilmore has at times, in moments of excitement and when she had lost self control, and especially during the quarrels with her husband, used expressions which were both improper and unseemly.

Evidence

Evidence was brought before us which showed that owing to rumours which had reached the ears of the Director of Charities, several inquiries had been made during the last two years by the Director, or by officers of his Department, as to Mrs. Gilmore's alleged intemperance, but that no conclusive evidence on this point had been obtained.

We have, &c.,  
F. NORTON MANNING, M.D.  
W. H. GOODE, M.D.

### Minute of The Chief Secretary.

Sydney, 14 November, 1895.

THE evidence taken at the inquiry held by Drs. Manning and Goode only partly confirms the statement made in Parliament by Mr. O'Reilly, M.P.

Mrs. Gilmore has, I think, acted imprudently, exemplified by her conduct whilst returning to her home at Parramatta after occasional visits to Sydney. The statement that she is a woman who is constantly drunk—a woman who has been guilty of the foulest language is not clearly proved.

The evidence given by several members of the medical profession, residents of Parramatta, and constant visitors to the Cottage Homes, proves beyond doubt that in her position as Matron, Mrs. Gilmore, has performed her duties efficiently. This view is strongly supported by the evidence of clergymen who have also frequently visited the Homes, and by highly respectable residents of Parramatta. There does not appear to be any evidence reflecting on the management or conduct of the institution. I find from the records that Mrs. Gilmore's appointment dates from May, 1883, and with the exception of the impropriety of conduct referred to in these proceedings no complaint has been recorded against her.

A careful review of the whole of the circumstances suggests that the interests of the Service will be more fully conserved by the transfer of Mrs. Gilmore to a position where she will be under judicious control and constant supervision.

JAMES N. BRUNKER.

### Evidence.

PROCEEDINGS of the Board appointed to inquire into the charges made by Mr. Dowell Phillip O'Reilly, M.P., in the Legislative Assembly on the 17th September and 2nd and 15th October, 1895, regarding the conduct of Mrs. Janet Gilmore, Matron Superintendent of the Cottage Homes, Parramatta.

THE Board, consisting of Frederic Norton Manning, Esq., M.D. (Chairman), and William Henry Goode, Esq., M.D., met at the reading-room of the Cottage Homes, Parramatta, on the 23rd October, 1895, at 10 o'clock a.m.

Mr. Neville W. Montagu, solicitor, stated that he had been instructed by Mrs. Gilmore, to watch the inquiry on her behalf, and requested the permission of the Board to be present, and, subject to their direction, to cross-examine the witnesses.

*Dr. Manning.*] We have already considered this question, and understanding that Mrs. Gilmore has no intimate male friend who could be with her in this inquiry, we think it right she should be represented by some one, her solicitor if need be, but we should be glad if you would put your questions through us as far as possible.

Mrs. Gilmore was called, and remained present throughout the inquiry.

*Dr. Manning.*] You are aware of these charges? Yes, sir.

And you know they are charges of drunkenness and of using bad language. At the wish of the Chief Secretary we are going into these charges very fully. I am not proposing to take this evidence on oath, there being reasons against that course; but if you will give me a list of the witnesses you wish to appear, I will call them.

Constable Frederick Henry West examined:—

*Dr. Manning.*] What is your name? Frederick Henry West.

You are a first-class constable? Yes.

Were are you stationed? At Parramatta.

You know Mrs. Gilmore? Yes.

You have frequent opportunities of seeing her? Yes.

You have made some statements through your sub-inspector;—will you repeat them to us? It is the duty of the man on duty, between 6 and 2 o'clock, to meet all trains, and I have seen Mrs. Gilmore on frequent occasions, generally between 11 and 1 o'clock, under the influence of drink.

When was the last occasion? In the early part of June last. On that occasion she was helplessly drunk.

Was anybody with you at that time? A cabman, named Morris, was there, but none of my comrades were there.

Did Morris see what occurred? Yes.

And saw Mrs. Gilmore's condition? Yes.

Was any railway officer present? John Lord, the night officer in charge, went to the carriage and almost carried her out. He assisted her, I believe, to her home.

You saw him go to a first-class railway carriage? Yes; Mrs. Gilmore had vomited over the seat and down her dress on one side.

The night officer assisted her out of the carriage and took her out at the door of the railway station? Yes.

And then you saw them go in the direction of these Cottage Homes—in the direction of her residence? Yes.

What was the reason for your considering Mrs. Gilmore drunk on that occasion? Her staggering gait. She was unable to stand up unsupported, and as she passed within 2 yards of me I smelt the fumes of drink distinctly.

And on other occasions why have you thought her drunk? On account of her staggering gait, but I never saw her so helpless before. She bumped against me going through the door.

Have you heard Mrs. Gilmore speak on any of these occasions? I have not, sir, to my recollection.

You

You have never heard her make use of any bad language? No; I have not on any occasion.

Can you fix the hour exactly? I cannot. It was either the twenty minutes to 12 or the ten minutes past 11 train; I am not sure which.

*Cross-examined by Mr. Montagu.*] If this witness saw Mrs. Gilmore in this complete state of intoxication, was it not his duty to take some action in the matter? I would have locked her up had John Lord not taken care of her.

*Dr. Manning.*] On what grounds would you have locked her up? For drunkenness.

*Mr. Montagu.*] Who was on the station with Mrs. Gilmore on this occasion? The other passengers had left the carriage. Mrs. Gilmore remained behind, almost double, on the seat of the carriage.

*Dr. Manning.*] Did anyone call your attention to her? Both I and the night officer saw her. They said, "Hello! here's Mrs. Gilmore," or a remark to that effect.

*Mr. Montagu.*] Did you notice who were the other passengers, and whether they were residents of Parramatta? I did not take enough notice to know who they were.

Did you look into this carriage? I could see it completely from where I stood at the door.

How often have you seen Mrs. Gilmore? I could not say, but on frequent occasions—a dozen times.

How many times have you seen her altogether? During the three years I have been on duty—and I had this duty on one occasion for four or five months together—and I suppose I have noticed her two or three times a month. I have seen her in a perfectly sober state passing my own door.

You have had some experience of people in that condition, I suppose;—will you be prepared to swear that Mrs. Gilmore was drunk on that occasion? I will, readily.

Do you not think it was possible she was suffering from illness? She may have been, but she was drunk.

You know, possibly, that people have been locked up on a charge of being drunk when they have proved to be ill;—is it not quite possible that on this occasion she may have been seriously ill? Yes; but she was also drunk.

How do you fix this occurrence in June last? It was the last month on which I was on that duty. I have ascertained that from the duty record. We do not get that duty but once in four or five months now.

So there was a lapse of time between when you were on this night duty again and the month of June? About three or four months.

Was Mr. Lord the night officer in June last? Yes.

Did Mr. Lord call your attention to Mrs. Gilmore? No; we both looked across at the same time. I was standing on one side of the door, and he was taking the tickets.

Where was the carriage that Mrs. Gilmore was in? Nearly opposite the door—a little to the left. Simultaneously both you and Mr. Lord looked into this particular carriage? Yes.

Did you make a statement about this to anyone? I was asked the question.

By whom? Mr. Dowell O'Reilly. I was asked by him if I had ever seen Mrs. Gilmore under the influence of drink.

As a matter of fact you gave it as your opinion that Mrs. Gilmore was drunk? I am prepared to swear it.

*Dr. Manning.*] Can you fix at all the first time that you saw Mrs. Gilmore? I cannot; it was early after I came here, which was the 5th August, 1892, three years ago.

After the 5th August, 1892, you first saw Mrs. Gilmore in this condition? Yes; but I could not fix it to a week, or month for that matter.

*Mr. Montagu.*] Then I understand you to say that several times prior to June, you saw Mrs. Gilmore in that condition? Yes; but never in such an advanced state of intoxication.

On this occasion in June, did you hear her make use of any bad language? No.

You say you saw her in the carriage, and both you and Lord went across to the carriage? No, I did not; I remained at the door.

Lord went there and helped her out of the carriage? Yes; he put his arm round her, and almost carried her out.

And you say you are satisfied, after the short experience of seeing her taken out of the carriage across the platform and through the door, that she was drunk? The smell of the vomit convinced me.

Constable Carpenter examined:—

*Dr. Manning.*] What is your name? William Carpenter.

You are a 1st class constable, stationed at Parramatta? Yes.

How long have you been stationed here? About a year and five months, this last time.

Do you know Mrs. Gilmore? Yes; I saw Mrs. Gilmore in the month of July last.

Have you seen her frequently? No.

You do not know her well? The first time I saw her was in July last.

You have made some statement to your sub-inspector;—will you repeat that statement to us? In the month of July last.

Can you give us the date? I cannot; I was on night duty and used to attend trains from 10 o'clock until five past 1. I think the first time I saw Mrs. Gilmore was between the 1st July and the middle of the month. I was standing at the station one night on the arrival of the train at ten minutes past 11, or five minutes to 12 o'clock. It was some train between after 10 and the five minutes past 1. I was standing on the platform and saw a rather respectable woman getting out of a carriage a little lower down than the doorway, and I inquired from one of the railway officials who the woman was.

What made you inquire? She was under the influence of drink.

You thought so? Yes.

What were the reasons for your thinking so? From the way she got out of the carriage, and the way she walked up the platform. The reason for my asking was because I did not like to see a respectable woman like her on the street without finding out where she lived.

Who did you ask? I asked a young fellow who is the ticket collector, and who is known as Andy.

What did he tell you? He said it was Mrs. Gilmore from the Cottage Homes.

Did you have any further conversation with him? No; I walked out off the platform, and Mrs. Gilmore came across to her residence here.

Are you sure of that? Yes. I walked after her to see whether she was able to get home. She was in front of me. I kept her in sight, and saw her come into her gate opposite her residence, and then went back.

Did

Did you see her on any other occasion? Yes; one night I happened to be on the platform.

Was this subsequently? Yes; and I saw Mrs. Gilmore standing against a verandah post on the platform, and Morrison, I think is his name, the guard, was speaking to her. They were on the left and I was on the right going into the doorway. I heard Morrison speaking to the night-officer, Lord, about her ticket.

On that occasion, what made you consider Mrs. Gilmore intoxicated? She was worse than on the first time.

What were the symptoms that led you to think she was intoxicated? Her dress appeared as if it had been spewed on, or something like that. She held on to the verandah post unable to walk.

What do you mean by holding on to the verandah post? She was leaning against it with her arms at the side of it.

What else? Nothing more, sir.

Did you follow her out? No; I did not. I did not want to see anything more. I believe they were talking about her ticket, and I did not want to be mixed up in it. I was there if I was wanted. It was nothing to do with me.

Who was there besides Guard Morris? Night-officer Lord.

Did she give her ticket up on this occasion? I do not think so.

*Cross-examined by Mr. Montagu.*] You were telling us just now that on the second occasion Mrs. Gilmore was worse than on the first, but she was not so drunk that you thought it necessary to take her into custody, was she? But for knowing who she was, and where she lived, I would not have left her in the street without protection.

She was not making any noise? No.

What you say is this, that Mrs. Gilmore was leaning against the post and looked in a helpless condition? She was very drunk.

She looked in a helpless condition? Yes.

You say you considered her drunk because you noticed her dress had a stain on it? Yes; and from the way she walked.

You know from your own experience that people sometimes have been locked up on a charge of drunkenness when it has turned out that they were suffering from some internal illness? No.

You have heard of it? I have never seen it.

There are only two occasions you can call to mind? That is all that I have seen the woman under the influence of drink. I have never had anything to say against Mrs. Gilmore at any other time.

*Dr. Manning.*] You did not hear Mrs. Gilmore speak on these occasions? No, sir.

Mrs. Gilmore did not speak? I could not say.

Have you ever heard Mrs. Gilmore making use of bad language? Never in my life.

Have you heard her speak at all? No; I never heard her speak.

Ephraim Haddon examined:—

*Dr. Manning.*] What is your occupation? Cabman.

You have made some statements to Mr. O'Reilly concerning charges against Mrs. Gilmore,—will you repeat them? I simply told him I saw Mrs. Gilmore arrive at Parramatta in the 11:10 train. She appeared to be in a state of intoxication. I saw her assisted from the carriage, and she held on to the verandah post until Mr. Lord, the night officer, assisted to take her home.

Can you fix the date of this occurrence? No, I cannot; I have no idea of the date, but I should think it was somewhere about four or five months ago.

Was that the only occasion? Yes; that is the only occasion on which I have seen Mrs. Gilmore under the influence of drink.

You know Mrs. Gilmore well? Yes; I have seen her frequently.

How long have you been on the ranks at Parramatta? About four and a half years.

Did you hear Mrs. Gilmore speak on that particular occasion? I cannot say that I did.

You did not hear her use any bad language? No; I was outside when the train arrived, leaning over the palisade, and just as I walked round on to the platform Mr. Lord took her away. I heard nothing.

What led you to suppose she was intoxicated? Because they had some difficulty in arousing her and assisting her out of the carriage, by the manner she got out, and by her holding on to the lamp-post.

You saw them rouse her out of the carriage? Yes; I was looking over the fence.

Do you know whether anyone else was present? Yes; Constable West, Morris, and there were one or two porters on the platform, besides the head officer.

*Dr. Goode.*] Was it cold weather at this time? Yes; it was early in the winter.

*Dr. Manning.*] What drew your attention to this first of all? Simply hearing them arousing somebody out of the carriage.

Can you tell us what was said? No; I did not hear any words. I went by the station to see whether there were any likely fares, as I usually go home about that time.

*Dr. Goode.*] Did Mrs. Gilmore go home then? Yes.

By herself? No; Mr. Lord led her home.

*Dr. Manning.*] Did you notice if she was sick on that occasion? No.

You were not near enough to her to detect any smell of liquor? No.

*Cross-examined by Mr. Montagu.*] Who is Morris that you referred to? James Morris, the cabman.

Whereabouts was the carriage that Mrs. Gilmore was in? About the centre of the train.

Would that be near the place where the tickets are taken? Yes, just below; this side of where the tickets were taken.

Would you have to clamber up the palisade to look over? No.

Is it a paling fence? Yes.

Who was engaged in arousing Mrs. Gilmore? The guard of the train.

Was Mr. Lord standing near the door? He was standing lower down; he came up afterwards.

Did the guard get her out of the train? Yes.

He

He left her standing on the platform, and she leant against the post? Yes.

To whom did you first make a statement about this matter? I was asked to do so by Mr. O'Reilly.

He came to you himself? Yes. He had been informed by some of the others that I was on the platform at the time. He asked me what I saw on that occasion and to put it in writing.

Did you write it out yourself? Yes.

That is the only time you saw Mrs. Gilmore as you say under the influence of drink? Yes.

Are you in the habit of being at the station every night? No; lately I have not been stopping late, owing to illness.

How many times used you to be there in June last? Perhaps two or three nights a week.

Did you see Mrs. Gilmore coming home late at night previous to this? I have not noticed her.

Would you have noticed her if she had been in the train? If I had been on the platform I should.

You thought she was under the influence of liquor because the guard had to help her up and you saw her leaning against the post? Yes.

*Dr. Goode.*] Does this train that arrives at Parramatta at ten minutes past 11 stop there? It goes back at 11:25.

[Witness withdrew.]

James Morris examined :—

*Dr. Manning.*] What is your name? James Morris.

You are a cabman residing at Parramatta, are you not? Yes.

How long have you lived at Parramatta? Twelve years.

Have you been a cabman all that time? No; for only about five years.

You are in the habit of going up to the station? I meet all the late trains.

Do you know Mrs. Gilmore? Yes.

Have you seen her very often? Not very often.

How many times altogether? About six or seven times.

Have you seen Mrs. Gilmore in a condition of intoxication at night? Yes.

On how many occasions? About three.

Can you give the dates of those occasions? No; I cannot give the dates at all.

Cannot you fix the dates to within two or three months? As near as I can judge, it was about May that I saw her last.

How long ago is it since you saw her first? It may have been a month before that.

So that all the occasions are within this year? Yes.

Who else was there on one of these occasions? Haddon, and Constable West, and Lord, the night officer at the railway station.

Anybody else? I think that was all.

Will you tell us what you saw on that occasion? They had to take her out of a first-class carriage; she had vomited all over the seat.

Did you see that yourself? I was on the station. There were no other passengers, and Haddon and I went on to the platform. They told her to get out, and she had vomited all over the seat.

You saw the vomit? Yes; and Lord assisted her out and took her home.

Where was the guard? I did not see the guard. He may have been there, but I did not see him.

You saw Lord leave the railway station with her? Yes.

How was he helping her? He had his arm underneath hers.

Did he go towards Mrs. Gilmore's residence? Yes, but I could not say he took her right home.

Did you hear Mrs. Gilmore speak at all? No; I did not.

What led you to suppose she was intoxicated? The state she was in.

You do not think it possible she was in bad health? No; I did not think she was; I would not say. My impression was she was intoxicated.

Were you near enough to smell any fumes of liquor? No, I was not.

What did you see on the other occasions? She staggered a little; that was all.

Did she go home alone? Yes.

Where were you when you saw her? At the station.

And the staggering was the only sign on the other occasion? Yes.

She did not speak then? No; she did not speak to me. I never heard her speak.

Have you ever heard her use bad language? No, never.

*Cross-examined by Mr. Montagu.*] How many times did you see Mrs. Gilmore prior to this night in May? About twice.

Then the reason you say she was drunk on these three occasions was on account of the way she staggered? Yes.

Was Haddon with you on the platform on the other occasions? No; he was not.

Was Lord in the carriage when you came up? Yes.

Did either you or Haddon interfere in any way? No.

You simply saw Lord take her out of the carriage and lead her out? Yes; that was all.

Did you notice where Constable West was standing? No.

Was he on the platform? Yes.

Was he standing at the carriage? He was looking into the carriage.

Did he remain on the platform? I could not say.

Did you notice whether Mrs. Gilmore passed near to West when she was taken out by Lord? I could not say.

You say that West was looking into the carriage? I could almost swear he was looking into the carriage.

You could not swear positively? No.

I suppose you have been talking about this matter with someone? I have, of course.

With Haddon, for instance? I might have.

Have you not been talking with Haddon about what occurred on that occasion? Yes; he may have said she was in a nice state, or something like that.

Hayo

Have you spoken to Constable West about this affair? No.

Or anything about Mrs. Gilmore? No.

Have you had a word with Haddon about it at all? I might have asked him if he had got notice to come here.

Did you ask him if he recollected what occurred? No.

Have you discussed the matter with anybody else? I might have. It is general talk at the station.

Did Mr. O'Reilly come to you? Yes; he came to ask me for a written statement. I did not want to have anything to do with it. He told me I would have to.

I suppose Mrs. Gilmore has employed you on occasions for herself or other people? Yes; once that I can recollect.

You know that cabmen are employed by her? No; I do not.

[Witness withdrew.]

William Morrison examined:--

*Dr. Manning.*] You are a railway guard residing at Parramatta? Yes.

Doing duty on the line between Sydney and Parramatta? Yes.

On what trains are you on duty? I am on a lot of trains, the last is the 12.9 a.m. from Granville.

What are the other evening trains? 5.20, 7.30, and 11 o'clock, Sydney time, and I go back to Granville and pick up the portion of the Campbelltown train.

You have made some statement to Mr. O'Reilly regarding the matter which we are inquiring into to-day, will you give us the gist of that statement? Mr. O'Reilly came to me and asked me for a statement, and I refused to give it to him. I told him I could not do anything of the kind unless I had permission. I asked him to give me his authority. He told me he thought he could get a statement from me. I told him I would not give him any statement unless he had proper authority. He then got permission for me to give him the information. He came to my place and told me, "You will have to tell me what you know, because you will be put on your oath in this matter." I was very sorry he should bring me into the matter, and asked him how he knew that I knew anything about it, and he said that he knew that I was the guard. On the first occasion a gentleman drew my attention to the lady at Granville.

On what date was that? I cannot say; as near as I can remember it was about sixteen months ago.

When the gentleman drew your attention to the lady in the carriage, you had been shunting the train there? Yes; I brought that portion on.

You took charge of the train at Granville? Yes. The gentleman said, "You had better see where she is going; she does not seem altogether right."

Was this in a first-class carriage? Yes. I did not know who the lady was, and I asked her where she was going to. She said Parramatta, and came on here. I asked the night officer who she was, and he told me.

You did not know her yourself? No; that was the first time I knew who she was. I never saw her on any other train but that one. Several times after that I saw her coming up.

What was her condition on this occasion? She was a good deal under the influence of drink, so much so that I had to call out two or three times at Granville to see where she was going. She then said Parramatta.

How did you judge she was under the influence of drink? By her appearance, and the way she looked when she got out and from the way she spoke.

Who was the gentleman who spoke to you? I did not ask him who he was. He went on in the Campbelltown train.

Might it not have been that he called your attention to her, because she was asleep, and might have passed her station? I could not say; she seemed to be asleep.

What happened when you got to Parramatta? She got out; I did not notice anything further.

When she got out at Parramatta, how did she appear? She looked like anybody having had too much. She went out of the door.

She may have been asleep? She may; only by appearance she looked like that.

That was your impression? Yes.

What occurred on the other occasions? After that I saw her two or three times, and she looked about the same. One night in particular, about six months ago, she came up and was in a carriage alone. I called out Parramatta, and she could not get up.

What time was this? The same train, the 12.11.

Can you fix the date at all? It was either at the end of May or commencement of June, because I got an illness just after that. I assisted her out of the carriage, and put her on the platform. I heard something drop, and picked her purse up and gave it to her. I could swear she was under the influence of drink that night; she could not stand up straight.

Did you detect any smell? Yes; there was some spew in the carriage. I gave her her purse, and she went to grab at it and nearly fell down. I had to catch hold of her or she would have fallen. When she went to the door Mr. Lord was there.

At the door? At the door going out where they collect the tickets.

Mr. Lord was at the door leading out of the station? Yes. I said, "You had better get that lady's ticket." I said that because if a ticket is not given at the door we are supposed to report it. If the night officer does not, the guard is supposed to. To see whether it was done I asked him if it was reported, and he said it was.

You are a check upon each other? In a case of that kind at the station.

Did you have any words with Mrs. Gilmore about the ticket? No; I never spoke to her about it.

Do you know what happened when she got to the door to pass through? I heard her tell Lord, who asked for her ticket--I understood she said he might go somewhere and look for it.

She said he might go to hell? Yes, and look for it. I was told afterwards that she sent the ticket over next morning.

Who told you that? Lord.

Did you see anybody else present on this occasion? There were the policemen.

Which

Which policemen? I do not know the names. I think it was the big man. I could not be sure, but he wanted to take her in charge, and I said to Lord, "No; the best thing you can do is to report the matter."

How many times on the whole do you think you have seen Mrs. Gilmore under the influence of drink? What I have fancied to be, but I could not really say. I have seen her several times, but I could not say how many.

You think she was under the influence of drink on several occasions? Yes.

But you are not absolutely certain? I could not tell whether it was or not; only the one time I am certain of that.

Can you give me the dates when these other occasions occurred? I have no idea of the times. I could not give any dates.

*Dr. Goode.*] Was it always by the same train that you saw her? Yes.

*Cross-examined by Mr. Montagu.*] About what time does that train leave Sydney? Half-past 11.

Practically the theatre train? Yes. It is the southern train to Campbelltown. There are two carriages that come on to Granville, which are brought on to Parramatta.

On each of the occasions that you saw Mrs. Gilmore it was by that train? Yes; never by any other train.

How long have you been acting as guard on that train? Over two years.

About how many times during those two years have you seen Mrs. Gilmore come home in that train? It is about sixteen months ago since I first saw her. I have seen her a good many times.

Give me some idea of the number? There are so many people travelling.

You took particular notice sixteen months ago—was it half-a-dozen times? Yes.

*Dr. Manning.*] Half-a-dozen times under the influence of drink? Yes.

How many times altogether under the influence of drink? I could not really say.

About once or twice a month? Yes; quite that. I only run this train every other week.

*Mr. Montagu.*] You have not seen her two or three times in one week? Twice in one week I have seen her.

How many times altogether? About six or seven times altogether.

Under the influence of drink? Yes.

On the platform or in the train? I have seen her in the train, and get out at Parramatta.

At any of those occasions did she make a disturbance on the station? Never—not in the slightest. I never saw her interfere with anybody, nor speak to anybody. On that one occasion is the only time I heard her say anything disrespectful, or use any improper language.

Except on that one occasion, you have always seen her go out of the station of her own accord. You have never seen her taken out? No; I have never.

You judged she was intoxicated on account of the peculiar manner of her walking? There was only one time I could swear to.

The other six or seven times you would not like to swear to? No; I would not.

She has always travelled in a first-class carriage? Yes.

Do you start from Sydney in that train? No; I join it at Granville.

Have you never heard her speak on those other occasions? No.

On this particular occasion about six months ago did she appear to be dozing? She seemed like a person under the influence of drink. I could smell beer—English or colonial I do not know which.

You knew she had been sick? Yes; she was sick in the train.

You are aware that the breath of a person who has been sick is not very good? Yes.

How far were you standing from Mrs. Gilmore when you say she told Lord to go to hell? About 12 feet.

And she called out in a loud tone of voice? No; in the casual way of speaking.

Had Lord been speaking to her before she said this? She was going out of the door as I came up to see whether she gave up the ticket. He blocked her at the door, and said, "I want your ticket."

Was she stopped by Lord? Yes.

I suppose what she said came out pretty quickly—there was no hesitation about it? No; there was no hesitation about it.

And he let her go on through? Yes.

[Witness withdrew.]

John Rutter examined:—

*Dr. Manning.*] Where do you live? Parramatta.

You are a guard on the train between Sydney and Parramatta? Yes.

You are on the alternate shift with Morrison? Yes.

And you bring up the 11 o'clock train from Sydney, and go back to Granville to bring up the 12-9 from there? Yes.

You know the object of this inquiry is with regard to certain charges against Mrs. Gilmore of intemperance and the use of bad language? I have heard about it.

Can you tell us what you know about it? I know very little. Mrs. Gilmore has come up with me on three or four occasions under the influence of drink when we arrived at Parramatta.

What trains was that by? By the 11-41 here, and the 12-13 here.

How do you know she was under the influence of drink? She was asleep in the carriage. I had some difficulty in waking her, and she was hardly able to get out of the carriage without assistance. She could not walk along the platform.

Can you fix the date? No, sir; it is about four to six months ago.

Did these three or four occasions happen near together? In about two months or ten weeks.

And they occurred from four to six months ago? I should think so. I could not say to a few weeks.

Since that time have you still been employed on this particular line? Yes.

And have you seen Mrs. Gilmore since? I have not seen Mrs. Gilmore for the last three months.

Not at all? No.

Not in the train? Not to my knowledge.

Has anybody else been present and seen her on any of those occasions? Night-officer Lord; a cabman was there and policemen.

Which cabman? I could not say.

Is he a tall man? His name is Morris, I think.

Do you remember any occasion on which Mrs. Gilmore was sick? I heard about it; I never saw it.

Have you had any difficulty with regard to tickets? No, sir.

Have you heard Mrs. Gilmore use bad language? I have not.

Have you ever had to assist Mrs. Gilmore out of the carriage? No, sir.

Have you seen anybody else assist her out? I have seen Lord.

What led you to suppose she was intoxicated? I had some difficulty in waking her. On arriving here I called out several times loudly, "Parramatta," and she did not take any notice. Lord went in and called her and woke her up. She did not seem to be able to get up. Lord assisted her, and if he had let her go she would have fallen. She got hold of the verandah post with one hand. Lord took her to the door, and asked her for her ticket. I went away to get some tea. I do not know how they got on.

*Cross-examined by Mr. Montagu.*] You have assumed, then, simply from what you have seen that Mrs. Gilmore on those occasions was the worse for liquor? Yes.

Have you made any statement to anybody in connection with this matter? Only to Mr. O'Reilly. He made it his business to come and speak to me.

Did you tell anyone before Mr. O'Reilly saw you that you could give information? Only Guard Morrison. He told me that Mr. O'Reilly had spoken to him about this case, and said, "You know something about it." I said, "I just know I have seen the lady two or three times under the influence of drink," and he told Mr. O'Reilly, I suppose.

It would not strike you for one moment that the lady was ill from some complaint? No; I do not think so.

You are a pretty good judge of what people are like in a state of intoxication? No; I am not.

Would you take it upon yourself to swear in court that she was drunk on any of those occasions? I believe I could do so.

To swear that she was drunk? Yes; under the influence of drink.

Simply because you happened to see her not able to walk straight on the platform? Yes.

During the last two years you have only seen her on three or four occasions in a condition which led you to believe she was drunk from the reason you have stated? Yes.

[Witness withdrew.]

John Henry Lord examined:—

*Dr. Manning.*] Your position is that of night officer? Yes, at Granville. I was removed there from Parramatta.

How long is it since you left Parramatta? I left on or about the 15th August this year.

As night officer you have to perform the duties of station-master? Yes.

How long were you at Parramatta? Ten years.

Do you know Mrs. Gilmore? Yes.

How long have you known her? By sight for the last three or four years.

Have you seen her frequently during the last eighteen months or two years? Yes, frequently.

You have made a statement to Mr. O'Reilly? Yes.

Will you give us the substance of that statement now? I have repeatedly seen Mrs. Gilmore. She generally used to arrive between the ten minutes past 9 and eleven past 12 trains from Sydney—usually the eleven minutes past 12. On one occasion she came by an earlier train.

What condition was she in when she arrived? Under the influence of liquor.

On how many occasions have you seen her in that state? On several occasions.

During how long? During eighteen months or two years.

Was she a frequent traveller? Generally about two or three times a week—twice a week, I should say.

Did she run any danger by her condition? She ran great risk. On one occasion the guard walked down to the end of the train. I was standing at the door to collect the tickets.

What guard was that? I cannot say. It was a train arriving, to the best of my knowledge, at ten past 11. He said there was a lady asleep in a first-class carriage. I cannot arouse her. With that I went down, after I had collected the tickets; and as I got on to the platform of the car a lady was getting up from the seat and going out of the car at the other end, and before I got to the other end she had turned to the opposite side of the platform, and the engine was running round at the time. I had to make a grab at her and pull her back towards the platform, otherwise she would have fallen underneath the engine.

What did you consider her condition was? She was then under the influence of drink.

May she not have been asleep, and suddenly woke up dazed? No; I could smell the drink very plainly on her on that occasion. She had vomited on the carpet in the car.

Can you fix that date at all? I could not give any dates at all. I did not take much notice of dates at the time. It was on such frequent occasions that I did not take dates whatever.

Was anybody present on the occasion that you rescued her from going over on the opposite side to the platform? No one was on the platform except myself and the guard.

How many times have you seen vomit? Three to four times in the carriages.

How do you know that this vomit came from Mrs. Gilmore? She was the only occupant of the carriage. It was right under the seat where she was sitting. On one occasion it was on her clothing.

Who else was there at the time you saw it on her clothing? I believe there was Constable West on the platform, and, I think, a cabman named Morrison, and another named Haddon.

Will you tell us what occurred on that occasion? This was on the ten past 11 train to the best of my knowledge. She was sitting in the car. I could see her from where I was standing collecting the tickets. I went in and said, "Parramatta, madam." She looked up in my face and said, "Aye." I said, "You want to get out here." She said, "You must assist me." I said, "Very good, madam." With that I took hold of her arm, put my arm round under her other arm. I saw vomit all over the car seat—

on

on the one on which she was sitting—and down one side of her clothing. I said, "You are unable to walk." She said, "I cannot walk." With that I still kept my arm round her and fetched her down to her cottage, and left her at the gate.

Was there any difficulty about the ticket on this occasion? She, I believe, gave the ticket up the next morning, to the best of my knowledge.

The ticket was not given to you? It was not given to me on that occasion.

Had you any difficulty on other occasions in getting her ticket? Yes; I had difficulty on several occasions. You cannot deal with a lady as you can with a gentleman; you can stop him. I have spoken to Mrs. Gilmore, and said, "Please give me your ticket," and she has said, "Damn you and the ticket; blast the ticket; I cannot find it at present." Then she would pull out the ticket and throw it at me and say, "You damned, blasted railway men are too smart." She has got quite annoyed when I asked her for her ticket.

Did you get the ticket? I got the ticket afterwards. She would throw it into my face as she was going from the door.

Was there only one occasion on which you did not get the ticket? On the occasion I assisted her home, I did not get the ticket that night.

And did you report this? I did, to the best of my knowledge, and it was got the next morning.

Of course you know nothing about that? No.

And you say that Mrs. Gilmore travelled about twice a week? On an average, about that.

How often was she intoxicated? I am sorry to say it was very seldom I saw her otherwise.

Have you seen Mrs. Gilmore since you have been living at Granville? Yes; I have seen her at Granville.

Can you tell me on what occasion? On or about the 4th September, I believe, it was of this year.

What occurred then? She came on to the platform about 10:20 to 10:40, in company with another lady.

Where did she come from? From the direction of Sydney Road, through the big general waiting-room on to the platform. It was on the up platform. I was standing talking to two members of the staff—a shunter and porter—in reference to some duties. Mrs. Gilmore came up and said, "Have any of you chaps got 6d. or 3d. to give us, to get a pint of beer with?" I looked round. I was rather taken aback at such a remark. She said, "You had better shout for us; I am very dry." I said, "If you have not got 6d. or 3d. you had better use a penny and go to Parramatta."

What is the fare to Parramatta? 1d., 2nd class; 2d., 1st class.

What else happened? I said, "I have no money, inadam." She was in company with another lady. Do you know who that lady was? I do not.

What else happened? The other lady said, "Come on Mrs. Gilmore." With that, Mrs. Gilmore up with her fist and struck her in the chest.

Struck the other lady in the chest? Yes, and said, "Blast you; how dare you mention my name."

What then? She left the premises then.

She did not go by train? She went away on to the street.

You knew Mrs. Gilmore was a Government official? Yes.

You knew that the existence of this condition of things was not creditable to the Public Service;—did it never occur to you to complain to the head of her Department? I got into trouble over one affair myself, and I determined not to mix myself up in another.

You got into trouble over reporting an officer? Yes, sir. Mr. Wing, I am sorry to say, was well aware—he is at present Superintendent of the George-street Asylum—he was well aware of this carrying on. He came to me on one occasion, and wanted a written statement from me. I refused to give it to him.

That was purely because you had got into trouble already? Yes.

And you consider Mr. Wing knew of this? Yes, sir, he did know of it. He came to me on the platform, and wanted me to give him a written statement.

What date was that? I cannot say when it occurred. It was just before his appointment to George-street. He was then prosecuting in those baby-farming affairs. He asked me about the Cook's River affair—something about a man named Johnson. I refused to give him a written statement.

On the occasions you saw Mrs. Gilmore, what led you to suppose she was under the influence of drink? She could not stand, hardly.

Hardly? She could only stand by supporting herself by the verandah post.

Did Mrs. Gilmore always get home by herself? Except on that one occasion.

She walked home by herself the other evenings? I cannot say. I saw her out of the door. The Night-guard Morrison assisted her from the saloon carriage. She had then vomited all over the car, and she asked him to assist her out on the platform, and she had to cling to the verandah post.

Was that on another occasion? Yes; that was when Guard Morrison assisted her out.

Can you call to mind the date of that? No, sir, I cannot.

Was that after the occasion on which you helped her home or before? Before.

*Cross-examined by Mr. Montagu.*] Mr. Wing, whom you refer to, was then holding an inquiry? Not that I am aware of.

He had been sent up by the department to make inquiries? Not to my knowledge.

When did you first mention this subject of Mrs. Gilmore? I do not remember mentioning it to anyone.

You have made a statement? Yes; a written statement to Mr. O'Reilly. He requested it from me, and I refused to give it unless he got permission from the superior officers of my department.

When Mr. O'Reilly came to you was the first time you mentioned it to anybody? Yes.

Do you know Mr. Ormiston? I do not. I may know him by sight. I do not know the man. I have no idea who he is.

You have never spoken to him in your life? Not to my knowledge.

Have you ever had a conversation with anyone, knowing him to be Mr. Ormiston? No; I have not.

Have you ever had a conversation with Mr. Ormiston and Mr. O'Reilly concerning Mrs. Gilmore? I have had no conversation in the presence of anyone except Mr. O'Reilly, and I do not think, to my knowledge, anyone was present. I have only had conversations with Mr. O'Reilly on two occasions at Granville—once on the up-platform and once on the down-platform. That is quite recently, and never before.

That

That must have been since August last? Yes.

Within the last couple of months? Yes.

Does Mr. O'Reilly live at Granville or Parramatta? He lives at Hayfield.

Do you know Mr. O'Reilly to speak to? Just to pass the time of day. I do not think I have ever spoken to Mr. O'Reilly, only when he asked me for the statement.

That was the first occasion you had to speak to Mr. O'Reilly? Yes.

You said just now you had got into some trouble;—what was that about? It was an affair in reference to a Mr. Norton at the George-street Asylum.

You made some report about him? I did. I was asked by Mr. Wing to substantiate what I had said. He accused the man of arriving home drunk.

Who accused him? Mr. Wing.

Was that on information that you gave him? He saw it himself. I did not give him any information. Mr. Wing was present on the platform, and saw it.

*Dr. Manning.*] Did you speak to Mr. Wing about him, and point him out? No; I did not point him out. Mr. Wing was present on the platform.

Did you give information to Mr. Wing with reference to this man? Yes; I gave him information previous to Mr. Wing seeing him, as Mr. Wing said, drunk. Mr. Wing wanted me to substantiate the evidence of being drunk. I said, "I will not." The man was under the influence of drink. In my opinion, a man drunk is absolutely unable to take care of himself. To be under the influence of drink is different. Mr. Norton waited on me previous to the inquiry, and asked me whether I would give it in writing that he was drunk. I said, "I will give it in writing that I have not seen you drunk, but under the influence of drink, leaving the train."

As a matter of fact, did you not state this "I have seen him under the influence of drink. He showed the effect of drink by his unsteadiness"? I said that at the inquiry.

*Dr. Goode.*] Who was Mr. Norton? He was a wardman at the George-street Asylum at the time.

*Mr. Montagu.*] Although you stated that at the inquiry, did you not make this statement in writing, "I beg to state that I have not seen him drunk at the station when leaving there"? Yes; I say now I have not seen him drunk. A report was circulated that if I said that Mr. Norton was drunk he was going to take an action against me.

So you qualified it by saying you saw him under the influence of drink? I think so.

There was an appeal about that, was there not? That is all I know about it.

Will you please tell us whether you consider Mrs. Gilmore was on the occasions you refer to under the influence of drink;—you will not go so far as to say she was drunk? No.

Because Mrs. Gilmore was unable to stand, and vomited, that is why you say she was under the influence of drink? Yes.

How would you explain it, then, if you were to say she was drunk? I do not know, I am sure.

*Dr. Manning.*] Do you think Mrs. Gilmore was drunk on the occasion you had to help her home? She was greatly under the influence of drink. By the smell of the vomit on the floor there was no mistake, in my opinion.

*Mr. Montagu.*] Do you know Mr. Brackenbridge, brother-in-law of Mr. Ormiston? No; I don't think I have heard the name. They are strange names to me.

When you are on duty you go to the hotel and have a drink? Yes, when I feel inclined; but understand that is during my meal time, from half-past 11 to 12.

You do not leave your duty except at meal times? No; except at meal times, and just previous to going off duty.

At any other time? No; in fact, I take but very little drink.

We have your admission that you have gone off duty to have a drink at the hotel? I consider that nothing to do with the inquiry.

Have you not been found fault with by the station-master for being under the influence of drink? Never. I can prove that.

Has Mr. Watsforth, the station-master, ever complained of you in any way? I asked him at an inquiry that was held whether he ever found me under the influence of drink or indulging in racing or gambling, and he said "No."

That was an inquiry into your conduct? I decline to answer that question.

Did the result of that inquiry end adversely to you;—were you not reprimanded? Yes, both of us; both myself and the station-master were.

It was a quarrel between you and the station-master? Yes.

You were reprimanded? Yes.

*Dr. Manning.*] Was it in consequence of this that you went to Granville? No, sir, the station-master was quite willing to have me at Parramatta. I applied for a shift on account of not being able to agree with one of the present officers there now.

*Mr. Montagu.*] But you were reprimanded by the Department? I was not reprimanded. The Superintendent told myself and Mr. Watsforth that if he heard anything of the kind again he would severely punish both of us, and destroyed the papers and put them in the waste-paper basket.

Have they been destroyed? I don't know. He simply said he would do so.

You are of a quarrelsome nature? No; I do not quarrel with other people.

You have reported other officers? I have had to report men during my life in connection with railway matters, which is my duty to do.

Have you been upheld in those reports? I have been upheld in all those reports.

In all of them? I decline to answer. It is very often a man makes a report, and it may be shown he is in the wrong when he is in the right. If you have several men working under you, you must make them do their duty, and consequently you get disliked.

You said without hesitation just now that on very many occasions you saw Mrs. Gilmore come home drunk? I say that on very many occasions Mrs. Gilmore has come home under the influence of drink.

Would you be surprised to learn that the guards of the night trains have stated that during the last two years they have seen her very few times indeed—one three or four and the other about six or seven? They may not have been the same guards. Mrs. Gilmore never came home by the one train, sometimes the 11:40 and sometimes the 12:11.

You

You told us she usually came home by the 12.11 train? Yes.

The guards have stated they have seen her very seldom? Considering they are on once a fortnight, that would bring it into some months.

Would their statements be correct or incorrect? I dare say between the two they could say they have seen her more than that. One of these guards was for three months on sick leave.

That was a good while ago? Not so long ago—about July. He was often away.

What is his name? Morrison. During that time he was absent to my knowledge between March and July. Previous to July he was absent nearly three months. He suffers a great deal.

Would you swear that this terrible language was used by Mrs. Gilmore? Yes. "Damn and blast it," she said. She threw the ticket in my face, and said, "You damned railway officials are too smart."

You know she is an excitable woman? No; I do not.

Where was the carriage she was sitting in? Very nearly opposite the door.

Could any person sitting in that carriage be seen by anyone looking over the fence outside the railway station? No; they would have to be very tall. They would have to stand 7 feet.

I am talking about the palisading? No; it is right opposite the general waiting-room door. It would be about 30 to 40 yards from the palisading.

How long ago did this conversation at Granville occur? It was on or about the 4th September.

How do you remember that? On account of there being a ball held at the Albert Hall, I believe it is, in Granville.

Were there not other people travelling from Granville from the ball? Sometimes they would go back, sometimes they would not.

*Dr. Manning.*] Were there many people travelling from Granville to Parramatta on that night? There were plenty of people travelling.

Apparently going from the ball in evening dress? There is very little evening dress there. It is only one of those larrikin affairs.

*Mr. Montagu.*] It was not a private ball? It was a larrikin ball—a monthly ball, held by the "Caledonians." It is a very rough affair.

Were there not other people travelling back about the time the ball was over? There may have been.

What time did this conversation occur? About twenty minutes to 11.

Did they get into the train? There was no train.

What became of them? They went across the street.

And did not come back? No.

Did the person you tell us was Mrs. Gilmore go back to Parramatta at all that night? Not by train.

What first drew your attention to her? Coming to speak to me on the platform at Granville.

How did you first come to know Mrs. Gilmore? She was first pointed out to me.

Who pointed her out? I cannot say. The present booking clerk at Parramatta has pointed her out to me as Mrs. Gilmore.

Do you remember what the lady you saw at Granville, and whom you call Mrs. Gilmore, wore that night? A kind of grey dress.

Had she a bonnet? I cannot say.

Did you notice the dress of the other lady? Yes; she had a little black hat on, I think.

Was anybody else present when this language was used? There was Vidler and Shunter North. I was giving them directions as to what they should do.

Where were they standing? On the platform, near to me.

This conversation took place near the ticket-office? Right against the general waiting-room door—the ticket-office is inside.

Was it on the platform of the train going to Sydney or coming from Sydney? Going to Sydney.

[Witness withdrew.]

George Henry Mobbs examined:—

*Dr. Manning.*] You are an auctioneer? Yes.

In Parramatta? Yes.

Some time ago you made a statement to Mr. O'Reilly regarding certain charges against Mrs. Gilmore;—will you tell us what was in that statement? I saw Mrs. Gilmore in the train coming up from Sydney, the 11.30 train, at the Granville Junction. I was coming on from Sydney in that train. When we got to Granville Junction I noticed a lady vomiting in a saloon carriage.

What time was this? I suppose it was about 12 o'clock at night. The porter assisted her to get out of the carriage on to the platform, as near as I can remember. He went to the lady's assistance, but I am not quite sure whether he assisted her or not. The passengers for Parramatta changed from the southern train at Granville. Mrs. Gilmore came on to Parramatta in the same carriage, to the best of my belief in the same carriage. I thought at the time the lady was ill, but when she got out at Parramatta she did not appear to be walking very upright, and I was inclined to think she was intoxicated.

Did she get out of the carriage by herself? I did not notice her in the act of getting out of the carriage.

Did you see her on the platform? No.

You noticed her when she got outside the station? Yes; and she could not walk properly.

Did you speak to her at all? No.

The only evidence of intoxication that you can give us is that she did not walk properly, and that there was vomit in the carriage? Yes.

*Dr. Goode.*] Did you detect any odour of liquor? No.

Was the lady Mrs. Gilmore? To the best of my belief.

*Dr. Manning.*] You know Mrs. Gilmore? Yes.

Have you seen her frequently? Not very frequently.

Do you reside quite close to here? Yes.

Are you quite sure it was Mrs. Gilmore? Yes.

There

There is also something about bad language in the statement you made? All I know about the language is this. Of course I could not swear to the person, because it was inside the house adjoining my property. I heard frequent quarrels of the same people, and only judge by the voice. I have not been in the house to see.

When these quarrels were going on, you have not seen the people? No; I have only heard. I could not say exactly what the language was I heard. I did not take it down, but on one occasion, when I heard something like a bottle smashing and crockery, I heard "bloody dog."

Was that in a woman's voice? Yes.

Have you at any other time seen Mrs. Gilmore intoxicated? No, never; and I cannot swear she was then; it was only the appearance.

Do you often come home in the same train with her? No, very seldom; not more than once in twelve months.

You are very seldom in Sydney at nights? No.

*Cross-examined by Mr. Montagu.*] How long ago was it that you saw Mrs. Gilmore in the train? I could not say positively—as near as I can remember, eighteen months ago. There was a commotion on the platform as if something was wrong. One or two porters were round rendering assistance to Mrs. Gilmore, at Granville.

Were there any other people in the carriage with you? There were other people travelling in that train.

But in the carriage you were travelling in? If I remember rightly there was only one car attached to the engine. That train going along the Southern line we change at Granville to come on to Parramatta.

Was it a saloon car? Yes.

There were other people in the car? To the best of my belief there were.

What do you mean by saying to the best of your belief you thought it was Mrs. Gilmore? Because I was not particularly well acquainted with her then, and as I thought I saw her the next day that made me doubly sure it was the same person.

Did you know Mrs. Gilmore before this? Yes; I had seen her before. In order to make sure on that occasion, when I came out of the railway station walking towards home, I was on one side of the road and Mrs. Gilmore was on the other side, and she came as though she were coming to speak to me. I stepped back and she went on home. I thought at the time I would make sure it was Mrs. Gilmore. I saw her go in the gate and then I saw her the next day.

Why were you so anxious to find out that it was Mrs. Gilmore? I do not know it was any anxiety to me.

What prompted you to ascertain as a fact that it was Mrs. Gilmore? I do not know what prompted me except that I should be positive about it. I had to go through the paddock to see about the horses.

That was pretty late? Ten minutes past 12.

Are you in the habit of looking after your horses at 12 at night? No; but when I return from town I generally take a stroll by the paddock.

Had you had any conversation with anyone about Mrs. Gilmore before? No; not that I remember.

Can you give us no reason why you tried to find out who it was? If you will allow me to refresh my memory, I might be able to find out a reason. I think it was for this reason. I had heard certain things respecting Mrs. Gilmore, and of course I did not know it to be a fact, and frequent quarrelling and so on. That is one reason that brought me to take particular notice of Mrs. Gilmore.

Because you heard quarrelling you wanted to find out whether it was Mrs. Gilmore? I had heard the quarrelling. I had heard reports about drunken habits of the lady in charge of the homes here.

You are living at Mrs. Brown's;—how long have you been living there? Six years.

Mrs. Brown's premises adjoins Mrs. Gilmore's? Yes.

Mrs. Brown keeps a boarding-house, does she not? Yes.

Do you know that there has been a little unpleasantness between Mrs. Gilmore and Mrs. Brown? I heard something about the unpleasantness.

You have only heard reports, you have heard of no outbreaks between them? No.

By what do you consider Mrs. Gilmore was drunk on that particular night? So far as appearances were concerned.

You very often see people drunk in Parramatta, do you judge by that? Yes.

There is not much love lost between Mrs. Brown and Mrs. Gilmore? I think there is an unpleasantness, but it is a slight one.

I think you were one of Mr. O'Reilly's secretaries? I was a supporter.

Were you one of his secretaries at the first election? Yes; I was.

How long ago? A little over two years ago, or rather the election before last, fourteen or fifteen months ago.

About the time that this affair occurred. You have been a prominent supporter of Mr. O'Reilly's? Yes; I have.

Do you not know who it was that prompted Mr. O'Reilly to make this statement in the House? I do not.

Did you make the statement yourself to Mr. O'Reilly? I did not.

When did you first give Mr. O'Reilly any information in reference to Mrs. Gilmore? I think it was about two weeks ago. He asked me if I knew anything. He challenged me to speak in connection with the matter. I told him something, and he came afterwards and told me to give a reply to his request. I sent him a letter.

About two or three weeks ago? I am not positive about that; it is quite recently.

Can you remember Mr. O'Reilly making a speech in the House on the 15th October, and another at the beginning of this month? It was prior to his speech in the House.

You gave him the information you have given us to-day prior to the 1st October? I do not think I stated everything so fully.

On the 1st October he made this speech in the House;—was it before or after that? I think it was just before.

Was it not on your information that Mr. O'Reilly practically based his speech? No.

Not at all? I cannot say; I did not ask him.

You have read his speech? I read something that was said on the last occasion.

You

You did not read his first speech? No; I did not read it. I saw a few lines in the *Telegraph*, I think.

Do you know a person named Orniston? No.

Nor Corcoran? No.

Nor Breckenridge? No.

You have never heard of them at all? No; I do not think I have ever seen them.

With this one exception that you speak of, you have not seen Mrs. Gilmore coming home late at night? No; I have not.

[Witness withdrew.]

Robert Vidler examined:—

*Dr. Manning.*] You are a railway official? Yes, at Granville.

What position do you hold? Porter.

Do you remember the 4th of September last? Yes.

How do you fix that date? There was a ball on that night at the Albert Hall.

Did you see Mrs. Gilmore that night? Yes.

Do you know Mrs. Gilmore? I never knew her before then.

Was anyone with her? She was in company with a young lady.

What time was it? Between 10:30 and 10:40. Mrs. Gilmore, in company with this other person, came in and asked if we would lend her 6d. or 3d.

Who was there besides you? Mr. Lord and Shunter North.

Were you together? Yes, talking.

Who did Mrs. Gilmore address? She asked all of us personally, I am sure.

Each one individually? Mrs. Gilmore came in with this lady, and said, "Will any of you lend us 6d. or 3d. to get a pint of beer?"

What happened then? We refused. She asked if we would give her a penny to fetch her to Parramatta, and we refused also.

Was there any bad language used of any kind? The person in company with Mrs. Gilmore mentioned her name, and she said, "Blast you, how dare you mention my name."

Was that all? I know of nothing else.

She mentioned Mrs. Gilmore's name? Yes; and Mrs. Gilmore struck her on the chest.

Had you ever seen Mrs. Gilmore before? Yes; I had seen her once before.

Where? At Granville, passing through in the train. She changed out of the Southern train, and got into the Parramatta portion.

Have you ever done duty at the Parramatta station? Yes, I did for a short while, but I never saw Mrs. Gilmore.

Can there be any doubt whatever about it being Mrs. Gilmore that night? No.

*Cross-examined by Mr. Montagu.*] What relation is Shunter North to you? My father-in-law.

Have you had any conversation with Lord about this? Yes, I certainly have.

You had a conversation with him between lunch time to-day? I have been speaking to him.

Between 1 and 2 o'clock? Yes.

After he gave evidence this morning? Yes.

Will you undertake to swear, although you only saw Mrs. Gilmore once before passing through Granville, that it was she at the station that night? Yes.

Who pointed Mrs. Gilmore out to you on the first occasion when she was passing through Granville? Mrs. Gilmore had changed, and I heard her name passed several times, but who by I do not know. I have been told it was Mrs. Gilmore.

I suppose a lot of people change at Granville? Yes.

Although you only saw her that once you want the Board to believe you are quite positive that it was Mrs. Gilmore? It was the same person that I saw.

What is your occupation? Porter. I had to attend to the trains and collect the tickets.

You had to get through in pretty quick time? Yes, when the train came in.

How long does the train wait to transfer passengers from Granville as a rule? Two minutes; then there is the Parramatta portion to get away afterwards.

How long afterwards do the Parramatta people get away? About three minutes. There is the engine to be hooked on.

Do you spend your time under those circumstances by keeping your eye on one passenger? Certainly not.

How do you fix the date as the 4th of September? There was a ball on that night.

What night of the week was it—it is only a month ago? I could not swear to the night. It was on or about the 4th.

What sort of a ball was it? I could not tell you the name of the ball.

Where was it held? In the Albert Hall.

You have not the slightest doubt it was the night on which the ball was held? No.

How long have you been at Granville? Over four years.

How far is the hall away from the station? About 150 yards.

Are there several dances held there during the week? No; not several.

Was there more than one that week? I do not remember.

Would you undertake to swear there was not more than one? I would not swear it.

Was the ball a social, an assembly—a monthly ball? It is a monthly ball.

You know it was a monthly ball, and yet you take no interest in it? I have been told it was a monthly ball.

Since when were you told? I knew before that this monthly ball was held.

What was the name of the ball? I do not remember the name. I never took any interest.

And you undertake to state, because there was a ball on that night, it was a monthly ball? Yes.

And you do not know how many balls are held during the month? No.

You made a statement to Mr. O'Reilly? Yes.

Voluntarily? Yes. Mr. O'Reilly never asked me for the statement. I gave it to Mr. Lord.

Mr. Lord asked you for the statement? No, he did not. I gave it to Mr. Lord as Mr. Lord was sending in his, and the two went together. Mr.

Mr. Lord must have told you he was making a statement? He did.

When did you send that statement in? About a fortnight ago.

And you went out of your way to make a statement voluntarily that it was Mrs. Gilmore who was guilty of this supposed offence at Granville Station? I never went out of my way to do it. If anything occurs we take notice of it.

Did you take a written note? No; just observed it.

Did anybody ask you to make that statement? Not that I remember. No one asked me to make a report.

It was only a fortnight ago? Yes, that is all.

You cannot remember whether you were asked at all? Mr. Lord told me he was making a statement, and I volunteered to make one.

Did it not strike you to ask him whether he was making a statement? I knew about it. I knew that such a thing was going on.

When Mr. Lord was making a statement you calmly sat down to write out yours;—you did not discuss the matter? I cannot say that, because we did talk it over.

*Dr. Goode.*] You talked over this occurrence on the platform with Shunter North and Mr. Lord? Yes.

Have you any doubt that the lady who asked for this 6d. or 3d. was Mrs. Gilmore? It was Mrs. Gilmore, I have no doubt.

*Mr. Montagu.*] You say you have no doubt, notwithstanding the fact that you only saw her once before when she was passing through Granville? Yes.

*Dr. Manning.*] You recognise Mrs. Gilmore to-day? Yes.

*Mr. Montagu.*] What platform were the two ladies on? The up-platform, just at the door-way. Can you tell us how long previously to the second occasion it was that you saw Mrs. Gilmore? I could not.

Was it months? Yes; quite three months.

On the first occasion was in the evening? Yes.

*Dr. Manning.*] At the time when the people said it was Mrs. Gilmore, was there anything special which made them refer to her? Mrs. Gilmore was under the influence of drink. She said she would report us owing to having to change.

That was why your attention was attracted to Mrs. Gilmore, and her name was mentioned? Yes.

*Mr. Montagu.*] What was she doing? She was complaining because she had to change out of the southern train to go to the Parramatta train.

Who was she complaining to? Anybody on the platform—just one and then another.

Was she excited? She was under the influence of drink.

Was she excited? I could not say.

Do you know, as a matter of fact, she was under the influence of drink? I could see it by her walk, and she threatened to report us to the Commissioners, and had no cause whatever for doing so.

Do you think she was under the influence of liquor or drunk;—you know Mr. Lord's idea of the difference? A person can be under the influence of liquor and not be drunk. A man when he is drunk is helpless. Mrs. Gilmore was not helpless, she could walk.

That was on the occasion when she said she would complain to the Commissioners? Yes.

She could walk on that occasion? Yes.

She found her way into the train;—she was not helped? No; she was not helped into the train.

She got into a 1st class compartment? Yes, she did.

She must have been very much under the influence of liquor then? There is no doubt about it.

*Dr. Goode.*] That occurred three months before the 4th September? It must have been at least three months.

[Witness withdrew.]

Constable James Torpy examined:—

*Dr. Manning.*] You are a constable? Yes.

You have made a report to your superior officer in regard to charges against Mrs. Gilmore? Yes.

You saw Mrs. Gilmore arriving by the nine or ten minutes after 12 o'clock train one night? Yes.

What date was that? It was some time in the middle of April. I could not say exactly what night it was.

What drew your attention to Mrs. Gilmore on that night? They all got out of the carriage. She was in a 1st class saloon carriage, and remained sitting there.

Were you on duty? Yes, sir.

Is it part of your duty to attend at the railway station? From 6 to 2 the man on duty meets all trains arriving and departing. The guard got into the carriage, and the lady came out.

Who was the guard? Morrison. He picked something up off the ground and handed it to the lady. She walked out and went towards the door without giving a ticket.

What was her condition? She was the worse for liquor.

What were the signs? She staggered a little as she got out of the carriage.

What was it the man picked up off the floor? Her purse he told me. I did not see it.

Why do you think she was the worse for liquor? From the way she came out of the door of the train. She went right towards the door, and walked sharply through it. The night officer said, "I know her, and will settle that in the morning."

Is that the only occasion on which you have seen Mrs. Gilmore arriving by the train? I have never noticed anything of her to attract my attention.

How often have you seen her arriving by the train before? Two or three times before.

How long were you on the beat? For that month. That is the only month during the last eighteen months.

*Cross-examined by Mr. Montagu.*] All you saw was that she got out of the carriage and walked straight through? She came towards me.

Was there anyone else there? The guard, Morrison, in charge of the train.

You did not see much of her on that occasion? No, sir, I did not.

There

There were others in the train? Five or six; they all got out and she remained there. That attracted my attention more than anything else.

Was there any other member of the Police Force there at the time? No; the shunter may have been there, but I could not say whether he was about at the time; there were only Morrison, the guard, the night officer, and myself.

Did you make your statement recently? Yes; I think it was about the 10th or 11th of October.

Was that the only time you noticed Mrs Gilmore? Yes; I have seen her going through here once or twice.

As a matter of fact, you merely assumed she was under the influence of liquor? She put me in mind of a person having had drink.

That might have been caused by other things;—you thought so simply from her bearing? Yes; simply from her manner.

It was pretty late at night? Half-past 11 from Sydney.

You know nothing about Mrs. Gilmore personally? No.

Do you ever come round this way? Very seldom, unless on special business or duty.

How long have you been in the force? Nearly four years—three years and a half in Parramatta.

[Witness withdrew.]

Edwin Gould examined:—

*Dr. Manning.*] You are in a cabinet factory here? Yes.

You made a statement to Mr. O'Reilly the other day;—will you repeat it now? I have passed the residence of the matron of this institution on several occasions. I have heard her use obscene language.

How did you know it came from the matron? I saw her on one particular occasion.

You saw her speaking as well as heard it? Yes.

Do you know her well? Yes.

You know her voice? Perfectly well; I worked in Mrs. Gilmore's house about six years ago.

Doing cabinet work? I had to attend to some drainage underneath the floor.

How often have you heard this bad language? I think at least three times.

Can you fix the date of any one of these occasions? I could not exactly; it is somewhere about twelve months ago.

Are all the occasions somewhere about twelve months ago? Yes.

Were they all close together? Yes; two were in the one week.

And the other occasion? I really forget the date. It is altogether about twelve months ago,—at the beginning of last November; because I went away to Goulburn, and it was previous to that.

Can you tell us any of that language? Yes; I heard Mrs. Gilmore say, "I will cut your bloody throat."

You do not know who it was addressed to? I could not say.

Was that the occasion on which you saw Mrs. Gilmore? Yes.

Where was that? Coming from the kitchen towards a little place she used for storing wood—a kind of out-house.

Have you ever seen Mrs. Gilmore the worse for drink? I cannot say I have. I mentioned in my note to Mr. O'Reilly I was not by myself.

Someone else was with you? Yes; his name is Leon Chessher. I went away to Goulburn on the 9th of November, and it was previous to that.

Does Chessher live in Parramatta? Yes; he lives 100 yards from here. He works for me, and lives with me.

*Cross-examined by Mr. Montagu.*] You have made a written statement, have you not? Yes.

When did you make that? Last Monday week. That was the night I made the statement to Mr. O'Reilly. He came to me on that date.

How did he know you could give information? I do not know how he knew.

How far away do you live from this place? 100 yards.

Are you a supporter of Mr. O'Reilly's? I am not a supporter. I am a poor politician.

You never attended any of his meetings? Yes; I attended both his and Mr. Taylor's.

Were you not on Mr. O'Reilly's committee? No.

Have you not been a good deal about with Mr. O'Reilly? No. The last time I met him was in the cricket field, about four years ago.

From that date until he called upon you you had never spoken to him? Oh, yes, I had.

You are an old friend of his? Yes; I am an old friend of his. I have known him ever since he has been in Parramatta.

That is a good number of years? Yes.

What did Mr. O'Reilly ask you when he came to you? He asked me if I had heard Mrs. Gilmore use any language, or if I knew anything about this scandal.

Was that after he made his first speech in Parliament? He came to ask me for the statement, and said he was going to bring it up in the House to-morrow night—on the Tuesday. He said he demanded the statement from me, as it was my duty to give it.

How did he know you knew anything about this matter? I suppose he thinks all the neighbours know. I pass this place half a dozen times a day, at all hours of the day. It is the main thoroughfare from my house to the town or the railway.

You think this language you heard occurred about November, twelve months ago? Yes; it must have—either at the end of October or the first week in November.

What impressed it on your memory, considering it happened twelve months ago? Because I have heard it on more than one occasion. I have heard disturbances at the matron's residence.

But what impressed it on your memory? It being used by a lady would perhaps impress it more on my memory, and being used by a person I had known for some time.

Has anybody called your recollection back to that time? No.

You never told anyone since that time that you had heard this language? I do not remember mentioning it to anyone.

Can you be positive about that? I do not think I ever did. I may have said something. I would not swear I have not done so.

You know that Mrs. Gilmore is a lady of quick temper? I believe so.

She speaks very rapidly? Yes.

And in very strong accents? Yes.

Who was she addressing this language to? I could not see. I did not see anyone about. It appeared that she was addressing someone in the wood-shed or small out-house.

Was she standing there? She was walking towards the shed.

And she called out to a person in the shed? Yes.

Where were you when you heard this? I was passing home. I was coming from Parramatta somewhere between 9 and 10 o'clock at night.

How can you tell me you saw Mrs. Gilmore? Because the fence is very low in front of Mrs. Gilmore's house, and we heard a disturbance before we reached the fence. There were some strong terms being used.

Were they used by one or two persons? There was a "barney" going on.

Of course there were two people? I should understand so.

She would not have been talking to herself? I should think not. Evidently someone was in the wood-shed.

How can you tell it was her? I saw the woman quite plainly. I know her voice well.

As a matter of fact, you did not see Mrs. Gilmore? I saw Mrs. Gilmore.

You saw a figure and assumed it was Mrs. Gilmore? I am quite certain it was; I saw the woman and knew the voice.

Was she turned towards the wood-shed? She was facing the wood-shed.

And you saw the wood-shed from the road? Yes; from the footpath.

Was the wood-shed lit up? No.

How could you see it at that time of night? It is only a matter of a few feet away.

It would have been dark at 9 or 10 o'clock? It might have been moonlight.

I suppose you would not recollect whether it was raining? It was fine; I am quite sure, or I would not have been walking about.

Do you know Mrs. Brown? Yes, I do; by sight.

Do you know her personally? No.

You know Mr. Mobbs? Yes.

Have you talked with Mr. Mobbs over this case? Never.

The first intimation you received of being requested to make a statement was when Mr. O'Reilly asked you on the Monday? Yes.

Did you decline to make the statement in the first instance? I told him I did not want to have anything to do with it. He said it was a matter of duty, and demanded the statement.

And he demanded from you to say whether you had heard her make use of bad language? He demanded from me anything I may have known in reference to this scandal.

You must have known all about this scandal, otherwise you would not have known to what he was referring? Of course I knew all about it; I read the papers.

You read the report of his speech in the House? Yes—the first speech.

Was what you read in the papers the groundwork of Mr. O'Reilly's speech in the House;—the papers did not go into this matter until after Mr. O'Reilly made his speech? I cannot say. It was something accusing Mr. Maxted about the Charitable Institutions. I do not think Mrs. Gilmore's name was mentioned in the House.

Did he not, in that speech, refer to this place here—the Cottage Homes? He did.

He intimated that this was the place? Yes.

After reading that speech you knew to what this scandal referred? Yes.

Have you been in Mrs. Gilmore's house? Yes; twice in the house.

Have you been about the premises? I have worked in the Cottage Homes.

I suppose you see Mrs. Gilmore about the premises at different parts of the day? Yes.

Can you conscientiously say you have seen her drunk on those occasions? I have already said I have never seen her drunk.

Or intoxicated? Not in the least.

[Witness withdrew.]

Mrs. Annie Johnson examined:—

*Mr. Montagu.*] You are a married woman, are you not? Yes.

Where do you reside? I am staying at the Hotel Metropole.

Do you know Mrs. Gilmore? Yes; I have known her for five years.

Has Mrs. Gilmore been in the habit of visiting you? She has been in the habit of visiting me as long as I have known her.

Has she visited you at night? She has, but during the afternoon as a rule. I have been several times to the theatre with Mrs. Gilmore, and on those instances she has returned late at night, by the 11 o'clock or half-past 11 train.

When she has left you after the theatre to go to the station, in what condition has she been? In the same condition as she is at present.

Has she been perfectly sober? Perfectly. She comes to see me nearly always when she visits the city. I am not always in Sydney. Sometimes I am in Melbourne. Mrs. Gilmore has also been to the theatre with her son. I am generally in Sydney eight months of the year. This time I have been in Sydney since last January, and have seen a great deal of Mrs. Gilmore.

On the occasions you have seen her, can you speak as to her conduct? I have never seen anything in Mrs. Gilmore's conduct that would lead me to believe she was not a most suitable person for the position she occupies.

Has she at any time given you any indication that she is addicted to drink? No; she has certainly not.

Has

Has she been temperate or otherwise? She has been temperate most decidedly. After the theatre I have seen Mrs. Gilmore into the tram to catch the train.

And up to the time of her departure for the train she has always been perfectly sober? Yes.

Do you remember whether, some time in May or June last, Mrs. Gilmore came to see you or whether she went to the theatre? I have my diary at home, and should be able to tell you my movements from that. If I went to the theatre with Mrs. Gilmore during that time I could tell you

If you did go to the theatre with Mrs. Gilmore in either of those months you could say if she were perfectly sober? Yes; I have never seen Mrs. Gilmore in anything but a strictly sober condition.

Did Mrs. Gilmore ever complain to you of any trouble she was suffering from of a personal nature? Yes; I have frequently heard her complain, and she suffered from a nervous complaint and from dyspepsia.

And has she told you she is often seriously inconvenienced by her complaints? She has very often when I have seen her in the city.

Have you been with her when she has been ill from the effects? Yes, I have. She has very often complained of ill health to me.

Can you tell me how it affects her? It seems to cause great excitement.

You have seen that yourself? Yes.

*Request by Mr. Montagu.*] As Mrs. Johnson can ascertain from her diary whether she went to the theatre, and mentions that Mrs. Gilmore always left her in a perfect state of sobriety, would a letter be accepted from her to that effect?

*Dr. Manning.*] We have no objection to receive the letter.

[Witness withdrew.]

Alfred Lake examined:—

*Dr. Manning.*] What is your office? Clerk at the Liverpool Asylums.

How long have you held that office? Since March last.

And previous to that? I was clerk at the Asylums in Parramatta, and doing the clerical work at the Cottage Homes as well.

*Mr. Montagu.*] I believe you have attended at the Cottage Homes very frequently? On an average twice a week.

Did you attend at any particular times? At all times from half-past 8 till 7 in the evening when convenient for me to get away from the other office.

On those occasions you had opportunities of seeing Mrs. Gilmore? I saw her very frequently.

Did she at any time appear to you under the influence of liquor? She never appeared so to me.

Had she been you would have noticed it? Certainly.

Did you ever hear her use any bad language? I never heard her use one word of bad language.

[Witness withdrew.]

Mrs. Jane Kilbut examined:—

*Dr. Manning.*] Have you known Mrs. Gilmore for some time? I have known Mrs. Gilmore for the last two years.

In what way have you known her? I have been to her place several times, doing needle-work off and on.

Have you ever seen her under the influence of drink? I have never seen her under the influence of drink in any way.

What time of the day did you go? In the forenoon and afternoon.

*Mr. Montagu.*] About how often on an average did you go to see Mrs. Gilmore? During the last twelve months I have done needle-work for her, and I have gone three or four times in the month.

You went in the mornings and afternoons? Sometimes in the morning, and sometimes in the afternoon.

Did you ever go in the evening? Yes.

Did you go after tea? Yes; I have been in two or three times after tea.

Did you ever hear Mrs. Gilmore use bad language? No, I have not.

Did you ever see any indication that she was under the influence of liquor? Not in the least.

You have not been employed in the house? No; I have not been living there.

Had you a daughter employed by Mrs. Gilmore? Yes.

How long was she with Mrs. Gilmore? I think about seven months.

[Witness withdrew.]

Alice Kilbut examined:—

*Dr. Manning.*] You have lived with Mrs. Gilmore? I was in Mrs. Gilmore's employ about seven months.

When did you enter on that employ? In the latter end of July, 1894, and I left at the latter end of February, 1895, I think it was.

*Mr. Montagu.*] How were you employed there? As nurse girl.

Would you be up when Mrs. Gilmore came home after being in town in the evenings? I saw Mrs. Gilmore frequently when she came home.

What was her condition? She was always the same as when she left.

You have been looking after the children? Yes.

Would that be late at night? No, early in the evening, when I saw Mrs. Gilmore. I used to go home after that.

*Dr. Manning.*] What time did you go home? About 6 o'clock.

You never saw Mrs. Gilmore after that? No, not after that.

*Mr. Montagu.*] When you saw Mrs. Gilmore come home, did she appear to be intoxicated? No, I never saw Mrs. Gilmore once under the influence of liquor.

If

If she had been, would you have noticed it, do you think? Yes; I would have noticed it. Do you think you could tell whether she was any different then to any other time? Yes. You have been near her, did you ever smell any drink? No, she never smelt of drink. Did you ever see her taking any drink? No, I never saw her taking any at any time.

*Dr. Manning.*] What age are you? Sixteen years.

Was there any drink kept in the house? I never saw any.

Neither beer, spirits, or wine? No.

Not the whole time you were there? No.

*Mr. Montagu.*] You are quite sure there was none kept in the house? Yes.

*Dr. Manning.*] Have you occasionally gone for beer? At lunch times.

You have gone for it? Yes; for a small bottle of stout or ale.

Where did you get it? At Holmes'.

At the hotel? Yes.

*Mr. Montagu.*] Would that be occasionally? Yes.

Would Mr. Gilmore be at home then? Yes.

You know that it was not kept in the house? There was never any kept in the house.

[Witness withdrew.]

Bredthafft Allez examined:—

*Dr. Manning.*] What is your occupation? Accountant.

Where do you reside? Cowper-street, Parramatta.

*Mr. Montagu.*] How long have you been living there? Twelve months.

Is where you live anywhere near the Cottage Homes? A few doors away, in the centre of Cowper-street.

And you have to pass by Mrs. Gilmore's? During the last twelve months I have passed three, four, and sometimes six times a day.

You are accountant for Murray Brothers carrying on business in Parramatta? Yes; in Church-street.

Have you seen anything of Mrs. Gilmore during that time? I cannot say I have ever seen Mrs. Gilmore until last Sunday evening.

You have passed by the house several times throughout the day? Yes.

Have you ever heard any quarrelling or bad language? Nothing of the kind, on the contrary, I have always noticed the nice way in which everything is kept and the orderliness of the place. I have never heard the slightest disturbance.

Everything seems to have been orderly? Especially the private residence.

Have you been by there at night? Yes; but never later than a quarter past 11.

And then have you ever heard any bad language used? No; nothing of the kind.

[Witness withdrew.]

Archdeacon William James Gunther examined:—

*Dr. Manning.*] You have been in Parramatta a great many years? Yes.

How long have you known Mrs. Gilmore? Since she took charge of the Cottage Home—five or six years at least.

*Mr. Montagu.*] Have you visited the Cottage Homes at all? I used to visit frequently at one time.

While Mrs. Gilmore was in charge? Yes; but not so much lately as my curate, Mr. M'Arthur, takes charge of this portion of my work.

How long has Mr. M'Arthur taken charge? Since about the 20th February of last year, conducting regular service. I have been only occasionally since that time.

Have you ever noticed Mrs. Gilmore under the influence of liquor? No; I have never noticed, nor have I heard of such a thing.

I suppose your visits would have been in the day-time, before evening? I do not think I have been in the evening at all.

Do you think if Mrs. Gilmore had been suffering from the effects of drink that you would have noticed it? I think I should, and I think I should have heard of it.

As far as you could see, she went about her work in a business-like way? Yes; and seemed attentive to her duties.

Had there been anything said in the district about her using bad language, you probably would have heard of it? Yes; and if I had noticed it, I certainly would have considered it my duty to take some action.

*Dr. Manning.*] Have you heard any complaint from the inmates? No.

You were not aware that there have been one or two inquiries upon this subject? No; the first I knew of it was from Mr. O'Reilly's statement.

[Witness withdrew.]

Alfred Henry Ferris examined:—

*Dr. Manning.*] You reside at Parramatta? Yes.

What is your occupation? Auctioneer.

*Mr. Montagu.*] I understand you overheard a conversation between a railway porter and a policeman at Parramatta? Yes.

When did it occur? Last Sunday morning week. I was waiting to meet some friends at the station.

Would you know the constable and porter again? I would know them by sight. I cannot tell you their names. The policeman has been here about three or four weeks to my knowledge.

Is he a tall policeman, with a red moustache? Yes.

What did you hear them say? They were talking about this case and the lady who has the management of this institution. The policeman was talking as if he had been fifty years in the place. I knew at the time he knew very little. The policeman was asking the porter's opinion of the case, which he gave.

*Dr.*

*Dr. Manning.*] Can you identify the porter? Yes; I could ascertain his name.

*Mr. Montagu.*] You have no doubt it was a porter? Not the slightest. This porter said he could say a good deal, and other Government officials there—I presume he meant other porters at the station—if they got orders from head-quarters, but without that they were keeping their mouths closed. The porter asked this new constable his opinion about the remarks in connection with the affair, and he said he had every reason to believe they were true.

I suppose this conversation did not take very long? No.

*Dr. Manning.*] This matter has been the subject of a great deal of talk within the last fortnight, I suppose? Yes; there has been a little talk amongst some people here.

*Mr. Montagu.*] You have never heard yourself anything wrong about Mrs. Gilmore? No; I never heard a disrespectful word against her.

You do not live this way? No; but I pass here six or seven times in the week. I knew an inmate here named Hill, and asked him one day what sort of quarters he had, and he spoke very highly of the institution, of the way in which it was conducted, and the treatment he received.

When you have passed have you heard any quarrelling or disturbance? No, never.

[Witness withdrew.]

George Vesey Allen examined:—

*Dr. Manning.*] What is your office? I am an inspector in the Charitable Institutions Branch of the Public Service under Mr. Maxted.

You held an inquiry some time ago into charges against Mrs. Gilmore? Yes.

How long ago was that? I have held four separate inquiries during the last two years. The first was in October, I think, of 1894, into some statements that had been made about the Matron Superintendent of the Cottage Homes having been under the influence of drink. I was instructed by the Director of Government Asylums to inquire into the truth of those statements. The second was in connection with an inmate not getting some clothes that he thought he ought to get; the third was in regard to rations not being of the proper quality; and the fourth was similar to the first, having reference to some remarks about intemperance.

What set you in motion on the first occasion? A report by Inspector Wing, of the Department, who had been instructed by the Director to inquire into remarks made of intemperance on the part of the matron, and he having failed to obtain any satisfactory evidence one way or the other, the matter was forwarded on to me by the Director to finish the inquiry.

What steps did you take? I came here and went through the cottages and saw all the old people in the whole of the cottages. I went to Mrs. Brown, who keeps a boarding-house at the back of the homes. Mrs. Brown was absent, and I saw her daughter. I had a conversation with her, and she told me she had heard some disturbance here between Mr. and Mrs. Gilmore on one or two occasions, but she could not and would not say that she had ever seen or heard of Mrs. Gilmore being drunk. I saw Mrs. Creasy.

Was anything said about bad language? I particularly inquired about bad language, but could ascertain nothing. I saw Mrs. Creasy, who keeps a boarding-house at the corner here, and she satisfied me that she had never seen any misconduct of any kind, and had neither seen or heard of Mrs. Gilmore being under the influence of drink. She had heard some dispute between Mrs. Gilmore and her husband. I also saw Mr. Watsford, the station-master at the Parramatta station, and he could not give me any evidence that would lead me to believe there was any truth in the charges made. I saw Constable Dimond, who is now in Wollongong, and was on night duty at the time here. He had seen Mrs. Gilmore on two or three occasions coming home, but never under the influence of drink, he assured me. I saw Night-officer Lord between 8 and half-past 8 the same night that I came up. I asked him, knowing he had made some statement to Mr. Wing, how they were getting on at the cottages, and he said, "Oh, they are noisy enough." I wanted to know what he meant by that. He said, "You can hear her talking all over the place," meaning Mrs. Gilmore. I asked him if he had ever seen her under the influence of drink. He said, "No; I could not say that." I was satisfied from him, too, that the trouble was bad temper, arising, probably, from domestic difficulties. After making the most searching investigation, I could not get any evidence to substantiate the charges.

That was in October, 1894? Yes; either the end of September or the beginning of October.

And this same charge was the subject of a fourth inquiry? Yes; the fourth inquiry was in consequence of statements made by Mr. O'Reilly, the Member for Parramatta.

On what date was this fourth inquiry held? Quite recently—last month, I think.

Was that before Mr. O'Reilly's speech in the House? It was when he made the statements in the House. I was sent up to see whether there was any truth in the statements that he made. I went round the neighbourhood, but I did not go to Mrs. Brown. Lord was removed from here. I saw Sergeant McGarvey. I went through the cottages, and saw Mrs. Creasy. I had a talk with the station-master, who is on duty in the day-time here, and I came to the conclusion it was the old statement renewed, and therefore I did not go further into it. I reported, saying that I had nothing further to add to the report I had already made. I could not find any evidence of her having been under the influence of drink.

On either of these occasions did you examine a blind man, one of the inmates of the homes? Yes; a quarrelsome old man. I examined all the inmates, and some of them had grievances about their clothing, and their socks being moth-eaten, and little complaints of that kind, but not one of them could say anything as regards intemperance. I had specific instructions from the Director to run the thing down.

This blind man appears to have made charges on one occasion? He made no charges to me, except some grievances about rations.

He appears to have made charges about over-indulgence in stimulants? He did not mention them to me, and I asked everybody in the place.

[Witness withdrew.]

THURSDAY,

THURSDAY, 24 OCTOBER, 1895.

Present: FREDERIC NORTON MANNING, Esq., M.D. (Chairman); WILLIAM HENRY GOODE, Esq., M.D.

Joseph Hart examined:—

*Dr. Manning.*] What is your occupation? Commercial traveller.

Do you reside in Parramatta? Yes.

You made some statements a few days ago to Mr. O'Reilly; will you repeat what you said to him? One night coming from town I heard Mrs. Gilmore making use of obscene language.

Can you fix the date? No; I could not, within a month; I should think it was four or five months ago.

That would bring it to May? Yes; about that, as far as I am able to remember.

About what time of the evening was it? It was close on a quarter to eleven o'clock.

And where was it? In Mrs. Gilmore's house. I was coming down past the Cottage Homes from Parramatta, past Mrs. Creasy's.

How do you know it was Mrs. Gilmore who used the language? I go by the voice; I could not see her. I knew Mrs. Gilmore by sight. I have heard her speak. I have no reason to doubt it was her, but I would not swear positively that it was.

You judge by her voice? Yes.

You have heard her speak? Yes, repeatedly.

What was the nature of this language? It was obscene and blasphemous.

What were the words? "Bloody brains"; "bloody wretch"; I cannot think of anything else. I stopped a few minutes.

You stopped a few minutes near the house and listened to this? Yes.

Do you know whom the language was addressed to? I think it was Mr. Gilmore; I heard a man's voice.

Replying to this? I could not hear what he said; I only heard a mumble. What he said I could not understand.

Did it appear to be a family quarrel? Yes.

Was that the only occasion on which you have heard anything of the kind? That is the only time I have stopped to listen to anything like that. I have heard a noise as though there was a disturbance inside at other times late at night,—as if there were a quarrel.

On those occasions you cannot tell us what words were used? No; I could not.

Your business takes you backward and forward by these cottages frequently? Yes.

Every night? I pass every day in the morning and back at night.

Late at night? No.

How many times have you heard quarrels from this house? That one particular night, and two or three other times.

Only on that one occasion you can testify to any bad language? Yes.

Have you ever seen Mrs. Gilmore intoxicated? No.

Have you seen her very frequently? I have seen her at the place two or three times a week.

Have you seen her in the evening? I cannot say I have. It is very rarely I pass until about 6 o'clock. I should certainly say she had had no intoxicating liquor in the morning when I have seen her.

*Cross-examined by Mr. Montagu.*] Are you living this way? Near Harris Park, at the top of Cowper-street.

How long have you lived there? Eight years.

Are you quite sure it was Mrs. Gilmore who made use of that language? I say it was Mrs. Gilmore by the voice.

Might it possibly have been someone else? It might possibly have been someone else in her house.

Suppose you were told it was a man who made use of that language? I would not believe it.

What opportunities have you had of hearing Mrs. Gilmore speak? I have heard her repeatedly in her own place when passing.

Would she be calling out in the garden? She was giving orders to the men.

Have you been passing many times when she was in the garden during the last eight years? I have seen her there a good many times in the garden and cottage.

When did you make this statement to Mr. O'Reilly? Last Sunday night week.

That was on the 13th October? Yes.

Was that the first time you made any statement of the kind? That was the first time I made any statement to Mr. O'Reilly.

Did you make a statement before that? Seeing the reports in the paper, two or three spoke to me about it.

Who? I think it was Brooks, a butcher at Finlayson's.

Was that before the report appeared in the paper? It was when the correspondence of Mr. O'Reilly appeared in the Parramatta papers.

You never mentioned it to anyone before the correspondence appeared? Not that I am aware of.

Did Mr. O'Reilly come to you? Yes.

Did you ask him how he knew you could make a statement? No; I did not.

Were you prepared for Mr. O'Reilly's visits? No; I thought when he came to me it was on other business that I had written him a letter about.

On private matters? Yes.

Did you offer to make this statement? I did not. He said the matter was a delicate subject that he had come to see me about, and he brought up Mr. Maxted's name and Mrs. Gilmore's name. He said, "You made a statement about Mrs. Gilmore to someone." I said, "I did." He said, "Are you prepared to swear that?" I said, "Yes, I would, and what I said I would not retract."

Mr. O'Reilly referred to a statement you had made to someone else? I made a statement to two or three, not disparaging Mrs. Gilmore or anyone else.

The statement you made to your friends was that on passing her house you heard some language? Yes. I said, from what I could see, Mr. O'Reilly was right in certain things. I had heard it myself going home at night.

I suppose you are used to hearing strong language? I certainly am.  
 Being accustomed to hearing strong language, it is quite possible you may not be quite correct in the words? I could not swear to the words. As near as I can recollect, it was something like that.  
 If you were on your oath you would not like to swear they were the exact words? I would not.

[Witness withdrew.]

[At 10:40 a.m. the Board adjourned to a room at the School of Arts, Parramatta.]

Dr. William Bradley Violette examined:—

*Dr. Manning.*] You are the Government Medical Officer for Parramatta? Yes.  
 And among other duties you visit the Cottage Homes? Yes.  
 How long have you held the position of Government Medical Visitor to the Cottage Homes? Since their establishment, with the exception of a short time when Dr. Brown acted.  
 How long have you known Mrs. Gilmore? About six or seven years.  
 You are in the habit of visiting these homes frequently? Yes.  
 How often? Three times a week regularly.  
 About what time generally are your visits made? The usual time is a little after 9 to half-past 9 in the morning.  
 Do you visit at night? Only in the case of emergency.  
 You have had considerable opportunity of seeing Mrs. Gilmore? I have.  
 Have you ever seen her at any time under the influence of drink? Never.  
 Have you ever heard her using bad language of any kind? I have not heard her using bad language but she has spoken to me of language that has been used to her.  
 By whom? In a sort of quarrel, I understand it was.  
 Between whom? I think it was with her husband.  
 Bad language used to her by her husband in a quarrel? Yes.  
 Did Mrs. Gilmore complain to you of this? You would hardly take it as a complaint. She was in a very excited state, and I asked her how she could account for her state, and she explained to me a quarrel, and then mentioned the language used to her.  
 And said it was by her husband? Yes.  
 Was that the only time she complained to you of her domestic difficulties? She may have on two or three other occasions, but they were slight.  
 Have you ever, in her demeanour or conversation, seen anything to lead you to think she was addicted to drink in any way? Never on any occasion.  
 Have you had any fault to find with the management of the place? Never. She has always given me every assistance in her power, and been kind to the inmates, done all she could to make them comfortable. She has looked after them regularly, and seen that things were done in a regular manner, and that cleanliness was enforced. I have never found her on any occasion under the influence of drink, or given to taking drink.  
 In your opinion, when you have seen her, she has always been fit to conduct the duties of her position? Certainly.  
 Have any charges been made to you by inmates having reference to Mrs. Gilmore being intoxicated? Never on any occasion.  
 When Mrs. Gilmore complained of this bad language, you introduced the subject first of all? Yes; from her appearance she seemed worried and distressed, and very excited. I asked her what was the matter, what had excited her, and she informed me of what I have said.  
 How long ago is this? Nine months, I should think.  
 And the other occasions on which there was some slight difficulties? They were previous to that.  
 You have heard of nothing of these difficulties within the last nine months? No; it may be more than nine months ago.  
*Mr. Montagu.*] Has Mrs. Gilmore ever told you she suffered considerably from hysteria? Yes.  
 Which would probably arise from several causes? Yes.  
 Would vomiting arise from hysteria? In certain conditions.  
 It is quite possible? Yes; hysteria might only be a symptom of the particular complaint.  
 Would it be possible for Mrs. Gilmore to be suffering from hysteria combined with dyspepsia? Yes, frequently.  
 Or biliousness? Well, hardly biliousness.  
 Has she told you she has suffered from those complaints? I have treated her for a complaint in which hysteria and dyspepsia were symptoms.  
 And I understand vomiting might arise from hysteria under those conditions? Yes.  
 This has been going on for some time? At times it is worse than at others.  
 Supposing, for the sake of example, Mrs. Gilmore had taken some stimulant, not feeling well, and she subsequently vomited, would the smell of liquor show under those circumstances? If it were in the vomit it would.  
 It would not necessarily follow that because the smell of liquor was noticed in the vomit, that therefore she was drunk? Not necessarily.  
 It might be mistaken by people who did not understand anything about it? Yes.  
 Were you attending Mrs. Gilmore about two years ago? Yes.  
 I think she was in advanced child? I did not attend her in that case.  
 Is it within the last two years you have been attending on Mrs. Gilmore? Yes.  
 If there anything you can tell me that would throw any light on this supposed over indulgence in stimulants? Mrs. Gilmore's manner might by a stranger be misunderstood. She is very excitable. Her language is not the most refined sometimes you may say. This would cause perhaps a stranger, when she was in a period of excitement, to fancy she had taken something. I have watched her most curiously to find out, and was satisfied it was her manner and expression in these states of excitement.  
 Which struck you as being peculiar, and made it necessary to watch her closely? Yes.  
 And having done so, you are quite satisfied it was not the result of over indulgence? Yes; it was not due to drink. When

When Mrs. Gilmore is like that, does she suffer very acutely? Yes.  
 And is probably prostrated to a certain extent? Yes.  
 These fits of hysteria come on suddenly without warning? Yes.  
 Some people have said they have seen her get out of a railway carriage and lean against a post;—  
 might not that be the result of a sudden illness? It might have followed a sudden illness.  
 To a certain extent it would prevent her having full control over herself? Very temporarily.  
 She would recover shortly afterwards? Yes.  
 When you say that in an excited state she would express herself in a peculiar way, I take it you  
 do not mean she used bad language? No; not bad language—coarse language. Not indecent or  
 blasphemous.  
*Dr. Manning.*] Can you tell me what expressions she used? Speaking of her husband she called  
 him a "lousy cur."  
*Mr. Montagu.*] That might arise from a custom in her own particular part of the country?  
 Quite so.

[Witness withdrew.]

Dr. Walter Sigismund Brown examined:—

*Dr. Manning.*] You are a medical practitioner, residing in Parramatta? Yes.  
*Mr. Montagu.*] Some time ago you were attending the Cottage Homes, were you not? Yes; from  
 February, 1890, to May, 1893.  
 Did you attend pretty often? Three times a week—Tuesdays, Thursdays, and Saturdays.  
 In the day-time? Yes.  
 In the morning, as a rule? In the mornings and afternoons.  
 Did you ever call there in the evenings? Yes; to see the old people.  
 Or to Mrs. Gilmore's cottage? Yes; I have been to the cottage.  
 At night? Yes; I have had calls there at night.  
 At any of these times did you ever notice Mrs. Gilmore under the influence of drink? Not once.  
 Did she appear to be going about her work in a rational way? Yes, as far as I could see.  
 Conducting the homes in a proper and efficient manner? Yes.  
 When you have gone there in the mornings, if Mrs. Gilmore had been drinking overnight, I  
 suppose you would have noticed some change? Yes; I should think so.  
 You have always found her to be the same? I have found her sometimes a little hysterical.  
 Did you attend her professionally? Yes; I have attended her personally within the last two  
 years or eighteen months, though I was not Medical Officer then.  
 Can you tell me for what you attended her? I attended her for dislocation of the shoulder joint  
 I have put it right at least three times. It is rather inclined to come out easily.  
 Did you ever notice hysteria within the last eighteen months? I have.  
 Did she complain to you of suffering from dyspepsia? Yes; I have treated her for that during  
 the last eighteen months.  
 Might the hysteria from which she was suffering bring on vomiting? Hysterical vomiting—yes.  
 Vomiting might arise from hysteria and other causes not connected with drink at all? Yes.  
 Supposing Mrs. Gilmore had taken a glass of spirits if she felt ill, that would be likely to be  
 administered to her? Yes; a little brandy and water would not do her any harm.  
 Assuming that were done would not the vomit under such circumstances smell of liquor? Yes.  
 And anyone noticing the smell might naturally mistake that for over indulgence on liquor? Yes.  
 It would not follow that such was the case? No; she might have had a little brandy and it  
 would be detected in the vomit.  
 I suppose if a person vomited the breath would be affected? Yes.  
 All of which might lead people to believe she was under the influence of drink, if they did not  
 know to the contrary? Yes.  
 When she suffers from hysteria, does it come on suddenly? If she were provoked it would bring  
 it on.  
 It might prostrate her for the time being pretty considerably? Yes.  
 Does she suffer from vertigo? I am not quite certain.  
 When an attack comes on, would it cause her to be unsteady on her feet? Yes; it would make  
 her gait peculiar.  
 It might even cause her to lean against a post or other support? Yes.  
 Who attended Mrs. Gilmore about two years ago during her confinement, you or your father? My  
 father, and he is too feeble to be here.  
 Your father is a medical practitioner at Parramatta? Yes; for the last forty years.  
 [*Mr. Montagu handed in letter (marked "A") from Dr. Walter Brown.*]  
*Dr. Manning.*] Are you quite certain the dyspepsia from which Mrs. Gilmore was suffering was  
 not due to drink? I am certain of that. I have never seen her the worse for drink.  
 You are aware that drink very often causes dyspepsia? Yes.  
 Are you able to make certain that the dyspepsia was not owing to drink? Yes; at the time I  
 prescribed for her I am confident it was not from drink.  
 How was her shoulder joint dislocated? From what I made out, she had been ill-used by her  
 husband. I put it in three times. The first and second times she had been pushed by her husband, and  
 the shoulder went out.  
 Did he provoke her again the last time? Yes, as far as I can say during my attendance, the whole  
 thing is due to her husband.  
 Your attendance has been due to the ill-treatment of Mrs. Gilmore by her husband? That is my  
 opinion during my three years treatment she has been ill-used by him. I advised her some two years ago  
 to get a separation from him. He is a beast, I think.  
 Did Mrs. Gilmore complain to you at the time of ill-treatment? On several occasions she has. I  
 may say the last time he came to me to see his wife, he was as drunk as he could be. He came to me at  
 3 o'clock in the morning to ask me to attend her for this dislocation.

Did

Did the squabble in which this dislocation occurred take place during the night? Yes, the last time. The time before it was about 1 o'clock in the middle of the day.

Was Mrs. Gilmore quite sober the last time? Yes, I am quite convinced she was.

The husband was not sober? He was the worse for drink. He came down to my house and nearly fell over the door-step.

Have you ever heard Mrs. Gilmore use bad language of any kind? When she has been excited her language has not been altogether what it might have been. I have heard her use epithets which she might not have used.

You have heard her speak so to her husband? Yes; she has called him a brute, a wretch, a blackguard.

The language she has used has not been blasphemous or obscene? No; not that I have heard.

But it has been coarse? Yes; I excused her then on account of her being so nervous and highly strung.

When hysterical she is likely to go beyond herself on those occasions? Yes; she has not the best of temper.

Sydney Maxted examined:—

*Dr. Manning.*] You are the Director of Charitable Institutions? Yes.

You are the official head of the Cottage Homes? Yes.

How long have you known Mrs. Gilmore? Over seven years. I knew her first as caretaker of the Government Asylums Office in Sydney, where I had opportunities of seeing her every day for some months up to as late as 11 at night, when I first took charge of the Government Asylums, and was compelled to be late at the office in order to complete the work.

And afterwards? Since then I have seen her at the Cottage Homes, and at the Sydney office on an average of once a fortnight at irregular times.

How long has Mrs. Gilmore been in charge of the Cottage Homes? Over six years.

Was she married at that time? She was in the Department when I came, as caretaker. She was then a widow, and afterwards married one of the officers of the Department, but whether she married before she came to the Cottage Homes or not, I cannot say from memory. It was about that time.

Her husband is not now employed in the Department? Not now.

When did he cease to be employed? About three years ago. He effected an exchange into another Department.

Was that due to Departmental reasons? Yes; I was not satisfied with the way he was doing his work, and his domestic relations began to be rather unhappy. He and Mrs. Gilmore used to come to the office to see me and occasionally strong words used to take place, and I thought it was a very undesirable connection to continue. As officials I had no occasion to find fault with either of them, but I suggested he should effect an exchange, and he did.

Some time ago you held an inquiry into Mrs. Gilmore's conduct, the charge being that she had over-indulged in stimulants. Can you tell us the circumstances which led you to hold that inquiry? Yes; there was an inmate of the Cottage Homes, named King, and his wife. Mrs. Gilmore reported them for being continually drunk, and for being dishonest, and I held an inquiry into that, and had to expel them. I found they had been stealing Government properties. That man made a charge in the first instance.

Can you tell us exactly what the charge was at that time? He told me as I was talking with him, "She has charged me with being drunk, and she gets drunk herself." The charge seemed to me to be very preposterous, from my knowledge of her.

Did he say when she got drunk? He could not fix any period, and knowing what these inmates are I really did not attach much importance to it. I questioned Dr. Violette, and he would not listen to it. He said it was out of the question. The charge, as far as Mrs. Gilmore was concerned, broke down, because there was absolutely no foundation for it.

Can you give us the date? I did not put it on record, for the reason that I did not believe there was any truth in the charge. I went right through the homes.

Can you tell us approximately how long it was ago? About three years.

Under what circumstances did the question of Mrs. Gilmore's sobriety or otherwise subsequently arise? Mrs. Gilmore reported another couple at the Cottage Homes. Her report was endorsed by Dr. Violette. She reported them for being continually dirty and for keeping the homes in a state of disorganization, and for endangering the homes by their reckless use of lights and fire. I knew the couple very well and arranged to have them transferred after consultation with Dr. Violette. The old man made this charge. He used to be very friendly with the other old couple I have spoken about, and he made the charge in the same way. He said, "Mrs. Gilmore ought to look after herself and take less to drink." I said, "What do you mean by that," and he said he only heard it as a rumour.

What steps were taken on that occasion? I made the same inquiries myself. I did not attach any importance to the charge.

Can you give us the date of that inquiry? It is quite two years ago.

On that occasion you were able to satisfy yourself there was no truth in the report? No truth whatever.

The same charge appears to have arisen on a subsequent occasion; can you tell us what led to it then? A man who was in the habit of driving there, spoke to me at the station, and said he had heard from another cabman that this cabman had seen Mrs. Gilmore under the influence of drink, and that some of the neighbours knew of it. I sent Mr. Wing, one of the most trusted officers of the Department, to make a thorough inquiry, and he reported that he could find no evidence of it. I was not quite satisfied with his report, and appointed Mr. Allen, who is most particularly qualified to make inquiries of this kind. I think he made three inquiries. I told him the persons to whom he was to go and to make the fullest inquiry. He made me a very unqualified report, and said he had been unable to find any proof whatever. I suggested that he should go to the neighbours, the police, and the railway officials, and he informed me he had done so.

During the time that Mrs. Gilmore has been an officer of your Department, have you had any reason to think that she over-indulged in stimulants? No, I have not.

There was nothing in the conduct of her Department to lead you to think so? Not the least. I have had occasion to find fault with matters of management, but not such matters as would lead me to think she drank. I never had the slightest suspicion of it. I know she is occasionally hysterical. I have seen her under the influence of temper, and in such a condition that persons who did not know her might think she had been taking drink. I came to Parramatta on Sunday last, and told her the line this inquiry was going to take, and she became very excited. I made this remark to her then: "Anybody who did not know you, and seeing you now, would think you had been drinking"; and in a minute afterwards she was as calm as now.

There has not been lately any falling off in her activity or her management of the institution? Not more than I have had occasion to find fault with for the last year.

I find in *Hansard* a statement that the case of this lady was under consideration, and that a charge against her had been made, and the Director of Charities had called upon her for an explanation. That does not refer to drunkenness at all? Not at all. I have had occasion to expostulate with her for carelessness in receiving rations,—rations which, in my opinion, were not up to the proper standard, and for irritability to the inmates. Her excuse was that the inmates were very provoking. I knew they were, but she was supposed to put up with that kind of thing; and also what I considered to be a disobedience to instructions on one or two occasions. I directed that she should personally receive the rations. She did not do so; she told someone off to do that. At the time that was being done I saw her, and she appeared to be quite as capable of receiving rations as at present. I think that would be all the complaints.

Those were the principal things? Yes. I found it necessary two or three months ago to direct that all the officers in the institution should sign an attendance book, as I found that some were leaving at unauthorised hours. Two or three objected, so I got the Chief Secretary's authority to have it done. Mrs. Gilmore did not sign the book from, in my opinion, simply disinclination to do so. I thought possibly it might have been overlooked.

Was this attendance book drawn up so as to show the absence from the institution of the officers? Yes; and to show when the officer left and when he came back.

Has this book not been kept by Mrs. Gilmore at all? No. Her instructions to keep the book would not have reached her earlier than two months ago. The book had no special relation to Mrs. Gilmore, it was made a general thing.

You have spoken of her irritability to the inmates;—do you put that down to her temperament? Yes, undoubtedly.

Has it been increasing of late? No; I do not think it has increased. I venture to think that if the inmates were called, nine-tenths of them would say she was kind to them.

She is irritable? Yes; the inmates ask unreasonable things, and instead of exercising tact she rubs roughly against them.

Have you heard Mrs. Gilmore make use of any bad language? I have never heard Mrs. Gilmore make use of an improper expression.

Have you ever heard her use any coarse language? No; I have not heard her use any language unbecoming a lady.

Have you been aware of the domestic difficulties that the doctors here have testified to between Mrs. Gilmore and her husband? Yes; for some time. I suggested an arrangement about a year ago, which I thought should be carried out, that Mr. Gilmore should live away from the homes. It was an ill-sorted marriage. I think he went away for a little while, but came back, and I thought things were going on better. Her institution always appeared to me to be in excellent order. It is only people who are conversant of matters of detail who would have noticed the little defects I have spoken of.

On the whole Mrs. Gilmore has conducted the duties of her office in a satisfactory manner? With the exceptions that I have spoken of.

Have you heard of Mrs. Gilmore's shoulder being dislocated on several occasions? No; I do not think I have. I do not recollect it.

*Mr. Montagu.*] You have taken every step to inquire fully into these charges of habitual drunkenness and the use of bad language? Certainly I have done that. I have taken every step that I have just detailed.

With the result that you have told us of? Yes.

You know the charges made in the house? Perfectly.

Are you of opinion that there is no reasonable justification for them whatever? For the charges of drunkenness and foul language, in my opinion, there is no justification whatever. The medical men have had more frequent opportunities of seeing her than I have. I do not mean to say it is impossible for any official to take drink in the middle of the night without my knowing it. I can only judge from her appearance, and the surroundings of the institution.

Has she ever complained to you of being in ill-health? Yes, frequently; in fact I have discussed the matter with the Chief Secretary on several occasions recently.

As to her health? Yes; and as to those matters I have just spoken about, to consider what was best to be done in the matter.

Are there any regulations in regard to Mrs. Gilmore's leave of absence? No; I have told Mrs. Gilmore to be away as seldom as possible in the daytime from the homes during the hours when the necessities of the institution require to be attended to, particularly as there are no other officers there.

Do you think it likely that there is any truth in what has been said about her being in town at night on an average of two or three times a week? I do not think it possible. I have had no opportunity of knowing that. I know she is generally at the homes in the daytime.

I suppose the homes might be inspected at any time without any warning being given to her? She never got warning. None of the officials do.

If she were constantly away at night she would not know but what an inspector might visit the homes? She might not, possibly.

Therefore, it would not be to her advantage to be constantly away at night two or three times a week? No; it certainly would not.

Can you give any suggestion as to the cause of these charges being made? I have no doubt of that, but I do not know whether the Board would consider that it came within the lines of the inquiry. I could prove it if the inquiry took a wider range.

*Dr. Manning.*] We are not inquiring into the causes of these charges; we are only going into the facts of the case.

*Mr. Montagu.*] The charges having been made, and requiring to be supported, might account for certain evidence that has been already given.

*Dr. Manning.*] What Mr. Maxted could tell us on that point would be matter of surmise.

*Witness.*] I am prepared to produce witnesses in the matter.

Have you any regulations as to Mrs. Gilmore leaving home in the evenings? No; she can go if she chooses, so long as she keeps the homes in order.

There are no special duties during the evening? Not at all. The work is done probably after the last rations are in at about 5 o'clock.

*Mr. Montagu.*] She is at liberty to leave after that? Yes; every evening if she likes. I should not interfere with her doing so.

*Dr. Manning.*] You have said that you have had several discussions with the Chief Secretary on this matter. I gather then that the whole condition of things has not been quite satisfactory to you? It has not been quite satisfactory for the last five or six months, and it has troubled me a good deal, but there is nothing I can lay hold of sufficiently tangible to say she should be dismissed. Such a penalty as that would be too severe, in my opinion. In June last Mrs. Gilmore wrote a very strong letter to me, promising that these matters would be attended to in the future.

The facts you had to complain of were minor breaches of discipline, the condition of Mrs. Gilmore's health and her conjugal relations? Her conjugal relations were, in my opinion, making her health worse, and completely destroying her temper. In my position I have had frequently to deal with drunkards in all shapes and forms, and I do not think I should have much difficulty in detecting an habitual drunkard.

*Mr. Montagu.*] In regard to the carelessness in receiving rations, I think you said she promised to be more careful in the future? As far as I could tell she was more careful.

These were lapses of carelessness more than anything else, which might have occurred with any official? Such laxity, in my opinion, should not be permitted, as it might lead to very serious results.

That would not arise from intemperance? Not at all.

It was simply carelessness on her part? I do not think drink had anything to do with it.

[Witness withdrew.]

Dr. James Kearney examined:—

*Dr. Manning.*] You are a medical practitioner in Parramatta? Yes.

For how long? Five years.

*Mr. Montagu.*] How long have you known Mrs. Gilmore? Between two or three years.

You have attended her professionally during that period? Yes; chiefly her children; sometimes herself.

Have you been often at the Cottage Homes? Yes; pretty often. Sometimes early in the morning, and sometimes late at night.

During those visits late at night have you ever noticed any sign that Mrs. Gilmore had been indulging in drink? No; never.

From your personal observation can you say whether she is a person likely to be addicted to indulgence in drink? I had no reason at any time to suspect that Mrs. Gilmore drank. She is a thoroughly neurotic subject; very hysterical at times? When her children were ill she was very anxious about them—too anxious, in fact, no matter how trifling the illness. I always found her most attentive, stopping up at night to look after her children when there was no occasion. I have found her very excited at times.

It has been said that Mrs. Gilmore vomited in the train;—could that not arise from the hysteria from which she was suffering? Yes. She was suffering from dyspeptic troubles in conjunction with hysteria.

In such a way that it might bring on vomiting? Yes.

It might not necessarily, under the circumstances, have been caused through drink? Not at all.

Supposing Mrs. Gilmore had taken some stimulant, feeling ill, and had vomited afterwards, I take it the smell of what liquor she may have taken would have been noticed, and her breath would have been affected? Yes, of course.

Would the hysteria she was attacked with affect her condition of temper materially? Undoubtedly. Some people, who would not know better, might very likely mistake an hysterical attack for drink.

People without experience? Yes; non-professional men, who had not seen a deal of hysteria, might undoubtedly be liable to err in that respect.

Suppose she had staggered at night-time? She might have been quite dazed.

Or leant against a post? She might lose complete control over herself.

When she suffers like that I suppose it is pretty severe while it lasts? It is afterwards she feels the effects of it.

Do you happen to know if she suffered from the effects of the birth of her last child? I cannot say. She has not told you? I do not remember.

You have treated her for dyspepsia;—have you treated her for biliousness? We put that down under the same head.

And this would bring on hysteria? We have frequently dyspepsia and hysteria conjointly. A little excitement is very likely to bring on hysteria. A trip to Sydney might bring on a fit of hysteria.

Have you ever heard, when you have attended at the Cottage Homes, Mrs. Gilmore, when excited, make use of obscene or profane or foul language? Not at any time. I have never heard Mrs. Gilmore make use of any vulgar expression whatever.

During the time you have known her, have you heard any well-founded reports against her want of sobriety? I make it a rule only to be guided by what I see myself.

When you have been there at night-time, she has been perfectly right? At no time have I seen Mrs. Gilmore in any condition that would lead you to suspect she had been drinking.

*Dr. Manning.*] How often have you been at the homes after 10 o'clock at night? As a rule, my visiting times are between 11 and 1 in the morning, from 3 to 6, and occasionally between 8 and half past 9.

You

You have never been after 10 at night? I may have been there once after 10, but not often.

*Dr. Goode.*] When Mrs. Gilmore suffered from these attacks did you advise her not to partake of stimulants of any sort? Yes.

*Mr. Montagu.*] Did you tell her she might take claret and water? I may have; I am not quite sure.

When you told her to avoid stimulants, you did not wish it to be inferred that she had been taking stimulants? Not at all. It was owing to her condition that she suffered from hysteria, and I recommended her not to take stimulants of any kind. I make it a rule in all cases of hysteria to recommend patients not to take stimulants.

[Witness withdrew.]

Rev. James M'Arthur examined:—

*Dr. Manning.*] You are a Church of England clergyman, residing at Parramatta? Yes.

And have the Cottage Homes within your parish or district? Yes.

Have you visited them frequently? Yes; it is my duty to visit them officially once a fortnight, but I am in the habit of going at least once a week.

How long have you been visiting them? One year and ten months.

Do you see the Matron on those occasions? Not always, but frequently.

You see the inmates? I visit the inmates.

Have complaints been made to you by the inmates at any time? No; I do not think I have heard any formal complaints.

As regards their treatment? No; I am certain I never heard any definite complaint.

Have any statements been made to you by the inmates with regard to the sobriety of the Matron? No.

Have you seen anything at any time to lead you to suppose that Mrs. Gilmore was not sober? Certainly not; never at any time.

Have you ever visited the institution in the evening? Yes, at all times.

What was the latest time? I cannot say exactly, but late at night—in the case of a person dying, for example. Perhaps about 10 o'clock at night.

Those have been rare occasions? Yes; I have not gone very often so late.

Did the charges made in the House ever reach your ears before? I have some difficulty in answering that question. You hear so many reports in Parramatta. It is such a gossiping place. I never attach any importance to what I hear.

I gather that some remarks of the kind have reached you? They may have; I cannot say yes or no. I attach no importance to what I hear in Parramatta in the shape of gossip.

Has anything come under your observation to lead you to suspect that any remarks you have heard had any foundation? Nothing in the shape of intemperance. In an institution like the Cottage Homes there will always be some grumblers—some dissatisfied persons—and, therefore, I attach no importance to what I hear. I have heard nothing definite, not more than is customary in the case of such an institution.

*Mr. Montagu.*] Having seen Mrs. Gilmore pretty frequently, have you always found her attentive and regular in her duties? I have always found her at her post.

You have never noticed any sign of her having been either at the time, or previously, under the influence of drink? Certainly not, at any time. Either directly or indirectly, I have not seen the slightest sign of it.

Have you ever heard her using obscene or foul language? No, I never heard of it until I read it in the papers. I have never received anything but politeness and civility when I have seen her, and I have never seen her anything but what was ladylike.

The complaints you heard were just the ordinary grumbling of the old people? Yes; and when you put the question that way, I do not mean to answer in a way to lead you to think I have heard anything definite at all—it has been mere indefinite grumbling.

*Dr. Manning.*] The remarks I spoke of with regard to intemperance I meant to apply to people outside, not the inmates? I never heard a word about intemperance until I saw it announced in the papers, either within the precincts of the Cottage Homes, or beyond.

I understand you have heard no remarks about Mrs. Gilmore being an intemperate person before these charges were made in the House? No; to the best of my recollection, I never heard a word, and most certainly amongst any indefinite whispers I may have heard, I never heard a whisper on the subject of intemperance.

[Witness withdrew.]

Dr. George Henry Phillips examined:—

*Dr. Manning.*] You are a medical practitioner at Parramatta? Yes.

How long have you been in practice here? Thirteen years.

*Mr. Montagu.*] I believe you used to visit the Cottage Homes prior to Dr. Violette? No; I visit for Dr. Violette when he is absent on leave.

Has that been on many occasions? A good many.

When was your last visit? On the 9th of August this year.

And for some considerable period prior to that? For some years when Dr. Violette has been on leave I have done his work.

From your personal observation, can you say whether you have ever noticed Mrs. Gilmore either under the influence of drink or apparently having been under the influence of drink? I have never seen any sign of it whatever when I have paid my visits. She has always been perfectly sober, and I have noticed no signs whatever of drink.

I suppose you would have gone in the morning? At different times in the day.

If she had been drunk over night I suppose you would have noticed something in her demeanour? Yes. I have never seen any signs of drink or of her suffering from drink when I paid the visits to the Cottage Homes.

Did

Did you ever attend Mrs. Gilmore professionally? I prescribed for her once when paying a visit. I think her child was one month or five weeks old. She was complaining of feeling weak, and I prescribed a tonic for her.

Did she tell you she was suffering from dyspepsia? No; simply debility after her confinement.

And the place, as far as you have seen, was always properly conducted? I never heard any complaint from the inmates.

I suppose you never heard any complaint from the inmates with regard to intemperance? They never made any complaint to me.

Did you ever hear any substantial reports in Parramatta concerning Mrs. Gilmore? I never take any notice of any report I hear in Parramatta.

There was nothing tangible of any kind? I never heard any charge; nothing that I should take notice of.

Nothing as regards habitual drunkenness? I never heard of it.

[Witness withdrew.]

Hugh Taylor examined:—

*Dr. Manning.*] You are the late Member of Parliament for Parramatta? Yes.

How long have you resided in Parramatta? Seventy-four years.

*Mr. Montagu.*] You know Mrs. Gilmore? Yes.

How many years have you known her? Between six and seven—since she came to Parramatta.

Have you been often to the Cottage Homes? Scores of times—morning, noon, and night. I take a great interest in the Cottage Homes, and was partly instrumental in their initiation.

I think you have been Mayor of Parramatta? Yes.

And you are still an alderman? Yes.

Have you had occasion to go to the homes officially as an alderman? Yes; about the drainage.

Where does that drainage run from? From the building outside.

From Mrs. Brown's premises? It did at one time; close to the fence.

Did you see Mrs. Gilmore every time you went there? Very nearly.

Did she appear to be conducting herself in a proper manner? Undoubtedly so.

Did she ever give you an idea she had been under the influence of drink, or suffering from the influence of drink? Not the slightest.

Can you safely say, from your personal observation, that Mrs. Gilmore was a person, in your opinion, not likely to be addicted to drink? Yes, I am certain. I heard the inmates complain of something about washing the floors, and they wanted boots, and when I made inquiries Mrs. Gilmore seemed very excited that they should make these charges, but on investigation I found it was the usual thing in all these institutions.

Did you ever hear her using foul or obscene language? No; decidedly not.

You said just now Mrs. Gilmore was excited? Yes; she is very excitable. When she is in the right, and these old people make complaints, she gets excitable, but in five minutes afterwards it is all over.

Her excitement goes down as quickly as it rises? Yes.

Have you seen Mrs. Gilmore returning from Sydney? Yes, when I have been returning from Parliament in the half-past 10 or 11 o'clock trains; but there has not been the slightest sign of drink upon her.

Where did you generally see her sitting? In a first-class carriage.

That would be in the carriage that comes straight through to Parramatta? There is the 11:30 train, where you get out at Granville and stand on the platform, and the carriage goes on to Parramatta after being shunted.

You need not necessarily change out of the carriage? Not now. There are Parramatta carriages in the Campbelltown train.

And you can go straight through from Sydney? Yes.

That has been so for some time past? Yes.

When you have come home on several occasions and seen Mrs. Gilmore in the carriage, has she been comporting herself all right? Yes. Sometimes she had her little son with her.

Never, at any time, did she give you the idea she was suffering from drink? No, never. My wife and daughter used to remark how well Mrs. Gilmore was conducting the places, and the old people used to say how well they were getting on.

*Dr. Manning.*] How often a week used you to see Mrs. Gilmore coming up in the train? Perhaps once a fortnight or three weeks. I did not always come in the same train. In the 10:30 or 11 o'clock train I have usually seen Mrs. Gilmore.

How long have you ceased being a Member of Parliament? Eighteen months.

Have you travelled much since that date? No.

You have not seen Mrs. Gilmore during the last eighteen months? No; only at my house. She used to come down on Government business.

On business? Yes.

At what time? Sometimes at 9 and sometimes at 10 o'clock.

You have not travelled home with her by train during the last eighteen months? No, I believe conscientiously there is no institution of the sort better conducted, except for her excitability and temper when the old people complained to her.

[Witness withdrew.]

Katherine Hutchinson examined:—

*Dr. Manning.*] What are you? A monthly nurse.

Residing in Parramatta? Yes.

*Mr. Montagu.*] You attended Mrs. Gilmore, did you not, in February, 1894? Yes; I went towards the end of February, and left on or about the 23rd March. Had

Had you been to the homes before that? I was there twice to see her before her confinement.  
Have you been there since February, 1894? Yes; I think three times altogether. I am positive in saying three times. I cannot give the exact dates.

Did you ever notice any signs of Mrs. Gilmore taking drink? No; none whatever. There was none kept in the house during the whole time I was there.

Did you ever hear Mrs. Gilmore using bad language? No.

[Witness withdrew.]

Thomas Kelly examined:—

*Dr. Manning.*] What are you? A butcher, carrying on business in Parramatta.

*Mr. Montagu.*] How long have you been residing in Parramatta? About ten or eleven years.

Do you frequently go to Sydney? Yes; until this last couple of months very frequently, coming home by the late train.

Do you know Mrs. Gilmore personally? Only by sight.

You know her to be the Matron of these homes? Yes.

You are not a personal friend of hers? No; I have never spoken to her.

On the occasions you have noticed her was she under the influence of drink? None of her actions ever showed that or pointed to anything in the shape of drink—far from that.

Have you ever noticed her ill in the train? No, never; in any shape or form.

When leaving town about 11.30? I think that was it; and earlier some nights.

During the last two years? Inside the last eleven months.

On all of those occasions she always appeared to be the same as on an ordinary occasion? Yes. There are not many people who get out of the late train—sometimes only one, two, or three, and you would notice particularly.

You have seen her get out at Parramatta? Yes; and change at Granville.

There is one carriage that comes right through from Sydney? Yes; on all the trains. They drop these carriages and the engine comes back and picks them up.

It is quite possible to get in at Sydney and come right up? Yes, as a rule the guard at the station walks along and asks whether you are for Parramatta, and tells you to get into the special carriages.

The probability is that a lady would get into one of the special carriages and remain there the whole time? Yes; if she were acquainted with the train.

That arrangement has existed for some time past? Yes; as long as I can remember in the half-past 11 from Sydney.

Can you tell us anything more about Mrs. Gilmore? No; nothing more.

Have you heard any substantial rumours before this affair was brought up in Parliament? None whatever. I never heard anybody say a bad word against Mrs. Gilmore. I never heard anything wrong against her.

[Witness withdrew.]

Joseph Wing examined:—

*Dr. Manning.*] What is your official position? Assistant Superintendent of the George-street Asylum.

Some time ago you were instructed to hold an inquiry with regard to Mrs. Gilmore's conduct? Yes.

Had you received any information before Mr. Maxted spoke to you as to her habits? No, sir.

Was that inquiry set in motion entirely by Mr. Maxted? Yes—in October, 1894.

You had heard no remarks as to her intemperate habits before that? No; I do not think so; not before that date.

Mr. Maxted asked you to make inquiries because of information he himself had received? Yes.

What was the result of your inquiry? I made inquiries. I heard of these reports from several neighbours, who told me of the quarrels at night between Mrs. Gilmore and her husband.

Or quarrels proceeding from that house? Of course they could not say who, except by the voice. They did not see who it was. They believed it was Mrs. Gilmore.

Was there anything said about bad language on this occasion? Yes; they said the language was bad sometimes.

Did they say it was obscene or blasphemous? No, only bad language, and I inferred they meant bad language for a woman to be using.

Did you report this to Mr. Maxted? I reported that the neighbours were not prepared to come forward to substantiate their statements as to drunkenness. They wished their names kept out of it, and were not prepared to substantiate the statements.

What did you report to Mr. Maxted about bad language? I am not sure that I reported that at all.

As regards drunkenness, you reported to him that you could not get any evidence to substantiate the statements—that the neighbours were not prepared to come forward? They were not prepared to have their names mixed up in the matter.

Did you make inquiries on any other occasion? In January, 1895, I made some more inquiries.

At whose instigation? The papers were handed back to me to make further inquiries, and I did not have an opportunity between October and January to make further inquiries.

The papers in this matter that had been dealt with in October, 1894, were handed back to you to make further inquiries in January? Yes; they were handed to me in the end of December.

With what result? That everything had been quiet. There had been no trouble, and that everything was going on satisfactorily, with the exception of one little quarrel which they themselves had reported at the head office—some private matter. Everything in connection with the homes had been going on satisfactorily.

The

The quarrels had been less frequent? Yes; so far as I could learn. There had been no further quarrels. A slight disturbance had taken place a week before I made the second inquiry, and they had reported the matter.

*Dr. Goode.*] Who were they? Mr. and Mrs. Gilmore.

*Dr. Manning.*] You are not certain that you reported what had been told you in regard to bad language that was heard from this house, to the head of your Department? No.

Either on the first or second occasion? No; I could not substantiate the statements. I held that I had not sufficient to go on to substantiate the matter, consequently it was no use making charges.

Did you not mention in your report anything about the matter? I mentioned that there had been quarrels.

You did not mention anything about language? I do not think I did.

You have come up occasionally with Mrs. Gilmore at night in the same train from Sydney? I have seen her at night.

How often? Not very often—at the outside two or three times.

Within what period? I have lived in Parramatta since May, 1894.

How often have you come back from town with Mrs. Gilmore? Not more than two or three times at night.

What condition has she been in? As far as I could judge she was the same as any other lady. I noticed nothing peculiar. I travelled in the same carriage. I have not spoken to her.

Have your duties led you to have communication with Mrs. Gilmore at other times within the last eighteen months? Yes; when I have inspected the Cottage Homes and been through there.

You have then found Mrs. Gilmore sober? Yes.

There has been no sign whatever of intoxication? Not the slightest.

That has been in the daytime? Yes.

The only occasions that you have seen Mrs. Gilmore at night is when you have come home in the train? Yes.

You have some official connection with the Cottage Homes? I used to be one of the inspectors.

At the present time have the two institutions no official relation? No, sir, none whatever.

Who does the clerical work and storekeeping? McGarvey, of Macquarie-street. Mr. Lake used to do it before McGarvey relieved him.

You said you reported the quarrelling? Yes.

You did not report the bad language? I do not think I did.

*Dr. Goode.*] Did you report that there were rumours of quarrelling, or that the quarrelling actually took place? That the neighbours stated that quarrelling took place, but they were not prepared to come forward and substantiate their statements. They did not wish their names mixed up in the matter.

*Mr. Montagu.*] Did you tell them you were there for the purpose of making an inquiry? I told them I had been sent up by Mr. Maxted to make an inquiry. I asked them to give me a written statement, and they would not do so.

Can you tell me the names of any person to whom you went? I went to Brown's, at the boarding-house.

Did Mrs. Brown make any statement to you? She called her daughter, and the daughter made a statement.

Mrs. Brown did not herself? No.

Is the daughter a young girl? A girl about 18 or 20 years of age.

She made some general statement? Yes; a general statement; she would not particularise anything.

And after that they said they would not come forward to substantiate their statements? They said they did not want their names mixed up in it.

It was principally the inmates of Brown's that you examined? Yes; they are quite close neighbours.

Did you go to Creasy's? No.

As to the allegations made with regard to Mrs. Gilmore being under the influence of drink—did anyone give you any particular dates as to when they saw her in that condition? Lord, the station-master, might have mentioned something. He said he had seen Mrs. Gilmore. He was the only one who made definite charges.

I suppose you took a lot of trouble to make inquiries? Yes; I did what I considered my duty in the matter.

Lord was the only one who made any definite statement? Yes; Lord was the principal one; so far as I could learn, if any quarrels took place in the house, the inmates were not sufferers by it. They were late at night, after the business of the day was over.

They were not so bad as to disturb the inmates? No; there were no complaints from the inmates.

Did you ask the inmates if they had heard any bad language? I asked the inmates. There was one man, I forget his name, who said that there were quarrels. He did not say anything about bad language.

You could not elicit from any of the inmates that bad language was used by Mrs. Gilmore? No; had I done so I should have reported it.

It was because you were unable to get anything substantial that you did not report upon it? I was not in a position to prove it. I have been connected with the Department for nine years, and I have never reported anything that I have had to take back.

In this case there were no reasonable grounds for your reporting? I reported the facts as far as I could—that there were quarrels; that the neighbours reported it.

That was the particular matter you investigated? I satisfied myself on that point, and I reported the matter.

That was the only matter on which you could get anything definite? That did not take place in the daytime.

*Dr. Manning.*] What did Lord tell you on the occasion you were making inquiries? He told me he had seen Mrs. Gilmore; he had to assist her out of the carriage, and assist to take her home.

Did you report that? I do not think I did. It was only his statement for it. I did not report that.

Did he mention that he had seen her intoxicated at other times? That he believed she was.

He did say he had seen her intoxicated on other occasions? Yes.

And

And you did not report this at all to Mr. Maxted? I did not report it, because he did not give me a written statement. He would not. He said he was willing to go before a Commission and state it. He would not give me a written statement.

When was this? About October, 1894. I have had nothing whatever to do with the Cottage Homes since January, 1895.

*Dr. Goode.*] When he objected to give you a written statement, he did not want what he said kept secret? No; he said he was prepared to go before any Commission.

*Mr. Montagu.*] Did he give you any substantial date when he assisted her home? No; he did not. He told me he had to do it. I think he said it was last month, that would be September, 1895.

He could not give you anything more definite? No.

Did you have a long conversation with him? No; not very long.

Where did you see him? At the station.

What were his duties at the time? Night station-master.

Did you make other inquiries at the time? No.

[Witness withdrew.]

Alfred William Green examined:—

*Dr. Manning.*] You are the Secretary to the Charitable Institutions? Yes.

*Mr. Montagu.*] You have known Mrs. Gilmore for some time? Ever since she has been in charge of the Cottage Homes.

In your official capacity you have made frequent visits there? Yes.

I suppose about once a week on an average? I have not seen Mrs. Gilmore more than three times a month.

Have you given notice when you were going? No.

Your visits have been paid without any warning? Yes.

Had you any difficulty in finding Mrs. Gilmore at her post? No.

Have the Cottage Homes been thoroughly well looked after by Mrs. Gilmore? The cottages are always in good order.

Have you ever noticed any sign of Mrs. Gilmore having been under the influence of drink, or recovering from the effects of drink? Never.

Did it ever strike you that Mrs. Gilmore was addicted to intemperance? Never. I have always thought Mrs. Gilmore was sober in every possible way.

She has been in charge about six years? Yes.

Was there any particular times when you made your visits? No; either in the mornings or evenings, when I could get away.

What would be your object in going there? To inspect the cottages.

Did you in the course of your inspection interview the inmates? Yes.

Did any of them complain to you that Mr. Gilmore had been addicted to drink? Never; except a man named Pilcher, who was sent out of the cottages some time ago. An inquiry was held, and his statements were proved to be incorrect. That is some years ago.

Pilcher is the father-in-law of Rutter? I do not know.

Was any complaint made about Mrs. Gilmore having used foul language? No; nor have I heard her using foul language.

You know her temperament? She is irritable to a degree.

When you say irritable to a degree, you do not mean she is in a constant state of irritation? No; she has frequently complained to me about her health. I have spoken to her about being irritable, and I have always put it down to ill-health. I know she has suffered a good deal. I have spoken to one or two of the doctors about it on several occasions.

Has there been any charge of ill-treatment or neglect by Mrs. Gilmore of the inmates? No; there have been minor complaints by these people about not having their little wants attended to at the right time, but after investigation I found they had nothing really to complain of. A person would complain about not getting clothes when I found clothes were not in the store. But really nothing of any consequence.

Is there anything you can tell us about Mrs. Gilmore herself in regard to these charges? What are the charges?

They are that she is habitually intoxicated, and in the habit of using foul language? As far as my experience goes, I have never found Mrs. Gilmore either to be addicted to drink or to the use of foul language.

When these charges were made in Parliament, was it a matter of surprise to you? I heard of the drink before, because we had an inquiry held, but we could get no evidence. We had two inspectors who made inquiries, neither of them could sheet the charge home. All we could do in regard to getting evidence was done, but we failed to get any evidence.

The charge must have arisen from some gossip without foundation? It had no foundation as far as we could find out.

*Dr. Manning.*] Did you have an opportunity of seeing Mr. Wing's report? Yes; I did.

As far as your memory goes, did he mention in that report that he had heard of quarrels and bad language in the house, and also that the night officer had stated that Mrs. Gilmore had been intoxicated? As far as I can remember he mentioned something about the night officer at Parramatta having stated that Mrs. Gilmore was under the influence of drink; but I do not remember anything about foul language.

In his evidence to us to-day he stated he did not mention what Lord had said? I do not remember whether it was in the report, or whether he spoke to me about the matter. The matter of this night officer saying Mrs. Gilmore was addicted to drink came to my knowledge from Mr. Wing, and as Mr. Wing could not find out anything about it, I put another officer on, Mr. Allen, to find out, but he could not sheet it home. I considered Mr. Wing's report unsatisfactory, there was nothing definite about it, and the other officer proved to my mind there was nothing in the statement.

No steps were taken by the Department, as far as you are aware, to make inquiries from the head of the police? I believe Mr. Allen interviewed the police, but we did not get a report from the police. We did not ask Mr. Fosbery to make any inquiries. You

You have been aware of the domestic troubles? Yes; I have spoken to Mrs. Gilmore about them myself, and advised her that it would be well for her husband to leave the house.

*Mr. Montagu.*] You are not sure whether Mr. Wing mentioned in his report about this conversation with Lord, or whether it came to you verbally? I think it was verbal. He could not make any report upon it, because he had not sufficient evidence. He told me he could not prove the charge. The night officer was the only man who had anything to say about it. I think I said I would take it out of his hands and get someone else to do it.

*Dr. Manning.*] Would it not have been a proper thing for him in making a confidential report of that kind to put down everything that came to his knowledge? I think it would. I was not satisfied with Mr. Wing's report when it was received. I said I would put another officer on or do it myself. I found fault with him for not sifting the thing to the bottom, and put on Mr. Allen to do the work.

*Mr. Montagu.*] I think Mr. Allen has reported that he saw Constable Dimond? He saw one policeman I know.

[Witness withdrew.]

John Robert Sanders examined:—

*Dr. Manning.*] What is your occupation? Compositor.

At the Government Printing Office? Yes; temporarily employed there.

Where do you reside? Cowper-street, Harris Park.

Do you know Mrs. Gilmore? Yes; since she has been Matron Superintendent of the Cottage Homes. I cannot say I know her except as the matron by passing by the place.

In going to and from home? Yes. When I have been out of work I might have passed her place eight to ten times a day.

*Mr. Montagu.*] How far do you live away from Mrs. Gilmore's? About 40 or 50 yards.

Have you been living there for long? For the last thirteen years.

You have seen Mrs. Gilmore pretty often? On an average, I might say five or six times a week.

Would that be in the morning or evening? At all times of the day.

Did you ever notice any disturbance going on at the cottage? Yes.

Did you ever notice Mrs. Gilmore in any but a strictly sober condition? No; I have never seen Mrs. Gilmore in any state of inebriation. I have only seen her in a fit and proper state, as a woman ought to be. I have never seen the slightest effects of drink upon her.

I suppose you would not come home late at night? In my business, I at times catch the half-past 10, and sometimes the 11 train.

Did you ever see Mrs. Gilmore in either of those trains? On two occasions I recollect seeing her. I cannot say whether it was the half-past 10 or 11. I recollect two occasions. I fancy it was more than that.

On those occasions, what condition did you notice Mrs. Gilmore to be in? As sober as anyone could possibly be. She passed me as I got to the top of the street, about 60 yards from the station. She bid me good night, and hurried down and went into her home. I was wondering at first who it was, it being rather dark, but when I saw the gate open I took it to be Mrs. Gilmore.

Did you see her get out of the train? No; I saw her go out of the station.

There was no difficulty about her getting home? Not on the occasions that I have seen her.

I suppose you have not been into the cottage at night-time? I have been into several of the cottages. I enjoy having a yarn with the old couples.

Have they ever made any complaint to you? No; I have never heard a word uttered by any of them regarding Mrs. Gilmore.

Can you give me any idea how long ago it is when you saw her on those two particular occasions? I fancy it was last November or December, as near as possible.

Towards the end of last year? Yes.

You were then in employment? I was in the employ of the Government at the time.

Are you in the employ of the Government now? Yes, temporarily.

You are pretty well acquainted with the different people living in the cottages? One or two.

Do you remember a man named Mau? I do.

He was an inmate? Yes.

Can you tell me anything about him? One evening I had occasion to send a parcel to the railway by my two little ones. As they were going back he happened to be outside on the footpath, and the children were running. When they got near he struck my little one right across the side of the cheek. The mark was long there. When I heard of it I saw Mrs. Gilmore. She instantly asked me to take the child to Dr. Violette. He examined her and said she would feel the force of the blow for some days. Mrs. Gilmore advised me to report it to Mr. Maxted, which I did. I got a reply from the office asking me to prosecute the man, but some four or five days having passed before I got the reply, I let the matter go. Mrs. Gilmore ordered the man inside, and said, "You beast, get inside." That was the only expression of the kind I ever heard Mrs. Gilmore use.

*Dr. Manning.*] Was that a blind man? No; he is not blind. I do not believe he is totally blind.

*Mr. Montagu.*] He is not totally blind? No; he gets about the town. I should not think he was totally blind.

He is an old man? He is over 60.

How do you know it was Mau who struck your child? I took my child's word. My wife was half-way up the street. The children were brought up to Mrs. Gilmore. Mrs. Gilmore had seen my wife before I saw her.

Your children told you it was Mau? They pointed him out to me.

Did you ascertain that his name was Mau? I heard it afterwards.

How old was the child that was struck? Between 6 and 7.

Did he ever give any reason why he struck the child? She had a little go-cart, and was making a noise going down the street. It might have irritated the man, but he had no right to strike the child.

[Witness withdrew.]

Charles Mau examined :—

*Dr. Manning.*] Are you quite blind? Nearly; I can see you, but there is like a heavy fog between me and you.

How long have you been an inmate of the Cottage Homes? Seven years on the 12th of April next.

You are living there with your wife? Yes.

Did you a considerable time ago make some charge against the matron of not being sober? No, sir! I never did. I never made any charge against the matron for that.

What charge was it? If I made a charge it was for not being civil—having no manners—not treating people with respect, but never for drunkenness.

Or indulgence in stimulants? No; I never.

You never made any charge of that kind? No; because I never had a chance of seeing her.

Have you ever heard of any charge of that kind made against her? Well, I have heard so many things outside, but most of the information I get from the papers.

You read the papers a good deal? Yes.

Do you remember any inquiry being made of you by Mr. Maxted or anybody else on this subject? I remember Mr. Allen, the Inspector, came a good while ago with regard to a quarrel between Mr. Gilmore and his wife, and asked me whether I knew anything about it, or whether I had heard anything about it. I gave Mr. Allen my answer then.

What did you tell him? I told him I did not hear any quarrel. I was not surprised that it had been, because I knew of a quarrel. I did not know any quarrel on that occasion that he wanted to know.

Is there any other blind person in the homes? No, sir.

*Mr. Montagu.*] Did you ever threaten Mrs. Gilmore at any time? No.

Did you ever take up an axe? No; I have not got an axe in my place.

Did you ever go up to Mrs. Gilmore's house? I did not.

You are not the best-tempered man in the world? I am the best-tempered man in the world.

You are very irritable? No; unless people annoy me or insult me. I am a respectable man, and as such I mean to be treated.

You do get annoyed if people worry you? They have themselves to blame.

They have to take the consequences if they do irritate you? I have not killed anybody yet.

Leon Chesshur examined :—

*Dr. Manning.*] What is your occupation? Polisher.

At a furniture warehouse? Yes.

You are employed with Mr. Gould? Yes.

You have been past the Cottage Homes on several occasions at night? Yes.

Have you ever heard any disturbance there? Yes.

In what part of the Cottage Homes was it? At the top, just below Mrs. Creasy's—at the matron's house.

What was it you heard? One night when passing with Mr. Gould I heard one thing, "I will cut your b——y throat."

Whose voice was it you heard? It was Mrs. Gilmore's.

How do you know? Only by her voice. I know her voice. I had heard it before.

How long have you known Mrs. Gilmore? I do not know her at all except by sight. I have been in Parramatta eighteen months now.

What opportunities have you had of hearing Mrs. Gilmore speak before? I have heard her speaking to Dr. Violette.

It has been merely while you were passing that you heard her;—she has never spoken to you? No.

You believe it was Mrs. Gilmore on the occasion you heard those words? I could not swear it.

But you believe it? Yes.

What time of the night was it? I came from the club-room between 9 and 10, as near as I remember.

Did you only hear such words on one occasion, or more than once? Afterwards I have heard it. I was riding down on a bicycle with Mr. Gould, but I could not see what it was.

You heard an altercation in the house on that occasion? Not in the house; it was outside.

Was the first time outside? Yes; outside.

Whereabouts? There is a little wood-shed there; it was towards that.

Did you hear anybody else talking besides;—was there more than one voice? I did not hear anybody else. I only heard those words.

On the second occasion were there two voices or one? I could not say if there were two.

Were the voices loud on the second occasion? No; I could not say that they were loud.

They were sufficient for you in the street to hear them? Sufficient for me to hear riding past.

*Mr. Montagu.*] Was it before or after the occasion on which you heard that language that you rode past on the bicycle? After.

How long after? I could not say.

Was it this year or last? It was this year.

There is no doubt about that? No doubt.

I suppose these two occurrences were within a week or two? About that.

Was it before or after Easter? I could not say. I did not take that notice. I did not think I would be called here.

What age are you? Nineteen.

What is this club that you belong to? It is a bicycle club.

You are living with Gould, are you not? Yes.

You are quite sure the affair occurred this year? I could not swear it was this year or the end of last year.

You said you were certain it was this year? I could not swear it.

It might have been two years ago? No; I have not been in Parramatta two years.

It might have been six months ago? It might have.

Have

Have you had any conversation with Mr. Gould about this? Yes; when he came home last night and gave me the letter he said, "The only thing for you to do is to tell the truth, and not to say more than what you can really say with truth."

Did you ever have a conversation with anybody about this expression of Mrs. Gilmore's? I might have spoken to Mr. Gould.

You have told Mr. Gould? Mr. Gould was with me. I have spoken of it to Mrs. Gould. We both told Mrs. Gould when we came home.

You, of course, spoke about it last night when you got the letter? Yes.

I suppose you refreshed your memory about the time you heard the bad language? We had a talk about it.

You had a talk with Mr. Gould to compare notes, so that you would not give any wrong evidence? Yes. There was another time I saw Mrs. Gilmore. Someone, I would not say whether it was Lord, the night officer at Granville now (then at Parramatta), was bringing her home. She was the worse for liquor. She did not want to go home; she wanted to go back again. She swore, and said, "Let me go back; I am not going home."

*Dr. Manning.*] Can you say when that was? No; I cannot.

You saw Lord taking her home? I think it was Lord.

What time was it? I could not say for certain; perhaps between 10 and 11 o'clock.

Why do you think it was Lord? Because I have met Lord at Granville. He has whiskers, and as much as I could notice I think it was Lord.

Cannot you fix how long ago it is when this occurred? No; I cannot. I walked from the top of the hill. They were up by Mrs. Creasy's then. I walked behind them.

Watching them? Yes.

*Dr. Goode.*] From the railway station? No; from Mrs. Creasy's.

*Dr. Manning.*] Where did he take her to? He took her to Mrs. Gilmore's gate.

In what way was he holding her? I could not see which way he was holding her.

Was he supporting her? Yes.

With one hand or both? I think he had an arm round her, and one catching her other hand as near as I can say.

Did you hear what was said? I forget what was said. I think it was—but I would not swear it—Shall I spit it out?

Yes; what was said? "F—k you, let me go back; I am not going home yet."

*Mr. Montagu.*] You said just now that this language was mentioned to Mrs. Gould when you got home;—did you or Mr. Gould mention it? I could not say. I think we both chipped in.

You saw a person whom you took to be Mrs. Gilmore near the wood-shed;—where were you standing? I was standing just near the picket fence on the footpath. We came down, looking over the picket fence.

You and Gould? Yes.

How long were you looking over this fence? I could not say how long. We did not stay long. There was a lady coming down (Mrs. Ardwick), and Mr. Gould is not good friends with her. He said, "Here's Mrs. Ardwick coming down; let us go on," and we went on.

Do you know Lord pretty well? No, I do not.

How long have you been living at Gould's? About eighteen months.

That is the time you came to Parramatta? I came straight from school to Parramatta.

Have you seen Mr. O'Reilly about this? No.

Mr. Gould has? Mr. Gould told me Mr. O'Reilly had seen him.

When did he tell you that? Last night.

Was that the first time he told you Mr. O'Reilly had seen him? I think he told me previously to that, and Mr. O'Reilly told him to write in some statements.

When did he tell you that? I could not say—about a week ago.

Had Gould been with you to the club when you heard this language? Yes.

Does he belong to the club? Yes.

You had been there all the evening? From about half-past 7.

This was between 10 and 11? It was between 9 and 10.

You cannot give us an idea how long ago it was? No; I cannot. I did not take that notice.

Is Gould employed at the cottage now? No.

Has he ever done work there? Yes; he has; from what he told me.

You have never done any work there? No.

How many times have you really seen Mrs. Gilmore? I could not say.

Have you seen her a dozen times in your life? I could not say. I have been up and down the street this last eighteen months.

Have you seen her every day, week, or month? I cannot say.

Did you have to climb up the fence? No; we looked over.

You cannot see the wood-house from the fence? Yes; you can.

Was it a dark night? I could not say.

You want us to understand that you cannot tell us whether it was a dark night, and yet you could distinctly see Mrs. Gilmore? I did not say I could see Mrs. Gilmore. I said I heard her voice, and I thought it was Mrs. Gilmore from what I had heard before.

Where did you say you heard the voice coming from? From the wood-shed.

That is some way away from the house? It is not far away—it is only just at the side.

Might it not have come from the cottage? No; it did not.

There was no answer to the remarks? The figure was outside.

You saw the figure? I did not see a figure.

You did not see a figure—what do you mean? I saw something. I could not say it was Mrs. Gilmore. I asked you whether you could see a figure? You asked me whether I could see her figure—I thought you meant her waist, or something like that.

Did you see any person there? I did see a person.

Was that person making use of that expression apparently to someone? I cannot say.

She might have been addressing the moon for all you know? She might have.

No one answered her? I did not hear.

How many minutes were you standing there? I could not say—we were not standing long.

You just put your head over the fence and you heard this expression? We heard it from the high fence first. We walked down to the picket fence and saw a figure.

Are there two fences? Yes; a high fence and a low one.

You were not looking over the fence when you heard this expression used? No; I came down to the fence, and had a look over.

When the expression was used you were not looking over the fence at all? No; I was coming down the pathway.

And when you got to the fence you looked over? Yes.

Did you hear any more language after you looked over? No.

You have made no written statement about this to anyone? No; no written statement.

Are you employed by Gould? Yes.

Regularly? Yes; as soon as I left school, eighteen months ago.

On a salary? Yes.

Is his place a workshop or warehouse? It is a workshop.

In the town? At the back of his house.

Are there any others employed besides yourself? Yes.

There are young men? No; there are no young men.

Women? No; elderly men.

You said that on this occasion that Lord was taking Mrs. Gilmore home, she was under the influence of liquor, did you not? Yes.

It was late at night? Between 10 and 11.

How did you fix the times—you saw something one night between 9 and 10, and another night between 10 and 11? I always made it a practice to get home between half-past 9 and 10. This night I was later.

You cannot tell us when it was? No.

How far were you away? I was quite close, as close as what I am from the table here.

Why do you assume she was under the influence of drink? Because she was staggering, and this man was helping her.

That is your only reason? Yes.

You did not say before that she appeared to be drunk—you said she was under the influence of liquor; as a matter of fact, you did not know whether she was or was not? She seemed devilish like it.

Do you know of your own knowledge that she was drunk? Yes; I know she was.

I suppose you saw her taking the liquor? No.

You say she was under the influence of drink because she was staggering? She was staggering, and he was helping her along. I heard her make that expression or something like it.

You do not remember that expression now? I heard her use some expression.

I suppose you hear a good deal of bad language? Yes; I use it myself sometimes.

You do not know what it was exactly that she said, and you assume she was drunk because she was staggering? [No answer.]

*Dr. Manning.* From what you saw you assumed that she was intoxicated? Yes.

You have no proof that she was intoxicated? Yes.

From what you saw you thought so? Yes.

That is what you mean? Yes.

[Witness withdrew.]

Constable Charles Davis examined:—

*Dr. Manning.* You are a senior-constable in the Police Force? Yes.

Stationed at Parramatta? Yes, for the last nine months.

*Mr. Montagu.* How long have you been here? I came here on the 28th January last.

You know Mrs. Gilmore by sight? I did not know her until I saw her just now.

Now you recollect her? Yes, I have seen her on several occasions. I live in Marion-street. I have occasion to pass the Cottage Homes two or three times a day. I never knew her name was Mrs. Gilmore.

Having seen her to-day, you recollect certain facts in connection with her? Although I can say I have seen the lady at different times, she always appeared as any other person.

Have your duties taken you at all to the railway platform? My duty is to visit the trains. I repeatedly go to the railway station at different hours of the evening until the last train.

Have you on those late trains seen Mrs. Gilmore coming home? I recognise her now. I have seen her.

On this occasion, did she appear to you to be intoxicated? Not at all. I have seen her walk by and give her ticket up the same as any other passenger.

How long have you been in the force? Fourteen years.

In your experience, you know it is quite possible for officers of the force to be under a misapprehension that a person has been intoxicated, when it has turned out they were seriously ill? I have not had any instance myself, but I have heard of such cases.

*Dr. Manning.* How often have you seen Mrs. Gilmore coming home at night? I have a recollection of having seen the lady five or six times.

In how long? During the past nine months. I pass the Cottage Homes at 9 o'clock in the morning, and again at mid-day, and then again between half-past 9 and 10.

You did not know her till to-day? I had never taken any particular notice, and did not know her until to-day.

You do not mean to say you have seen Mrs. Gilmore every time you have passed the houses? No.

When you have passed by the houses you have never heard any disturbance? No, I have never heard anything to attract my notice to look in.

You have not seen Mrs. Gilmore when passing by the homes? I did not know her until I recognised her to-day as the person I have seen several times on the platform.

[Witness withdrew.]

Mrs.

Mrs. Katherine Hill examined :—

*Dr. Manning.*] Are you a resident of Parramatta? No; Neutral Bay.

*Mr. Montagu.*] Are you married? Yes.

And living with your husband? Yes.

What is Mr. Hill? A mining expert.

You have known Mrs. Gilmore for some time? Yes, I have.

How long have you known her? About four years or more.

Is she in the habit of visiting you in Neutral Bay? Yes; frequently.

Spending the evening? Yes.

And has she been doing so for the past eighteen months? Yes.

Has she ever led you to believe that she has been addicted to over-indulgence in liquor? Not at all; on the contrary, when she has dined at my house she has always taken water and tea in preference to wine.

Although you have had wine on the table? Yes, she has always refused it; she has never taken wine at the table.

Have you asked her to take wine? Yes, I have.

Has she given you any reason for her refusal? She said it did not agree with her, she preferred water or tea.

How long ago did she see you last? Quite recently—a few weeks ago.

About how late would she leave your house? About a quarter to 9 or a quarter-past 9.

She would have to come from Neutral Bay? Yes; the boats go at the quarter to the hour and the quarter past. That has been the latest she has left my house.

You are quite certain that during the whole time you have known her she has never at any time given indication of over-indulgence in drink? No; she is very excitable. She has sometimes come and seemed very excitable, very troubled; and speaking about her troubles she would get excited.

Even then would she take anything to drink? No.

Have you ever been out to the Cottage Homes? No.

When she has left you at night I suppose she had told you she was going home? Yes; to catch the next train from Sydney to Parramatta.

She always left you in a perfectly proper state? Yes.

Did you ever hear her make use of any foul language? No, never.

I suppose you thought she was the last person who would? Yes.

*Dr. Manning.*] How often did Mrs. Gilmore come to see you? Several times. I have met her in town, and at other times she has come over to see me.

Once a week? Not always once a week; perhaps once a month when it was my day at home, and sometimes at other times.

Once a month? Perhaps once a month, or it might be two or three times; and then two or three months without coming at all.

*Mr. Montagu.*] At irregular intervals? Yes.

[Witness withdrew.]

Michael Joseph Halligan examined :—

*Dr. Manning.*] You are employed in some public department? Yes; the Railway Department in Sydney.

In what position? Clerk in the Outdoor Superintendent's Office.

*Mr. Montagu.*] You live somewhere near to the Cottage Homes? The next house to the homes on the other side.

You have to pass Mrs. Gilmore's house on the way to the station? I have passed on an average of six times a day the last eighteen months.

Where are you stationed? My occupation is in Sydney. I travel from Parramatta, and then home at night. I then go out with messages, and take a stroll in the evening.

How long have you been living there? Eight months in the present place. Previous to that I frequently passed there visiting a friend's house.

Have you ever heard any quarrelling there, or bad language used by Mrs. Gilmore? From my observation I should form an opinion that Mrs. Gilmore lived a very secluded life. What made me so observant was that before I lived there I heard these rumours, and out of curiosity more than anything else I paid attention to that more than any other dwelling. I often heard my wife make the remark that the rumours must have been unfounded.

*Dr. Manning.*] What rumours? The rumours came from an old lady. I did not take much notice of them.

What was their effect? You could make anything out of the rumours. Their effect was that Mrs. Gilmore had been drinking. I would not say definitely what was meant.

You heard these rumours more than nine months ago? Yes.

Were there any other rumours? I did not pay much attention at the time. I took it as mere gossip.

There were other rumours then? On one occasion this woman said the matron was not a good woman. I remember that distinctly. It was said in the presence of my wife. The lady, I understand, visited the old people at the Cottage Homes. I live in her house, that is how she came to tell me.

*Mr. Montagu.*] Who is this lady? Mrs. Ireland, living in Hunter-street.

*Dr. Manning.*] You had heard these rumours and paid particular attention in passing this house, and you came to the conclusion that they were not correct, and you found the place was quiet, and there was no disturbance there? Exactly so; I have often made the remark to my wife that there must be no foundation for them. As a matter of fact, we never saw the matron. I did not know Mrs. Gilmore until I saw her outside to day. I thought I surely must have heard something of the disturbances if they were so frequent.

*Mr. Montagu.*] Did you say you were living in this Mrs. Ireland's house? Yes, renting the house from her.

You

You said she visited the old people? She is rather a peculiar old lady, and I did not pay much attention to what she said. She visited the old couples; I very often heard her speaking about them.

Mrs. Ireland used to get information from these old people? I did not ask.

She told you she visited the old people? I knew from what she said.

[Witness withdrew.]

Mrs. Mary Inglis examined:—

*Dr. Manning.*] You reside in Parramatta? Yes.

How long have you lived here? Five years.

*Mr. Montagu.*] You are a widow? Yes, of the late Rev. Mr. Inglis, Presbyterian clergyman. We lived for the first year next to Mrs. Creasy's house, near to the homes.

*Dr. Manning.*] Four years ago? Yes.

*Mr. Montagu.*] Do you remember seeing Mrs. Gilmore during that time? The place was very open then. There was a kind of wire railing there, and we saw Mrs. Gilmore at all times. My children were in and out of the homes. I have not seen Mrs. Gilmore much lately.

Did she ever give you the appearance of a lady who drank? No, never.

Did you ever hear her using strong or bad language? Never.

Did you ever notice her excited? I should say she was an excitable woman, but I never had any experience of it. There was never any disturbance while we were there.

Then you moved? We came down here.

Since then have you been to the homes at all? Once or twice, and Mrs. Gilmore was at our house after my husband died. I came out in the train with her a few weeks ago.

Was that in the evening? I fancy we got into the train that gets in about 7 o'clock. I sat and talked to her in the train.

Was she all right then? Yes. I detect the smell of drink pretty quickly. She was always very kind to the old people.

She seemed to take a great interest in her work? Yes.

You have never heard of any charges made against her? No, and I was surprised to see them.

[Witness withdrew.]

Margaret Creasy examined:—

*Dr. Manning.*] You reside in Parramatta? Yes, for the last twenty-seven years.

Where are you living now? In the house I had built close to the Cottage Homes.

How long have you been living there? Eight years last March.

You have been living there ever since? I let it for twelve months after I had been there three years; then I let it again; but I have been back in the house during the last eighteen months.

You have been living for eighteen months in the house near the Cottage Homes? Yes.

*Mr. Montagu.*] From your house you can see into Mrs. Gilmore's, can you not? Yes, I could; but now there is a fence. I can hear and see from the road.

Until the fence was up you could see into the house? Yes.

Have you seen Mrs. Gilmore very often during the last eighteen months? Yes; I saw her when she first came to Parramatta. She stayed at my house. She got married from my place.

You have had ample opportunities of observing Mrs. Gilmore? Certainly I have.

Have you ever noticed her at any time under the influence of liquor? Never. I have seen her take a glass of wine or a glass of ale in the evening in my house, but never the worse for drink. I have seen her pass my place, but not very often, because I do not think she is a person who goes out very much.

You know she is very often at home? She is—looking after the place. She never interferes with any of the neighbours or ever troubles me. If passing by or in the garden she would speak to me, or while walking up and down with the children.

Have you ever seen her at night-time? Yes, I have sometimes. When the children have been laid up with sickness, I have walked in and found her nursing her child.

Late at night? Yes.

I suppose you have always found Mrs. Gilmore in exactly the same condition as usual? I have.

There is not the slightest doubt about that? No.

Have you ever heard Mrs. Gilmore make use of foul language? I have heard her speak pretty loudly, which I think she is accustomed to.

Have you heard foul language? No; I would not call it foul language.

Have you ever heard her use wicked language? No.

Or filthy language? No, not exactly filthy or dirty. I have been down in the yard very often and have heard Mrs. Gilmore speaking—she speaks very loudly—but I have heard nothing out of the way.

I take it you are at home a good deal? I am at home pretty well every day.

Have you people living with you? I have boarders.

And it is necessary for you to be at home? Yes.

If Mrs. Gilmore had been making use of bad language, you would have been the first to notice it? I would.

You would have been in a position to have heard it? Yes.

And you would have recollected it? Yes.

*Dr. Manning.*] The back of the house adjoins yours? Yes, there is just a galvanised fence dividing. You could look in almost.

Have you heard quarrels in the house? I have heard quarrels sometimes.

Those were the occasions on which you have heard the loud language? Yes; perhaps when I have been amongst the poultry I would hear it.

That language has not been bad language? Not extra bad.

Has it been bad at all? I would not remember what it was.

It was nothing to attract your attention? No.

[Witness withdrew.]

Mary

Mary Sheady examined :—

*Dr. Manning.*] You are a resident of Parramatta? Yes; I have resided here for thirty years. Where are you living now? In Cowper-street—about five houses from, and in the same street as, the Cottage Homes.

*Mr. Montagu.*] You know Mrs. Gilmore? Yes. I met Mrs. Gilmore just before she was married at Mrs. Creasy's.

Have you visited the homes much? Yes, I visited the old couples frequently. A few years ago I used to visit them more.

But during the last five years you have frequently visited the old couples? Yes.

Have you ever heard any complaint from them against Mrs. Gilmore using bad language, or of ever suffering from the effects of drink or being intoxicated? Never. I have been speaking to the old couples and they say they are better off there than ever before in their life. I never heard one complain against Mrs. Gilmore.

During the time she has been in charge of the Cottage Homes? No.

Have you seen Mrs. Gilmore herself on those visits? Occasionally passing.

You have no intimate acquaintance with Mrs. Gilmore? I have been twice in her house. Mrs. Gilmore was never in my house. She always seems to me to be attending to her business.

You have seen nothing to show that Mrs. Gilmore has been indulging in drink? No. I keep gentlemen boarders, and they pass that place at all hours of the day and night, and they have told me they never have heard Mrs. Gilmore's voice or saw anything wrong. I have asked them particularly. Some of them come by all trains at night, and they think it very strange if anything took place and they did not see it.

[Witness withdrew.]

Mrs. Lily Le Jeune examined :—

*Dr. Manning.*] Are you living in Parramatta? Yes.

Whereabouts? At the Macquarie-street Asylum.

You are an official of that place? I am the sub-matron at that asylum.

*Mr. Montagu.*] You know Mrs. Gilmore, I think? Yes.

How long have you been sub-matron? Five years.

You have known Mrs. Gilmore during the last five years? Yes.

Have you ever come home in the evening with Mrs. Gilmore from Sydney? I have.

During the last eighteen months? Yes.

You have been fellow-passengers? Yes; in the same carriage.

Have you ever noticed her at any time under the influence of drink in any way? Certainly not. I have met Mrs. Gilmore at the railway-station, and sat with her all the way.

Would that be after the theatre? Yes; by the late train.

When you have been visiting in town? Yes. I generally have certain days off from the institution, and sometimes I remain until the late train.

Have you been over the cottages? At one time I was over the cottages, when Mrs. Gilmore's son was ill. That is the only time.

You know personally that Mrs. Gilmore was not drunk when you saw her coming home in the train? Yes.

That is frequently during the last eighteen months? Yes.

*Dr. Manning.*] Three or four times at the least.

*Mr. Montagu.*] Do you get leave regularly? Two days a month.

One of those two days you go to Sydney? I always go to Sydney, to see my friends. I know very few people in Parramatta.

[Witness withdrew.]

[The Board met at the School of Arts, Parramatta, on Monday, the 28th October, but in consequence of the unavoidable absence of Mr. Montagu adjourned until Thursday, the 31st instant.]

#### THURSDAY, 31 OCTOBER, 1895.

The Board met at the School of Arts, Parramatta, at 10 a.m.

*Present* :—FREDERIC NORFON MANNING, M.D., Chairman; WILLIAM HENRY GOODE, M.D.

Dowell Phillip O'Reilly, M.P., examined :—

*Dr. Manning.*] You are the Member of the Legislative Assembly for Parramatta? Yes.

You have handed to the Board certain papers in connection with the inquiry now being held? Yes.

These contain statements made to you in reference to certain charges? Yes.

And you have also handed to the Board a list of witnesses whom you suggested might be examined to give the Board information on the subject? Yes.

Have you any personal knowledge of the subject of these charges? Absolutely none whatever.

Neither as regards the charge of intoxication nor that of the use of bad language? None whatever.

Have you ever visited the Cottage Homes? On one occasion, about two months after the 1894 election, in company with Mr. Sydney Maxted—an official visit, I may add—and I think on two occasions subsequently I visited an old couple from Newcastle of the name of Donkin.

At the homes? Yes; in one of the cottages.

Did you see Mrs. Gilmore on the first occasion? Yes.

And on the other occasions? I did not see her.

How often have you seen Mrs. Gilmore? The first occasion was on the official visit, and on last Monday I saw Mrs. Gilmore in this room.

When

When you went to the Cottage Homes on that official visit did you look round the homes? I went through the majority of the cottages.

Did you find them all in good order? In excellent order.

And you were generally satisfied with their management and order? Everything was in tip-top order.

When did you first hear that Mrs. Gilmore drank? I heard rumours of it before I was elected to Parliament.

On the occasion of the election in 1894? Yes, before that. The election was in July, 1894.

When did these rumours take more definite shape? They have been gradually accumulating, especially since I have held the responsible position in the town that I have. I presume people felt bound to make some direct representations to me.

Can you inform us who first gave you information? No, I could not inform you of that. The rumours were so broadly distributed that I could not tell you that.

*Hansard* shows us that you first made these charges in Parliament on the 17th September last? Yes.

At that time what information had you? Sufficient information to make the charges on.

Sufficient to convince you that you were justified in making the charges? Amply.

The evidence that you submitted to us was procured subsequently to that? In the majority of cases I think so.

The written statements were all subsequent to that date? Yes.

I understand that you had information that you considered justified you in making these charges, but a good deal of the evidence you collected afterwards? That is so. When you say evidence, you mean documentary evidence?

Yes; at the time you made the charges had you seen any of the witnesses from whom you got evidence afterwards? Yes.

In obtaining this evidence, had you to press the people to give it? On the contrary, I said I had a duty to perform, and so had they. In every case I went to these people and said, "I am taking the initiative in this matter, and you in your lesser position have the same responsibility to act that I have in mine." I must say that in every case they recognised the position and gave me the statement of what they knew in this matter.

In all these cases then it was not volunteered? The documentary evidence was in no case volunteered. In every case I demanded it for my own security.

Having already made the charges and wishing to obtain the evidence so as to justify what you had already said? Wishing to have such documentary evidence to place in the hands of a Board such as this.

Do you know anything of a man named Ormiston? Yes.

Has he communicated with you in regard to these charges? He came to see me on one occasion; but as far as I recollect he never alluded to these charges.

Have you heard anything in reference to these charges from a man named Corcoran? Nothing in regard to these charges.

Or from a man named Brackenbury? I never heard the man's name before. Corcoran and Ormiston came to see me months ago. They had some grievance against the Charities Department. I did not like the cut of the men. They brought me papers, which I looked through. I saw a barrister who was interested in this case on their behalf. I disliked the look of the whole thing, and returned the barrister their papers. They have not had a shred of influence on me in this action.

They have given you no information in regard to these charges? Absolutely none. I must be very careful in this. Absolutely none that I have acted on. I do not know whether their appeals said that Mrs. Gilmore had been guilty of intemperance or not. Absolutely no evidence or statement upon which I have placed any credence whatever.

Of course you were aware that Ormiston and Corcoran said they had a grievance against the Department? Well aware of that.

And that an inquiry was held, and Mr. O'Malley Clarke spoke of their charges as wicked inventions? I recollect they told me that.

Have you had any communication with a man named Meads? Yes. There again I must be careful. He has had communication with me; I have not had communication with Meads. He took the initiative.

Has he given you information at all in regard to these charges? He has given me no information; he has never alluded to these charges at all. I have never seen or communicated with him since I made these charges. He came to see me at my house. I cannot prevent people from calling to see me.

You quite see, Mr. O'Reilly, why we are asking all this? Yes. He came to see me upon some departmental matter outside and unconnected with this inquiry.

Are you aware that he is now suspended and recommended for dismissal? I am not aware that this Meads is suspended.

Have you seen Mr. Wing, an officer of the Charities Department? On several occasions.

Have you ever seen him in connection with this matter? Not to my knowledge.

Did you ask him if he knew anything about Mrs. Gilmore drinking, and did he not tell you he had been appointed by Mr. Maxted to inquire, but could find no evidence with regard to it? I have no recollection of any such statements.

Did you get any information from the Police Force before you did so officially through the Colonial Secretary? I was aware that the police knew of these facts through third persons, but the first official information, which I have not yet seen, was forwarded to Mr. Brunker, through the official routine, by the Inspector-General's request.

These papers were not forwarded to you? I have never seen these papers, nor received any statement from the police whatever.

Have you employed anybody to collect evidence? No one.

Nobody whatever? No.

The question is put to me to ask whether you have ever offered any rewards to people to supply you with information to enable you, as it is said, to help you to kill Mr. Maxted in this inquiry? Do you feel qualified in asking that question?

I think it is advisable to do so? I should never do anything of the sort.

I am not wanting to impugn your motives in any shape or form. I am only giving you the opportunity of saying that you have not? The idea never occurred to me before.

*Mr. Montagu.*] You said just now that you had no written statements prior to the 17th September, when you made the speech in the House;—is that so? Yes.

I may take it that this speech on the 17th September was upon verbal statements given by various people about the district? That is so.

Do you not consider in making a charge of this kind against Mrs. Gilmore on mere verbal statements that you were acting somewhat in advance of your privileges? That is merely for me to decide.

As a matter of fact, you did so in that speech;—you are here to advance nothing you cannot support? No.

And nothing you cannot challenge a trial upon? Nothing.

And you made that statement not having one single bit of written proof? I had evidence that I could rely upon as much as if it were in black and white.

Prior to making that speech, how long did you take to make those inquiries? I first heard the rumour before my first election.

I understand that you have been following up these rumours since your first election? I never said so. They may have been following me up. There is a considerable difference.

Would you be surprised to learn that gentlemen of long residence in Parramatta have given evidence here that they have never heard such rumours? I would not be surprised that 5,000 respectable residents of Sydney never saw Makin poisoning babies. It counts nothing against one creditable witness who saw it.

Will you kindly give us the names of some of the creditable witnesses in this matter? You have them on paper there. I have called no witnesses whose word I would not credit, to the best of my knowledge.

From your intimate knowledge of them, or from their official position? I do not place much credence on any man from his official position.

From your intimate knowledge then? More or less intimate knowledge. I place credence on the word of any man who is prepared to give me a signed statement, and to substantiate it in a Court of Justice if necessary.

Did you ask these people before you made that speech on the 17th September if they would be prepared to sign a statement? I never said so.

First of all you tell us you did not get a written statement before the 17th September, now you say you were willing to take these people's word before they would be prepared to make a written statement? There is a grammatical difference.

I simply want to know how it was that you were prepared in the House to state what you did? I have already stated that the word of these men—I do not say all these witnesses, but certain of them—was quite sufficient for me to go upon and stake my reputation. You know you can find witnesses like that.

Were they people you know personally or did you take their word on account of their official position? Some of them I know personally, all of them I trusted sufficiently to speak on their evidence and act upon their evidence. As I have already stated there was a constantly accumulating flow of evidence, still some of that I did not hear of until after that first speech.

You placed your reliance upon those people's statements not knowing whether they were willing to make written statements? I never knew whether they were willing or not.

You did not ask them? I did not.

Or they did not state to you they were prepared to make written statements? No.

Did not witnesses tell you, as a matter of fact, they did not want to be mixed up in the matter when you asked them for written statements? So far as I can recollect, not one witness whose name I have given expressed any such feeling. Of course I knew, in a way, that they would be disinclined; but if you mean as an argument against being implicated in the matter, I say no.

They said that they did not want to be mixed up in the matter? I never asked them. I did not want to be mixed up in the matter myself.

We have it in evidence that some of the witnesses say distinctly that they did not want to be mixed up in the matter? It is such a trivial thing to me I cannot recollect it.

And that you demanded it from them, and said if they knew anything about this they were bound to give you a written statement. Some of them did demur? I would not have cared whether they demurred or not as a question of duty.

And you forcibly reminded them of their duty?—

*Dr. Manning.*] We will take Mr. O'Reilly's statement with regard to that; he was definite in what his actions were.

*Mr. Montagu.*] Did not Meads have a conversation with you in the train on one occasion;—did you not see him in the train and have a conversation with him about steps being taken to have him dismissed? I have no recollection of such.

You do not recollect any reference to the proposed dismissal of Meads, and saying that if anything of the kind was attempted by Mr. Maxted he was to see you? In this alleged conversation in the train, I cannot recollect anything whatever about it. It is a stupid invention.

Within the last two months? I cannot recollect any such conversation.

No reference was made by Mr. Meads at all in the matter? You are speaking of in the train, none whatever.

Do you recollect any similar conversation anywhere else? I have already told the Board, and is it necessary to reiterate the statement that I had one interview with this gentleman at my own house?

And did not this conversation occur at your own house, that if anything of the kind was attempted by Mr. Maxted he was to see you?—

*Dr. Manning.*] Mr. O'Reilly has already said that was a stupid invention.

*Mr. O'Reilly.*] That stupid invention was with reference to the alleged conversation I had in the train with Meads.

*Mr. Montagu.*] Did that similar conversation occur in your house? Dr. Manning will find on reference to the notes that I told him Meads came to see me on a matter unconnected with this inquiry.

[The Board at this stage ruled that matters unconnected with the particular charges into which the Board was inquiring could not be gone into.] *Mr.*

*Mr. Montagu.*] Since the 17th September you personally have gone to a number of people asking for these statements, have you not? Yes.

Do you know a man named Gould? Yes. I do not admit that I went to him for a statement.

Did you not go to Gould and get a statement? No.

Did you not go to Gould's house, and while there get a statement in writing? I met Gould on the railway station. I spoke to him of this. He told me had heard bad language, and said he would be prepared to support me in my efforts to disclose what he regarded as a public scandal.

You met Gould on the railway station? Yes; Harris Park railway station.

Did Gould tell you he wanted to get a lease of some ground near the Cottage Homes? He never told me anything of the sort; nothing relative to it.

You were not aware that Mrs. Gilmore opposed his getting such a lease? No.

Was it on the Harris Park railway station that he said he was prepared to make a statement? He said he was prepared to make a statement, and I fancy he posted it to me. I am almost sure he did. I have no recollection of going to his house at all.

You would not like to state one way or the other whether you went to Gould's house or not, and whilst there got a statement from him? I really have not the slightest feeling one way or the other. I cannot recollect now. I do not think it would influence my case in any way if I did not go to his house.

Do you know where he lives? I think it is in Cowper-street. I know the locality.

Have you not been in his house? Several times.

Do you know him pretty well? I have known him in cricket for some years. He used to be scorer.

Do you recollect whether you went to see Gould,—on a matter unconnected with this inquiry if you like,—and that at his house you got a statement in writing from him? I have nothing to do now with any visit I may have paid him totally unconnected with this inquiry.

Do you recollect having been to his house since the 17th September on a matter totally unconnected with this inquiry, and whilst there getting this written statement? I have no recollection whatever of it.

You would not like to say you did not do so? Yes; I will state I did not do so. I have no recollection whatever, and I can trust my memory. I said before I think he sent it through the post.

It was a voluntary statement of Gould's at the railway station that subsequently led up to getting the statement from him? I will not go so far as to say it was a voluntary statement. I may have introduced the subject. I remember his distinctly saying, "I shall be prepared to support you in this." I daresay I said, "Will you give me a written statement?"

It is quite probable that you mentioned the matter to Gould? Very probable.

What induced you to speak to Gould about the matter? Seeing he was a resident in the neighbourhood, I daresay I concluded he might know something of this matter.

I think we can generalise it that your reason for going to these people to get this statement was the fact that they were residents near the Cottages? Which people?

Those who have given evidence? A number of them do not reside near.

Some of them do? Yes; but you must not generalise on a question of that sort.

Did you go to any of the cabmen at the station and ask for statements? Yes.

Prior to the 17th September had you any verbal statements from any of those cabmen? No, if you are alluding to the cabmen called in evidence.

I was? You are alluding to Haddon and Morris.

Yes. Did you get any verbal statement from any of the police before the 17th September? I may have had some conversation with them on the subject.

I suppose they were not very searching inquiries—only casual conversations? I have not stated I had any conversations. I may have had

They would be casual if you had? I recognised their official position, and I wanted their statements to go through the official sources. For that reason I went to Mr. Brunker and then to Mr. Fosbery, but Mr. Brunker has thought fit to retain the statements.

Had you any verbal statements from any of the railway officials before you made that speech? Not so far as I can recollect.

You say you have heard rumours against Mrs. Gilmore since July, 1894? Yes.

From whom would those rumours emanate;—can you call to mind any particular individual? No; Parramatta, I should think.

You cannot call any particular person to mind;—do you know Mrs. Ireland? No; not to my knowledge. More know me than I know, and many may think I know them when I do not. I want to be quite clear. I may have spoken to Mrs. Ireland. She may have told me her name, but I cannot recollect it.

You had only some casual conversation with the police before you made that speech? I may have had.

Had you any conversation with Lord before the 17th September? On this matter, no; none whatever.

With Vidler? No.

Mrs. Gregory? No.

Haddon? No.

Mobbs or Morris? Of course. I have known Mr. Mobbs for some time. He has been a personal friend of mine a good many years.

You have had conversation with Mr. Mobbs relative to these charges prior to the 17th September? Yes.

With Hart? No.

With Gould? No; not to my knowledge.

The conversation with him was after the 17th September? Since the initiation of this business.

Of those witnesses, with the exception of Mr. Mobbs, you have had no conversation with them about these charges prior to the 17th September? No.

Can you give us any idea of any person with whom you did have any conversation, irrespective of Mr. Mobbs? Yes, I can; but I will not.

I asked you whether you could tell us the names of people who gave you information before you made that speech, and you said just now you did not recollect who they were? Various sources, gossip, I said.

The rumours were from various people? Whose evidence I choose to reserve at the present moment. You

You did not make that reservation before? I told you Parramatta.

I asked you on what grounds you made that statement in the House, and from who you got the information, and did you not say you could not recollect, that it was simply gossip? I may have said so.

You said it was simply gossip? I may have.

Now you say you do know the names of people who told you these things, but you will not mention their names? My only wish is to give an absolutely clear statement of what I know. I repeat now that I had evidence to go upon before the 17th September.

I want to know whether you are correct in saying you do not recollect from whom you got your information, or you do recollect? When I said Parramatta and rumour, I meant that prior to the time I first thought it my duty to make these inquiries, the evidence was in a more or less nebulous shape. I at once began to make inquiries. I felt it my duty. I went to persons who seemed to be able to give me evidence. Living in a gossiping town you cannot recollect all the sources from which you form an opinion.

And now you qualify it and say you do recollect the names of the people, but will not give them? I will not give the names of the persons before this board of inquiry who first gave me information in this matter.

*Dr. Manning.*] We are quite prepared to think that Mr. O'Reilly may have had this evidence in a nebulous condition at first, and he then obtained evidence sufficient in his mind to justify him in making these charges, and subsequently he got more definite information, but declines, quite within his right, to give us the names of the persons on whose statements he sufficiently relied to make the charges on the 17th of September.

*Mr. Montagu.*] Mr. O'Reilly makes charges in the House, and says he has evidence to make them on. I ask him if he can give us the names of any reliable people upon whose evidence he based that speech on the 17th September, and in answer he said he could not recollect. Now I have referred him to the witnesses who have given evidence, and with the exception of Mobbs he did not have any conversation with these people before the 17th September. I now ask him will he tell us with whom he had conversations, and he says he can but will not give the names. The two answers are not consistent.

You said in the House, did you not, that Mrs. Gilmore had been a habitual drunkard for six years, and that she was a most unscrupulous woman? Did I say six years; I do not recollect it.

You did say she was a most unscrupulous woman? I think I did use that phrase. I am not sure. I should like to see it in *Hansard* before I admit it.

*Dr. Manning.*] The words were that the Director of Charities had for some years past had in charge of the Cottage Homes a woman who was constantly drunk. There was no reference to time.

*Mr. Montagu.*] You charged her with being a habitual drunkard? You have got the words there—constantly drunk.

And all the facts you had then was this nebulous gossip? I never said so.

Did many people make you absolutely direct statements? Several people; that is to say, more than one.

And with the exception of Mobbs, you have not called any of these witnesses to this inquiry? Not at this inquiry—no.

And you decline to tell us the names of any persons who made direct statements to you? I see no necessity to do so.

Might it not be possible—I am only asking your opinion—that some of the witnesses, having read your speech on the 17th September, have assumed that the charges were correct, and made their statements accordingly, believing them to be true? I should never knowingly call a witness who would do a thing of that sort. There is not one witness of whom I can believe anything of the sort.

I suppose you believe everything that Lord told you? He was very careful before he gave me a written statement.

You believe him only because he was careful in giving a written statement? Yes, dealing with me.

Did you not know that Lord had been removed from Parramatta to Granville? Do not I know that every railway official in the service is removed from one place to another?

Did you not know that he was removed to Granville after having been in Parramatta for some years? Yes; I knew that.

He was removed before the 17th September? I believe so.

Did you not know that Lord was removed in consequence of some difficulty between him and the station-master? I never heard of such a thing until you just suggested it.

And you did not know that Lord was reprimanded by his Department? No; I never heard of it.

Did you not know that Mr. Wing, an officer of the Charities Department, had been sent up by the Department to make inquiries into those rumours? Not to my knowledge.

Wing never told you anything of the kind? I cannot recollect his doing so.

He never told you that he had been sent up to make inquiries, and had got nothing definite? I never said he never told me. It was news to me when I read in the report that Wing was one of the men who had made inquiries. If he did tell me it had passed out of my mind when Mr. Bruncker tabled that report.

Did you not ask Wing before you made these charges in the House if he could tell you anything about Mrs. Gilmore? It might assist your inquiry if you will give me the date of this alleged conversation.

I am only asking you if you have any recollection of it? I have no recollection of it at all.

Are you prepared to state positively that neither Ormiston or Corcoran made any reference or remark about Mrs. Gilmore to you in connection with the charges now before the Board? I have no recollection of what these men said to me. From the first I regarded them as worthless characters, and what was said went in one ear and out at the other.

So that you took no notice of what was said? I do not know that they said anything about Mrs. Gilmore. They had their own fish to fry, and wanted me to fry it for them.

Did they tell you that Mrs. Gilmore was a habitual drunkard? These men were in my opinion utterly unreliable. I cannot recollect anything they said to me. I may say I know their papers have been sent to different Members of the House, and all have rejected them in the same way. Their visit produced no impression on me in any way.

Did

Did you consider it your duty to make these charges against Mrs. Gilmore before the House, having before you rumours and statements made by several persons? I had ample evidence to make that speech on the 17th of September before I made it.

And with the exception of Mobbs, not one of the persons have been called here upon whose evidence you relied at that time.

*Dr. Manning.*] We are going over the same ground that has already been gone over.

*Mr. Montagu.*] Mobbs is the only witness you have called upon whom you relied at the time? Is that quite fair, when I could find a harvest of evidence ripe to my hand whenever I chose to reap it.

I want to show that if Mr. O'Reilly had ample evidence, the proper course would be to have that evidence brought here, but the only ample evidence shown was that of Mr. Mobbs.

*Dr. Manning.*] Mr. O'Reilly has not given any evidence here as regards these charges. If he had you would have been perfectly within your right in cross-examining him very fully on it, and I think his examination on the matters referred to has already been full enough.

*Mr. Montagu.*] You said this in the House: "What is easier for this Mrs. Gilmore, when she sees that a patient is obnoxious and getting rebellious, that a patient sees too much, what is easier for this unscrupulous woman—I have not the slightest hesitation in branding her as such—than to lodge a charge against this helpless old patient of misconduct?" Do you remember saying that? I do. The foot-note to that report of Mr. Sydney Maxted's is foundation for that statement. Why is that foot-note put there but to shut me out from calling the inmates in evidence.

If necessary we will call the whole of the inmates to appear and examine every one of them.

And you base your statement that I have just read in regard to Mrs. Gilmore on that foot-note? Yes, I will let that go.

Have you any proof that Mrs. Gilmore has acted in that manner? I never said I had; it is not a statement, it is only a query.

Sometimes these queries are much more serious than direct charges;—do you know of any case? So far as Mrs. Gilmore herself is concerned, no.

You have nothing against Mrs. Gilmore that is suggested there? No.

[Witness withdrew.]

Mrs. Fanny May examined:—

*Dr. Manning.*] You were at one time in the Cottage Homes? Yes.

How long ago was that? About six months, when my husband died.

How long were you there altogether? Close upon five years.

*Mr. Montagu.*] Had you frequent opportunities of seeing Mrs. Gilmore? I had; I lived next door to her for about two years.

During the last two years before you left? Yes.

Did you ever see Mrs. Gilmore under the influence of drink? Never in my life.

Did you ever hear her using wicked language? No, never; I never heard her use a bad word all the time I was there.

Did you ever see her at night-time? No.

Was she always very kind? Always very kind both to me and my husband. She could not have been more kind. I never saw her unkind to anyone.

[Witness withdrew.]

Mrs. Mary Ann Chadwick examined:—

*Dr. Manning.*] Were you at one time an inmate of the Cottage Homes? I was a cleaner.

For how long? From June, 1892, until January, 1895.

What are you doing now? I have been in service, but I am now at Newington. I was taken out of the hospital to come here.

*Mr. Montagu.*] Did you see much of Mrs. Gilmore? When I had finished my work I used to earn an extra shilling at her house.

Would you see her in the morning? All day.

You saw Mrs. Gilmore pretty often? All the time I was up there.

Did you ever hear her use bad language? No.

Did you ever see Mrs. Gilmore peculiar in her manner as if she had taken some drink? No, never. You never saw her take anything stronger than tea or water? Never. I never saw a drop of anything.

You have cleaned out the house occasionally? Yes.

[Witness withdrew.]

Father Thomas O'Reilly examined:—

*Dr. Manning.*] You are a clergyman of the Roman Catholic Church? Yes.

Stationed at Parramatta? Yes.

Do the Cottage Homes come within your district? They do.

Have you visited the homes frequently? For the last seven years I have visited the homes frequently, but not so much for the last twelve months.

During the first six years of your duty you visited them very frequently? Yes; we have no regular service, but we visit the old people, especially when they are sick.

So that you have visited the homes at all times of the day? Yes, and sometimes at night.

On special occasions when you were called for? Yes.

Have you heard any complaint about the matron from the inmates? Never. I did not know the matron. I have never met her, but I have never heard any of the inmates complain of their treatment.

[Witness withdrew.]

James Watsford examined :—

*Dr. Manning.*] You are the railway station-master at Parramatta? Yes.

*Mr. Montagu.*] How long have you been station-master at Parramatta? Twelve years.

You know Mrs. Gilmore? Yes.

I suppose you have had frequent opportunities of seeing her? I have.

It has been stated by Night-officer Lord that he had some difficulty with her one night; she refused to give up her ticket, but he believed it was returned the next day to the station;—would you have cognisance of that? Yes.

Do you know whether that ticket was returned? I believe it was.

Was it returned to you? That I cannot remember. I do not remember whether it was handed to me or to the clerk. I was told it was returned.

Do you remember who told you? No; they simply said Mrs. Gilmore's ticket has been sent up.

Were you informed at the time it was returned that she had refused to give it up, or simply told that she had sent back her ticket? I cannot remember the circumstances.

Was there not some difficulty between you and Lord? Yes.

There was an inquiry? Yes.

And Lord was removed to Granville? He was.

Was it in consequence of that inquiry? No; not in consequence of the first inquiry.

What was it in consequence of? It was a railway matter.

You have had frequent opportunities of seeing Lord? Yes; he was with me for ten years.

He was your subordinate? Yes.

Did you always find him to be truthful? No; untruthful and unreliable during the latter part of his service with me.

Have you seen Mrs. Gilmore come home in the evening? Not often. I am seldom on duty at night.

When you have noticed Mrs. Gilmore was she sober? Yes; always.

Is she in the habit of going two or three time a week to town? I should not think so; I have not noticed her.

You did not notice her going often into town? Not very often.

You say Lord was untruthful;—is that from facts which have come under your notice? Yes.

Lord stated you were reprimanded at that inquiry;—is that true? No; I have not been reprimanded since I have been in Parramatta.

*Dr. Manning.*] What are your hours of duty? From a quarter to 8 in the morning until a quarter to 8 in the evening; but I often remain until the mail train comes in at half-past 8.

After that you are not on duty? No.

What time was it when you have seen Mrs. Gilmore going into town? 10:25 in the morning, I think.

Not in the afternoons or evenings? Seldom.

Is it a usual or an unusual thing for Mrs. Gilmore to retain her ticket and send it up the next morning? Unusual.

Did it occur on more than one occasion? Only once that I am aware of.

Can you tell us if anything further was said about that ticket at that time? Lord may have said something, but I do not remember what it was.

No explanation was offered? I do not like to say. There was not an explanation given to me that I remember. I was told a lady refused to give up her ticket, and that it came to hand the next morning.

Is it your duty to see that tickets are all right? It is brought under my notice.

How long ago is this? I could hardly say.

Can you not fix the date at all? No, I cannot.

[Witness withdrew.]

Father John Martin examined :—

*Dr. Manning.*] You are a Roman Catholic clergyman, doing duty in Parramatta? Yes.

And the Cottage Homes come within your district? Yes.

Are you in the habit of visiting them? Yes; I visit them frequently; sometimes to see a sick person twice a week.

For how long have you visited the homes? The last three years.

At what hours? Generally in the morning; sometimes in the evening, especially if there was a sick person there. In the morning about 11 o'clock.

When people are ill do you visit at night? I have not visited at night later than 4 o'clock.

You are still visiting the homes? Yes.

Do you know the matron? No, I do not; I have never spoken to her.

Do you know her by sight? I do not think so.

Have any of the inmates made any complaint to you in regard to the matron? They never have. Only about four weeks ago a family told me they were very happy and contented, and about twelve months ago they went out of their way in alluding to the way they were treated, and from the general conversation then I was left under the impression that it was excellently managed by the matron.

*Mr. Montagu.*] You never heard any of the inmates state that Mrs. Gilmore was addicted to drink, or of using bad language? I never did, and I am sure I would have heard of it.

If such a thing had occurred you would have heard of it? Yes; patients are generally very communicative, and whenever they spoke—and I remember those two occasions—it was in very high terms of the care taken of them and the general management.

*Dr. Manning.*] Have you always found the places clean and in good order? Yes; very clean.

[Witness withdrew.]

Amy Brock examined:—

*Dr. Manning.*] What age are you? Fifteen.  
Do you live in Parramatta? Yes.  
You have been acting as servant to Mrs. Gilmore at the Cottage Homes? Yes.  
For how long? Six weeks.  
The last six weeks? Yes.  
Are you still there? Yes.  
*Mr. Montagu.*] Is that the first time you have been employed there? Yes.  
What is your position there? To help to do the work.  
Do you sleep there? I sleep at home.  
Have you ever noticed Mrs. Gilmore under the influence of liquor during the last six weeks?  
Never.  
Have you ever heard her use bad language? No.  
[Witness withdrew.]

William M'Garvey examined:—

*Dr. Manning.*] What is your position in the Public Service? Clerk in the Macquarie-street Asylum, Parramatta.  
How long have you held that post? Since March last.  
*Mr. Montagu.*] Where were you before? At the George-street Asylum.  
Had you anything to do with the Cottage Homes? Since March last I have been doing the clerical work there.  
Have you been there often? On an average two or three times a week.  
When do you generally do the work? At irregular hours, between 10 in the morning and 6 in the evening.  
I suppose you have had frequent opportunities of seeing Mrs. Gilmore? On every occasion I have met her there.  
Have you ever noticed her suffering from the effects of drink? Never.  
Did you ever hear her use bad language? No.  
Did she appear to conduct the place properly? Yes; I always thought so.  
Do you go amongst the inmates of the cottages? Yes; frequently I have met some of them there, and have spoken to them.  
Did they ever make any complaint against Mrs. Gilmore? No.  
No charges of any kind? No.  
Either directly or indirectly? None whatever.  
Is there anything else you can tell us? On one occasion, about four or five months ago, I saw Mrs. Gilmore at the Redfern Railway Station, leaving by the 11:30 train.  
Did you come home in the same train? Yes. I did not speak to her; I saw her coming along the platform.  
What condition did she appear to be in? I never noticed anything out of the usual.  
She appeared to be alright? Yes.  
Did she get out of the train alright? I did not see her get out.  
You saw her go to the carriage? I was standing on the platform, and saw her come along past me.  
Have you ever come home at any other time in the same train?  
[Witness withdrew.]

Joseph Wing recalled:—

*Mr. Montagu.*] Did you ever have any conversation with Mr. O'Reilly, the Member for Parramatta, in reference to any inquiry you have made concerning Mrs. Gilmore? Yes.  
Can you tell us when that conversation occurred? Some time after I made the inquiry.  
Before he made his speech in the House? Months before. Before the last election, and after he was first elected.  
Can you remember what was said? He spoke to me of the rumours going round about Mrs. Gilmore. I told him then I had made inquiries, but could not substantiate them. I said the people were ready enough to make statements, but, when they were asked, they would not put them in writing.  
Did he call upon you, or did you meet him accidentally? I met him in the street.  
In Parramatta? Yes. It is a long time ago now.  
You have no doubt about what you told him? None whatever.  
Did he open the conversation about Mrs. Gilmore? Yes, I think so. I could not be sure. I did not pay much attention to the conversation at the time.  
Did you tell him by whom you were appointed to make the inquiry? I did; by the Department, I told him.  
Did he make any complaint about the Department, or about the head of the Department? No. He made the remark he would like to work with Mr. Maxted, but Mr. Maxted did not seem inclined to be friendly. That was the only remark he made.  
I suppose you have seen Mr. O'Reilly on several occasions? I have not seen Mr. O'Reilly to speak to more than three or four times in my life. I am only a new comer in Parramatta, since the last eighteen months.

[Witness withdrew.]

John Minor examined:—

*Dr. Manning.*] You are a cabman? Yes.  
For how long have you been a cabman? This last sixteen years.  
On the rank at Parramatta? Yes.  
I suppose you know everybody in Parramatta? I do.

*Mr.*

*Mr. Montagu.*] Do you know Mrs. Gilmore? I do.  
 Are you on the cab rank at night? Sometimes.  
 You have seen the late trains come in? I have on several occasions.  
 Have you seen Mrs. Gilmore come home by those trains? I have on some few occasions.  
 During the last twelve or eighteen months? Yes.  
 Did she appear to be sober? I never saw anything wrong with Mrs. Gilmore at any time.  
 If she had been under the influence of drink, you would have noticed it? Yes.  
 Do you know Lord? I do, since he came to Parramatta station.  
 He is the night officer? Yes; he used to be formerly at Granville years ago.  
 He would come on duty at night-time? Between 7:30 and 8 I think was his time, and go off in the morning at 8 or 7:30. I have seen him frequently going down to the hotel at night with other cabmen and railway officials. Not only once, but three or four times a night.  
 Can you tell us the names of any of the cabmen? I have seen him have a drink with Morris.  
 With Haddon? He does not drink.  
 Two or three times a night? Yes, while on duty.  
 Have you seen him in the morning? Yes. When I have been out to meet the mail coming down at 10 past 5, he would say "Is Andy's open," that is Holmes' hotel. I have seen him go down with the guard about 10 past 6. On one occasion he had a good drop of drink in one morning, and actually insulted a man just outside the station on railway property, and, had the other cabmen not stuck to Lord, the man would have summoned him.  
 Have you ever driven Mrs. Gilmore out? Yes.  
 In the evening? Yes, between 7 and 8 o'clock. She was calling on some people about some business she had.

[Witness withdrew.]

William Brown examined:—

*Dr. Manning.*] What are you? A carpenter and joiner.  
 Living in Parramatta? Yes.  
 How long have you been here? Nearly ten years, part of the time on the other side of the river, and lately at Harris Park. Part of the time in Cowper-street, and the rest on the other side of the railway line.  
 When in Cowper-street you were near the Cottage Homes? Yes.  
*Mr. Montagu.*] You know Mrs. Gilmore? Yes.  
 Have you passed by her place very frequently? During the time I was living in Cowper-street three or four times a day.  
 Are you in business in Parramatta? I was working for Murray Brothers.  
 Have you passed by there in the evening? Yes, between 7 and half-past in the morning, 12 and 1 dinner hour, and at 5 at night, and occasionally when going down the town.  
 Did you ever see Mrs. Gilmore in any other condition than she is at present? No, never.  
 Did you ever hear her using disgraceful language? Never.  
 Have you ever been in any of the Cottage Homes? Yes; I was there several times during the time I was in the employ of Murray Brothers. For the first eighteen months after the Homes were built, on and off as occasion required.  
 When you were working there, were you ever in Mrs. Gilmore's cottage? Yes.  
 Did you notice anything remarkable about the place? No.  
 Everything seemed to be in good order? Yes.  
 Have you ever had any conversation with any of the inmates of the homes? Yes, I could not help it.  
 Did they ever make any complaint about Mrs. Gilmore? No.  
 Did you ever hear of any tangible complaint against Mrs. Gilmore? No, never. The inmates never spoke to me about it.

[Witness withdrew.]

Constable James Tindall examined:—

*Dr. Manning.*] You are a constable, stationed at Parramatta? Yes.  
 How long have you been in the Police Force? About ten years in this country.  
 How long have you been stationed at Parramatta? Nearly three years.  
 Are you on duty at the railway station at all? Yes.  
 On what occasions? Periodically, generally on one month and off two.  
 So that you are on duty one month out of three? About that, until lately. The last time I was on duty at the railway station attending the arrival of trains was in December last.  
 And for how long before that? For two years back. That shift has been done away with now on account of being short handed.  
 What trains did you meet? All trains from 6 p.m. till five minutes to 1.  
 Do you know Mrs. Gilmore? I do.  
 Have you frequently seen her? I have.  
 Not only at the railway station, but at other times? Yes.  
 Have you ever seen her under the influence of drink? I have.  
 On how many occasions? During December last I saw her come out of one of the trains. I would not be positive which, either the ten past 12 or the twenty to 12. She was very much the worse for drink. Her hair was all disarranged and I followed her towards her home, keeping behind, and saw her go into her gate.  
 Where were you when you first saw her? On the platform. I generally stand at the door to take particular notice of anyone coming up by the late trains.  
 Did you see her get out of the train? I did.  
 What induced you to follow her home? For her safety. I considered she was very much the worse for drink; she could scarcely walk.

Was

Was there anything to make you notice her? Her clothes appeared to be very much disarranged. They were all twisted round; they were not hanging as they ought on a lady in-sobriety.

And having seen her into her own house you left? Yes. Then on that occasion I saw Mr. Gilmore in the street a little before 2 o'clock at night.

What happened? I did not speak to Mr. Gilmore.

Did he go home? I do not know; I went off duty.

Where did you see him? In Church-street.

Your reasons for considering Mrs. Gilmore under the influence of drink were her gait and the disarrangement of her dress? Yes, her general appearance.

Was the station lighted? Yes.

You saw her get out of the carriage? I did.

Who was there? Night-officer Lord was there. There were very few passengers I remember that came out.

Did you hear her speak at all? There was something about a ticket; I could not say whether she gave it up or not.

You have no personal knowledge on the subject? No.

Did you hear what was said by Lord to Mrs. Gilmore? Lord asked for her ticket, and I think she said "Alright."

You heard no bad language or anything of that kind? No, I did not hear any bad language.

Have you ever heard any bad language from Mrs. Gilmore? No.

Is that the only occasion on which you have seen her? I saw her previous to that.

At what time? It was, I think, in October.

Were there more than two occasions? Yes; when I came here I was three or four months running on that duty.

And you saw her then? Yes; I should think about four or five times.

Altogether? Yes.

Within what period? Within two and a half years.

The last two occasions were in October and December? Yes; but I would not be positive. December was the last month I was attending the arrival of trains.

*Mr. Montagu.*] Where were you standing when the ticket incident occurred? Close beside the door going out into the street from the platform.

The platform door or the street door? The platform door.

Who was taking the tickets that night? Night-officer Lord. He always did take those late trains.

How far were you standing from Lord? Just close beside him on the other side of the door.

You said just now there was no bad language? Not to my hearing.

If there had been you would have heard it? Certainly, on that night.

You heard her say, "It is all right," when she was going out? I believe those were the words she used.

She just went straight through? She got out the best way she could.

You never at any time heard her use bad language? Not personally.

And you have stated that you considered her drunk, or under the influence of liquor, because she was unable to walk straight and her hair and clothes were disarranged? That is so.

She was not creating any disturbance on that occasion? No.

You have not seen Mrs. Gilmore come home at night time by train since last December? No; that is the last time I was on that shift.

Since last December you have not seen Mrs. Gilmore in a similar condition to that which you have related? No.

*Dr. Manning.*] You do not know whether Lord got the ticket or not? I do not remember. I know the night-officer asked Mrs. Gilmore for her ticket, and I think she said, "It is all right," and passed through the door.

*Mr. Montagu.*] Unless a person were creating a disturbance you would not arrest them? No, unless they were unable to take care of themselves.

There was nothing else to guide you except that you judged by appearances? Quite so.

[Witness withdrew.]

Donald M'Donald examined:—

(Witness stated that Webster, railway official at Granville, was unable to attend to give evidence.)

*Dr. Manning.*] What are you? Railway clerk at the Parramatta railway station.

How long have you held that position? Nearly five years.

What are your hours of duty? From a quarter to 8 in the morning until 5 at night as a general rule. There are times when I am required to stay on later, but not later than about half-past 8.

*Mr. Montagu.*] Do you know Mrs. Gilmore? I know her, but not to speak to. I was a resident of Cowper-street, adjoining the Cottage Homes, from July, 1891, to February, 1895.

You have frequently passed the Homes then? About three times a day.

Have you been in the cottages? I have been in one, though I have frequently spoken to the old people.

Have they ever made any complaint about Mrs. Gilmore? Not those I have spoken to. They always spoke in a high manner of Mrs. Gilmore.

Did you ever see Mrs. Gilmore there? Yes, frequently about the house.

Did you ever hear her use bad language of any kind? Never.

Do you know Lord, the night-officer? Yes.

Do you come into contact with him much? Yes, on business. I have to look after the checking of his cash and the work performed during the night.

Do you know him otherwise? No.

What opportunities have you had of observing him? Every opportunity of observing his character.

Have you anything to say about him in his transactions? I have nothing to say in his favour. I have always looked upon him as a very dangerous man—as a natural liar in my opinion.

Those

Those are strong words to say against a man;—have you any knowledge of it yourself? Yes; in business transactions I have frequently. I have seen him doing some funny things, which, in my opinion, were not straight working.

Anything in connection with his department? Departmental work.

*Dr. Manning.*] In passing the Cottage Homes have you ever heard any noise in Mrs. Gilmore's house? No.

Never at any time? No.

You have never heard any quarrelling? No.

*Mr. Montagu.*] Do you know whether a railway ticket was returned by Mrs. Gilmore on any occasion? I think there was something about a railway ticket some few months ago? I believe she came up in the train and said she had given up her ticket, or had lost it in some way; and the ticket was sent back the following day.

She said she could not find it, and returned it the next day? Yes. Mr. Lord made some remarks about it at the time.

Do you remember what he said? He said perhaps she was drunk.

Would that be as far back as last December? I do not think it was. About four or five months ago.

*Dr. Goode.*] Do you know whether this ticket was returned the next morning? I could not say for certain. I would not like to say it was returned.

What you know was only hearsay? Yes.

*Mr. Montagu.*] Do you know who it was who told you it had been returned? No; I do not recollect.

*Dr. Goode.*] You do not know yourself whether the ticket was given up the night before? I know it was not given up the night before by the statements of the person who was collecting the tickets.

*Dr. Manning.*] Did he leave a memorandum to that effect? I fancy he did.

[Witness withdrew.]

Mrs. Alice Gregory examined:—

*Dr. Manning.*] You are in an official position in the Railway Service? Yes.

What is that position? Ladies' attendant at the waiting-room at the Redfern Railway Station.

There are three or four others, are there not? Three.

And you take the duty in turns? Yes.

For how long? About eight hours.

You remember an occasion on which you had some difficulty with a lady in a closet at the waiting-room? Yes. I have not seen the lady since, so I do not know whether it is the lady you are referring to.

Would you know her again if you saw her? Yes.

Will you describe her? She was taller than me; not much stouter. She had blue-grey eyes, full red lips, and, I think, dark hair. A woman about 30. That is all I can say.

How was she dressed? In a dark dress, I think, with a white gem hat—a round straw hat, with a veil I know, which I think was brown, but I am not positive.

*Mr. Montagu.*] A sailor hat? Yes; plain, without any feathers on it; just a band.

*Dr. Manning.*] Will you tell us what occurred on that occasion;—what time was it? It was about 5 o'clock in the evening. One of the closets was kept an unreasonable time, and there were a great many people in the general waiting-room. I knocked at the door, and a person answered in a sleepy, drowsy way. I left it for a few moments and went again, and she answered again clearly. And then I went again and the door was open, and to my astonishment it was a well dressed woman—not the kind who usually shut themselves in to take a nap. I asked her if she were going by train, and she said "No." I asked her if she had a ticket, and she said "No"; and I had no right to ask her to see whether she had. Then she commenced in an abusive way; but there was a lot before this. Later on she came out of the W.C. compartment. There was a lot of people about. She was arranging her hair and hat. I was attending to my duties, and she said, "You don't know who I am—you don't know I can get you out of your situation in a minute." This was said in a shrill, hard, horrid way. She kept on. I cannot tell you one-tenth of what she said. Later on she said, "Fetch your officials; fetch your officials." The word official not being mentioned before, and saying that I thought she must be something in the Government. The word official is not often used. She said officials in an insulting way. I went to find an official, but could not see one at the time, and I thought it would be over. She came up close to me, walking close to me in whatever I did in an insulting, quarrelsome way. She was under the influence of drink undoubtedly. Then I went into the station-master's office—he was not there,—and while I was there she got into a great temper. I could find no porter; they were all busy. She said, "You are slinking, are you!" about six times, in a horrid way, and in a high shrill voice. There was a train full of people waiting to go out. I think it was the 10 to 6 train. She said, "Go in and clean up the closets; that is your place," in an abusive way, and walked on then down the platform. Those are the words, I remember perfectly.

Was any bad language used? No; no bad language.

The language was abusive and taunting, but not bad? Yes.

Why do you think she was intoxicated? She smelt very strong of liquor, and had the appearance of it altogether—a flushed appearance.

Do you know where she came from? No.

You did not see her go into the closets? No; I saw her on one other occasion about eighteen months previous to this. When she began in this abusive tone, I recognised her. I am sure she was the same woman.

[Mrs. Gilmore who had not been present during this witness' examination was here called in.]

*Dr. Manning.*] Do you recognise this as the person? I would not swear to her. I am not sure.

You are not sure of the voice? I cannot swear to that either.

Did you make any inquiries afterwards? Yes; it was through the inquiries I made, that I was called here as a witness I daresay. I wanted to find out who she was.

What inquiries did you make? I went to the station-master to complain to him about ten minutes after. Then I spoke to the inspector, and inquired from another inspector. That is all.

Did you find out anything as regards who she was? No.

Nothing as regards her being a matron of an asylum? No, nothing of the sort. When I saw this in the paper, I wondered if it was the same woman.

*Mr. Montagu.*] And then did you make a communication with Mr. O'Reilly? No.

Did Mr. O'Reilly come to you? Yes.

When did Mr. O'Reilly come to you? Two days ago.

Did you make a statement in writing to him? No.

You simply detailed the circumstances as you have told the Board here? Yes, but not so fully.

And upon that you were asked to come here? Then I went to the station-master to make him fully acquainted with the whole thing, and to-day I got word to come to Parramatta.

[Witness withdrew.]

Sydney Rundle Walford examined:—

*Dr. Manning.*] What is your occupation? Brewer.

In Sydney or Parramatta? Parramatta.

How long have you lived here? Twelve years.

*Mr. Montagu.*] Do you know Mrs. Gilmore? I cannot say I do. I live quite near.

You live close to the Cottage Homes? Just on the rise of the hill, about 50 yards away.

I suppose you pass by that way? Yes, a good deal.

Have you been over the cottages? No.

You pass by a good deal? Yes; I daresay I pass by once a fortnight or month.

Have you ever seen any of the people in the cottages? Yes.

Have you heard them make any complaint in any way? No; they have never said anything to me. I have generally given them a few coppers. That is the only intercourse I have had with them.

Have you ever seen Mrs. Gilmore at the cottages? No; I have never seen her. I have never noticed her there.

Have you passed by there in the evening? Very seldom of an evening.

When you have, did the place appear to be orderly? Yes, quite. I have been coming by the late train from the theatre perhaps, but I have never noticed any noise.

Is there anything you can tell us about Mrs. Gilmore? I know nothing. I told Mrs. Gilmore when she came to see me I could say nothing for or against her, except that I have never been annoyed in any way by any noise or rows. I have been living within 50 yards of the place. There is only Mrs. Creasy's between my house and Mrs. Gilmore's, so you would think I should have heard it if there had been any excessive noise.

[Witness withdrew.]

Mrs. Janet Gilmore examined:—

*Dr. Manning.*] You are the matron of the Cottage Homes? Yes.

How long have you held that appointment? Seven years next February.

What appointment did you hold prior to your going there? I was housekeeper at the Government Asylums Office in Pott-street, I think, from the beginning of June until the date of my appointment.

Who appointed you to that position? Mr. Critchett Walker.

Was that before Mr. Maxted took charge of the Department or not? I do not think Mr. Maxted was then really appointed. His name was mooted, but he was not appointed.

You were appointed to the Service before Mr. Maxted was appointed to his present office? Yes.

Mr. Maxted was then in the Service when you were appointed as matron of the Cottage Homes? Yes.

Was that appointment made on his recommendation, do you know? I knew Dr. Tarrant and Mr. Humphery, who went to Mr. Critchett Walker and asked that I should be given this appointment for the sake of my first husband, Major Coote of the 26th Cameronians. He was a Mason and Mr. Humphery was a Mason. Major Coote was a distant relative of Dr. Tarrant's.

Mr. Gilmore is no longer in the Public Service? No.

How long is it since he was? He was in the Harbours and Rivers Branch, and through no fault of his, when the present Government came in at first they retrenched a lot of men in that particular department and he was one amongst the number.

He was originally in the Asylums Department and exchanged into the Harbours and Rivers, and from there was retrenched? Yes.

Has he had any occupation since he was retrenched? Nothing at all.

[Mr. Montagu handed in a letter addressed to Mrs. Gilmore, from Mrs. Tarrant, marked "B" herewith.]

*Mr. Montagu.*] During the whole period of your appointment as matron of the Cottage Homes, Parramatta, have you at any time taken liquor to any extent? No, I have not. I have taken a glass of beer or a glass of stout with my food, but never anything more.

Are you in the habit of keeping liquor in your house? No; we do not keep it in the house.

And on rare occasions when you do take a glass of beer or stout, you send out for it? Always.

And you only take it with meals? I never take it in the morning or evening, only in the middle of the day.

Never in the morning or evening? Never.

And you have been advised by medical men that it is not a good thing for you to take? I could tell by my own feeling that I never wanted it. I have no taste for it. I have only taken it as a help to digest my food; tea does not suit me when I am eating meat or vegetables. That is the only time I take it.

There

There is no truth whatever in the statements alleged against you that you have been constantly under the influence of liquor? No; I can safely say people are quite mistaken in my character in that respect.

You have for some years past, I understand, been suffering from dyspepsia? I have suffered with indigestion and nervous dyspepsia for ten years—ever since I had a shock in Tasmania. I have never recovered it since. I have had a lot of trouble in those cottages. I lost a son there when I came first. I have always felt it very much having to live there. I would have gone away but that my living depended upon it.

*Dr. Manning.*] What family have you now? A son by Major Coote, 18 years old, and two little girls by Mr. Gilmore. I have had seven children, but I have only three living out of the seven.

Does your son live at the Homes? Yes.

*Mr. Montagu.*] Does he live with you? Yes; he is a kind of clerk at Macquarie-street.

I understand you have been on several occasions in the train when these fits of hysteria have come on? I have, once or twice. On one occasion this sickness came on very suddenly. I had some very sad news from home. I had been worrying very much.

You will admit that you are of an excitable nature? I cannot help that; I must have been born like it. I try to control myself as much as I can.

Do you remember going, on several occasions, with friends to the theatre in the evening? Yes, I have gone to the theatre on various occasions—with Mrs. Johnson more than with anybody else.

Mr. Gilmore has not gone with you? Mr. Gilmore does not care to come out. He will not leave the two children. One of them is subject to croup. He does not like to leave the children; otherwise he would come with me.

Allegations have been made against you that you have used bad language, have you done so? No, I am certain I never in my life. I want to make a statement about what Dr. Violette said the other day. He must have made a mistake about the word. He said I called my husband a something cur; but I have never done such a thing. I believe what I did say one day was, when I felt very angry with Mr. Gilmore, who brought it on himself, that he was a loafing cur. The other word I did not use.

Dr. Violette made a mistake in the word? I think I said he was a loafing cur. He does not like hard work. That is what I meant. I am never happy unless I am working about the place. Dr. Violette made a mistake in the word. I felt it very much when he said it. It was not a very ladylike word; even loafing is not a nice word, but it is a Colonial word. Instead of saying a lazy man here you say a loafing man.

What nationality are you? I am Scotch.

You have heard what has been said about creating a disturbance or scene at Granville on the night of the 4th of September;—were you in Granville that night? I have never been in Granville but once in my life, and that is years ago.

Do you recollect having a dispute with Night-officer Lord about your railway ticket? That might have been on the night I felt so terrible sick—the night that I told Mr. Maxted I felt so bad. I might not have been able to find it. That may have been the case; I will not say it is not. At all events, I can conscientiously swear that I never once sent a ticket up to that railway officer. They are telling a falsehood. Not so long ago I came across a half ticket in the drawer; I must have thrown it in there. I destroyed it and put it in the fire. I said to Mr. Gilmore at the time, "That must have been the ticket I ought to have given up." I may not have given up the ticket that night, because I felt too ill to be worried looking for it; but the ticket was never sent up to Mr. Watsford, as Mr. Lord says.

They did not say they knew it was, they were only told so;—that is the only occasion that you recollect? That is the only occasion, decidedly.

Is there any truth whatever in the allegation that you told someone they could go to a certain place? I am positive I never said such a thing in my life to anyone.

You have heard what Chesshur said;—did you use such language? I have never used any strong language that people could speak about me in this way. They may have heard it from someone else in the house; they never heard it from me.

You did not use it? I did not.

I may take it that you have always been attentive to your duties, consistently and conscientiously throughout? I have done my best always. Sometimes it was very hard to do it, and I have had very little support. Some of the inmates have threatened my life, and that has all told on my nervous system and affected me.

I suppose some of the inmates themselves have used very strong language? They have. One man who has gone away now—a Frenchman—if he did not get everything he wanted he would curse and swear and come to my back door and call me fearful names. That was just before one of my children was born—the last one. This man Mau threatened to strike me with a tomahawk. If I had not got out of the gate he would have struck me. He struck the gate as it was. I have had some rough treatment.

Some of the inmates have come to your cottage and used strong language there? They have indeed; this Frenchman particularly.

So that it is quite possible that when witnesses say it was you, they may have mistaken you for someone else—perhaps one of the inmates? They may have done so. I have had no satisfaction. I consider I have been to a certain extent peculiarly illused.

When you went to the theatre in the evening, or to your friends, did you have any liquor of any kind? I might have had a glass of wine with my food when I have had dinner in town.

On the two or three occasions in the train your illness was brought on by your own physical infirmities? Once, I have said, I had had bad news from home and I was thinking about it.

How many times, on an average, do you go to town during the month? I can say I have never exceeded three or four times a month. My allowance is three times a month—two week days and the last Sunday in the month. If I exceeded that I generally mentioned it to Mr. Green. I have to send in a paper to say how often I have been out during the month. If I have exceeded my leave of absence I have to state it in this paper. Then Mr. Maxted gave me directions to keep a book; he said I did not do so. I do not know why I did not do so; it was pure carelessness. I have always sent in the paper every month, and they will show that my leave has not been exceeded.

*Dr.*

*Dr. Manning.*] The times you mentioned are the recognised times that you were allowed to leave the institution? Yes; three times to go to Sydney—two week days and one Sunday. I was not supposed to leave at any other time without consent from the office. I may have gone away more on one or two occasions, but if I have I have always mentioned it to Mr. Green.

Does that refer to absence during the day? It includes evenings.

There is no limit to your going to Sydney at times when you are not on duty in the evening? I have always inferred that I was simply allowed those three days to go to Sydney, and I can honestly say I have never gone at night to Sydney. I have left in the forenoon or afternoon and spent the day in Sydney with friends. I have not left in the evening for years. I have done so years ago on two or three occasions, before our children were born; then Mr. Gilmore and I used to go together.

You considered you were restricted to those days and evenings? Yes.

Mr. Maxted said you were not restricted as regards the evenings? Mr. Maxted knows I have not left in the evenings. Mr. Green would soon hear about it if I had. There are plenty of people who would give him all the news. He knows very well I have not done so.

Your returning home in the evening was the result of your visits paid to town during the day in accordance with your leave of absence? Exactly.

[Witness withdrew.]

1894-5.

NEW SOUTH WALES.

## EVIDENCE

TAKEN BEFORE THE

## ROYAL COMMISSION

APPOINTED TO INQUIRE INTO THE

CONDUCT AND MANAGEMENT OF THE LICENSED HOUSE  
FOR INSANE AT COOK'S RIVER, NEAR SYDNEY,

KNOWN AS

“BAYVIEW HOUSE,”

AND PARTICULARLY AS REGARDS THE ALLEGATIONS MADE IN THE  
LEGISLATIVE ASSEMBLY RESPECTING THE TREATMENT OF  
CERTAIN PATIENTS IN THE SAID LICENSED HOUSE.

APPOINTED 18<sup>TH</sup> OCTOBER, 1894.


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Presented to Parliament by Command.

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SYDNEY: CHARLES POTTER, GOVERNMENT PRINTER, PHILLIP STREET.

1895.



## Commission.

VICTORIA, by the Grace of God, of the United Kingdom of Great Britain and Ireland, Queen,  
Defender of the Faith, and so forth,—

To our trusty and well-beloved—

The Honorable Sir ARTHUR RENWICK, Knight, B.A., M.D., a Member of Our Legislative Council  
of Our Colony of New South Wales, President;

FREDERIC NORTON MANNING, Esquire, M.D., Inspector-General of the Insane;

ANDREW GARRAN, Esquire, LL.D.; and

JAMES SINCLAIR MCGOWEN, Esquire, a Member of the Legislative Assembly of Our said Colony,—

Greeting :—

KNOW ye, That We, reposing great trust and confidence in your ability, zeal, industry, discretion, and integrity, do, by these presents, authorise and appoint you, or any two or more of you, as hereinafter mentioned, to make a diligent and full inquiry into the conduct and management of the Licensed House for the Insane, at Cook's River, near Sydney, in Our said Colony, known as "Bayview House," and particularly as regards the allegations made in the said Legislative Assembly respecting the treatment of certain patients in the said Licensed House: And we do, by these presents, grant to you, or any two or more of you, at any meeting or meetings to which all of you shall have been duly summoned, full power and authority to call before you all such persons as you may judge necessary, by whom you may be better informed of the truth in the premises, and to require the production of all such books, papers, writings, and all other documents as you may deem expedient, and to visit and inspect the same at the offices or places where the same or any of them may be deposited, and to inquire of the premises by all lawful ways and means: And We do give you the power, at your discretion, to procure such clerical and other assistance as you may deem necessary for enabling you to duly execute this Our Commission: And Our further will and pleasure is that you do, within two months after the date of Our Commission, certify to Us, in the office of Our Chief Secretary, under your or any two or more of your hands and seals, what you shall find touching the premises: And We hereby command all Government Officers and other persons whomsoever within Our said Colony, that they be assistant to you and each of you in the execution of these presents: And we appoint you, the said Sir ARTHUR RENWICK, to be President of this Our Commission, which said Commission We declare to be a Commission for all purposes of the Act 44 Victoriae No. 1, intituled, "*An Act to regulate the taking of evidence by Commissioners under the Great Seal.*"

In testimony whereof, We have caused these Our Letters to be made Patent, and the Great Seal of Our said Colony of New South Wales to be hereunto affixed.

Witness, Our Right Trusty and Well-beloved Councillor, Sir ROBERT WILLIAM DUFF, a Knight Grand Cross of Our Most Distinguished Order of Saint Michael and Saint George, Our Governor and Commander-in-Chief of Our Colony of New South Wales and its Dependencies, at Government House, Sydney, in New South Wales aforesaid, this eighteenth day of October, in the fifty-eighth year of Our Reign, and in the year of Our Lord one thousand eight hundred and ninety-four.

(L.S.)

R. W. DUFF.

By His Excellency's Command,  
(L.S.) JAMES N. BRUNKER.

Entered on record by me, in REGISTER OF PATENTS, No. 16, page 147, this nineteenth day of October, one thousand eight hundred and ninety-four.

For the Colonial Secretary and Registrar of Records,

(L.S.)

CRITCHETT WALKER,  
Principal Under Secretary.

## LETTER OF INSTRUCTIONS.

The Principal Under Secretary to The President.

Sir,

Chief Secretary's Office, Sydney, 19 October, 1894.

Dated 18th  
October, 1894.

I am directed by the Chief Secretary to transmit herewith a Commission under the Great Seal of the Colony appointing you, in conjunction with the other gentlemen named therein, to be a Royal Commission to make a diligent and full inquiry into the conduct and management of the Licensed House for the Insane at Cook's River, near Sydney, known as "Bayview House," and particularly as regards the allegations made in the Legislative Assembly respecting the treatment of certain patients in that institution.

2. I am desired to add that the Governor-in-Council has also been pleased to appoint you to be President of the Commission.

3. You will be provided with such clerical and other assistance as may be deemed necessary for enabling you to execute the Commission.

I have, &amp;c.,

CRITCHETT WALKER,

Principal Under Secretary.

The Hon. Sir Arthur Renwick, Knt., B.A., M.D., M.L.C., &amp;c., &amp;c.

## EXTENSIONS OF COMMISSION.

WHEREAS it is necessary to extend the time within which the Commissioners are to make their report in the above matter. Now, therefore, I do hereby, with the advice of the Executive Council, extend the time within which the said Commissioners are to make such report for a period of two months—to take effect from the 18th instant.

Given under my hand at Government House, Sydney, this nineteenth day of December, one thousand eight hundred and ninety-four.

R. W. DUFF.

By His Excellency's Command,  
JAMES N. BRUNKER.

WHEREAS the time appointed for the return of the Commission in the above matter was, by an instrument dated the nineteenth day of December last, extended for a period of two months: And whereas it is necessary to extend the same still further, Now, therefore, I do hereby, with the advice of the Executive Council, extend the time within which the Commission are to make their return to and for a further period of one month beyond the time in and by the aforesaid instrument appointed for the purpose—to take effect from the 18th instant.

Given under my hand at Government House, Sydney, this nineteenth day of February, one thousand eight hundred and ninety-five.

By deputation from His Excellency,  
FREDK. M. DARLEY,  
Lieutenant-Governor.

By His Excellency's command,  
JAMES N. BRUNKER.

WHEREAS the time appointed for the return of the Commission in the above matter was, by an instrument dated the nineteenth day of February last, extended for a period of one month: And whereas it is necessary to extend the same still further, Now, therefore, I do hereby, with the advice of the Executive Council, further extend the time within which the Commission are to make their return until the 9th April proximo.

Given under my hand at Government House, Sydney, this twenty-second day of March, one thousand eight hundred and ninety-five.

FREDK. M. DARLEY,  
Lieutenant-Governor.

By His Excellency's Command,  
JAMES N. BRUNKER.

## INTERIM REPORT TO THE HONORABLE THE CHIEF SECRETARY.

Sir, Board Room, Chief Secretary's Office, Sydney, 11 December, 1894.

I have the honor to inform you that the period of duration of the Royal Commission appointed to make a full and diligent inquiry into the working and management of the Hospital for the Insane, known as Bayview House, Tempe, will lapse on the 19th instant. In consequence of the protracted nature of the investigation, we shall, as Royal Commissioners, be unable to present our report to His Excellency the Governor within the time prescribed in the Commission, I therefore beg to request that the time be extended for a period of two (2) months—to a date expiring on February 19, 1895.

From official papers placed at our disposal to aid us in executing the terms of our Commission, we see that, on July 10, 1891, in reply to a letter written by Dr. A. J. Vause on 23rd of the previous month, the then Colonial Secretary approved of the renewal for the further period of three years from 31st December, 1891, of an agreement entered into between Dr. Vause and the Government for the care of fifty insane patients in the Licensed House for the Insane, known as Bayview House, Tempe, at the rate of £1 2s. 6d. per week per patient, with the distinct stipulation that such renewal was granted under exceptional circumstances, and that the Government patients were to be removed on 31st December, 1894.

In a further paper, dated December 1st, 1893, the Inspector-General of Insane reported at length, for the information of the Chief Secretary, on the farming out of the insane at Cook's River Road. Dr. Manning then submitted that there had been no economy, but a greatly increased cost in farming out insane patients, and, incidentally, that by reason of political and other extraneous influences, it had been found difficult for the Government to regain possession of the patients farmed out: It was therefore necessary to point out that the whole principal of farming out insane patients is wrong. This memorandum was submitted to the Chief Secretary, who, after careful consideration of Dr. Manning's report and proposals submitted by Dr. Vause, and personal visits to the Tempe, Rydalmere, and Parramatta establishments, made a minute dated 19th March, 1894, to the effect that he had had the figures of cost at the private establishments and the cost of patients in Government institutions carefully checked, and, in consequence, was led to the conclusion that no further extension of the system of boarding-out of insane should be permitted, and he fully concurred in Dr. Manning's report and suggestions; and furthermore, he desired that all parties be so informed, and arrangements made accordingly.

In the meantime, therefore, while asking for an extension of time, we, as the Commissioners conducting this inquiry, recommend and unanimously approve the steps we understand are being taken by the Government for the removal of the Government patients from Bayview House on the ground of increased economy, as fully explained in the report of the Inspector-General of Insane.

I have, &c.,

ARTHUR RENWICK,  
President.

To the Honorable the Chief Secretary, Sydney.



ROYAL COMMISSION TO INVESTIGATE CERTAIN CHARGES AGAINST BAYVIEW  
ASYLUM.

MINUTES OF EVIDENCE.

FRIDAY, 2 NOVEMBER, 1894.

[The Commission met at 11 a.m. in the Board Room, Chief Secretary's Office.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
Esq., M.D., INSPECTOR-GENERAL OF THE  
INSANE.

ANDREW GARRAN, Esq., LL.D.  
JAMES SINCLAIR TAYLOR MCGOWEN,  
Esq., M.L.A.

Dr. Vause attended on his own behalf to hear evidence and cross-examine witnesses.

C. E. Jeanneret, Esq., sworn and examined:—

1. *President.*] This is a Royal Commission appointed to make a diligent and full inquiry into the conduct and management of the Licensed House for the Insane at Cook's River, known as Bayview House, and particularly as regards the allegations made in the Legislative Assembly by you, as Member for Carcoar, respecting the treatment of a certain patient. We see from the copy of *Hansard* in our hands the nature of the charge you then made, and we should like to know if the remarks I am about to read as an extract from your speech contain the real charge you desire to make. These words, taken from your speech, are:—"I think it behoves the Government, upon the statement I have laid before the House, to make full inquiry. The inquiry will prove this: that a gentleman has been for months past—for the last four months to my knowledge—kept from 5 in the afternoon till 7 in the morning, over twelve hours, in a cold stable without even a bed to lie upon, without any water, without any attendant, without any food, having upon his body nothing but his nightshirt." These words, I think, contain the real charge you made to the House on that occasion, and do you still maintain that the charge is valid and a matter of fact? Yes; to the best of my knowledge that charge is true.
2. Of your own knowledge, do you know anything concerning the management of the asylum or of Dr. Vause, or of the general working of the institution? No; I do not.
3. Upon what grounds do you base this charge? I made that charge from information I received.
4. So, then, upon the information given to you, you made that charge in the Legislative Assembly? Yes.
5. We, as the Commission, wish you to tell us all that you think proper of the circumstances which led you to make this charge. Our desire is to get the fullest information possible upon this subject. Therefore, will you tell us what led up to your action in the Legislative Assembly? Some time ago, I think about a month before I took action in the Assembly, a house inspector under the City Corporation, a man named Gearey—I may say, a very reliable man—made a certain statement to me concerning an inspection outside the boundaries of the city. I did not pay much heed to what he said at first. He saw me on a second occasion, and asked me if I had done anything in reference to the first statement he made. I replied, "No, I have not; but I will see Dr. Manning about it." I went to Dr. Manning without further delay. I called at his private residence, but he had gone to Goulburn, I believe. On the next day I was in the company of Mr. Alfred Bennett, Mr. Taylor, and Sir William Manning, at the powder works at Manly Beach, and, in the course of conversation, I asked Sir William Manning if he had heard anything about the reports current relative to case No. 1 at Bayview. Mr. Bennett replied, "I have heard something about them; I have had them investigated, and there is nothing in the charges; I have had a thorough investigation made, and there is nothing in it." A few weeks passed, and Gearey came to me again upon this subject. I said to him, "You seem to take a great interest in case No. 1," and he replied, "I do so because of a very long-standing friendship, and I feel myself under some obligation to him for kindnesses rendered years ago." He then added, "I wish you to take steps in this matter, because all I have told you is absolutely true." I, thereupon, went to Dr. Manning, but unfortunately Dr. Manning was again out, and therefore I did not see him. I was going away to Queensland then for the purpose of being present at the opening of a section of the Tweed railway, and knowing I should be absent some days, I went to Messrs. Allen and Allen, my solicitors, to lay the case before them. I saw Mr. Arthur Allen, of that firm, and after other conversation I suggested that on my return to town we should go to Gearey and ascertain as far as possible the truth of the statement made. That was on the Monday.
6. Do you mean the Monday prior to the day on which you made this speech? No; a fortnight before that. It was then arranged that I should send Gearey to Mr. Arthur Allen. I knew nothing more until I returned from Queensland, which was the day before I brought the matter up in the House. Then I called on Dr. Manning at Gladesville.

C. E.  
Jeanneret,  
Esq.  
2 Nov., 1894.

7. *Dr. Garran.*] You said "we." Do you refer to anyone else besides Mr. Arthur Allen and yourself ;— do you mean another house inspector or some person appointed by the Government? On the Monday night I went to Dr. Manning's house, and ascertained that he had gone away to Goulburn by the 5 o'clock train, and it being the second occasion on which I had attempted to see Dr. Manning on this subject, I thought I would be justified in bringing the whole question before the House. After consultation with a medical friend in Sydney, whose advice I took, I determined to bring it before the House, and I carried out my determination.

8. *President.*] And the charge you made is the same in substance and in fact as the charge I read to you from *Hansard* a few minutes ago? Yes; and further, that when friends of the patient went to visit him at the asylum they were shown into an ante-room, "where they were kept waiting for ten minutes or a quarter of an hour. They were then shown into an elegantly furnished bedroom in which there were two beds, one for the patient and one for an attendant. They saw the patient in clean and comfortable sheets in a good bed; but, will hon. Members believe me when I tell them that, on each of these visits, the patient was brought out from the stable in the yard, where there was not even a mattress for him to lie upon, until one of the attendants in his own time made him one. There was not a blanket or rug of any kind; but there were three pieces of bagging or calico—something of that kind—and the three put together were not sufficient to cover a human being." That, Mr. President, was what I said previously—or the substance of what I said in Parliament.

9. Personally, do you know anything concerning the charges you have made? No. Personally, I know nothing at all about them. I made the charges in Parliament on the evidence of one whom I considered to be a reliable witness. Gearey is the man I mean. I have always found him most reliable, and I believe he can substantiate all I have said. I rely for my charges upon the accuracy of what Gearey told me. I may say I have seen Mrs. Clowdy, the daughter of the Hon. J. F. Burns, and another lady, whose name I forget, a lady who wrote to me from Lithgow, who also made complaints. I have destroyed that letter, but I showed it to Dr. Manning. I also received an anonymous letter, which I handed to Dr. Manning. This lady, who wrote to me from Lithgow, told me of things which confirmed me of the necessity for taking the action I took.

10. Do you know a man named J. J. O'Brien? I have heard of him; but it is mainly on Gearey's statement that I rely.

11. *Dr. Manning.*] Is Gearey an inspector of Chinese houses? Yes; he was a general house inspector; but I think he is now an inspector of Chinese houses.

12. When you called at my house were you given a reason why I could not be seen? Yes; I was informed you had left for Goulburn. I communicated with you on the two occasions named, and I am quite certain that it was my earnest wish to see you.

13. Did you leave your card when you called? No, Dr. Manning; I have called very often upon you during the many years you have been my neighbour, and I do not think I ever left my card at your house.

14. *President.*] You mentioned the name of Mrs. Clowdy? I saw Mrs. Clowdy; she expressed a wish to see me, and I went out to her house and saw her.

15. Where does this lady reside? Mrs. Clowdy resides with her husband, who is a Custom House officer, living at Paddington.

16. Had you any particular reason for making these charges in Parliament? None beyond that I considered it to be my duty as a public man to lay the statements I made before Members of the House.

17. You merely thought it your duty as a public man? Yes; as a Member of the House I considered the action I took was my duty towards the public.

[Witness withdrew.]

Professor Anderson Stuart, sworn and examined:—

Professor  
Anderson  
Stuart.  
2 Nov., 1894.

18. *President.*] As you are aware, this is a Commission appointed to inquire into the conduct and management of the Bayview Asylum at Cook's River. We have before us the report of a visit you made to that institution on the morning of the 20th May last. In that report you say:—

Sir,

As instructed by you on the evening of the 17th instant, I saw Messrs. Allen and Allen on the 18th; and from their Mr. \_\_\_\_\_, as also from H. Gearey, and from Mr. \_\_\_\_\_, son of Case No. 1, both of whom were present, I heard the accounts of the conditions said to be surrounding the patient at the Licensed House for the Insane, Cook's River. In order to further carry out your directions, I concluded that it was necessary for me to visit this establishment in the early morning, so that, if he were accommodated in the place and manner alleged, I should be in a position to verify the same.

On the 19th I completed my arrangements, and, starting from Sydney on the 20th at 5 a.m., I visited the licensed house at 5:50, with the results which follow.

I took with me Mr. Edmund Sager, Secretary to the Medical Adviser to the Government, who should accompany me as a witness of what might occur, H. Gearey and J. J. O'Brien, who had been the means of communication with Messrs. \_\_\_\_\_, and Detective Goulder, as a member of the Police Force, placed at my disposal by the Inspector-General of Police at your request, so that the party visiting a suburban house at such an hour and on a Sunday morning should be free from possible interference by the local police.

I left Goulder at the gate and went straight towards the office, the situation of which I well knew. Just at the office door I encountered an employe, of whom I inquired for the person in charge. He at once directed me to the head attendant round the corner to the left, following Gearey and O'Brien, who had preceded me. Having gone as directed, we found ourselves in a sort of courtyard, where, after a time, we found an attendant, who went to rouse the head attendant. After considerable delay the latter came, and to him I stated my office, authority, and business; but he said he could not let me see any patient without Dr. Vause's direction, and the doctor was at his residence. He then said I should go to the office. Thereupon I said that I had done so, and had been directed to where we then were. He then led me and Mr. Sager to the office, but said nothing to Geary and O'Brien, who therefore remained where they were, standing near a building with the external aspect of having been a stable with hay-loft above it at some previous time, with no windows, but now provided with two separate barred and padlocked doors, each with a small observation hole.

Arrived at the office, great delay occurred ere anyone answered the head attendant's summons by the electric bell. During this time I frequently urged him to take my card to Dr. Vause, or to find someone who would do so, but he declined to do either. Finally a maid-servant came, took my card, and soon returned with an intimation that Dr. Vause would be there in a few minutes, and he, in fact, soon appeared.

I apologised to Dr. Vause for disturbing him at that early hour, but told him that I had been directed by you to see a patient, concerning whom statements had been made, which rendered it necessary that you should take action. In answer to his inquiry as to their nature, I told him the gist of what had been communicated to you and to me. Dr. Vause asked who the patient was, and I now, for the first time, disclosed the name of Case No. 1. Dr

Dr. Vause showed no hesitancy in replying that I should see him, and asked me to sit down, but I requested to be allowed to accompany the doctor, and to be taken to where the patient was directly, so that I might see him as he actually was. I was led across a lobby, through a small dormitory, into a lavatory adjoining, and as we entered at one end of the lavatory, the patient entered at the other end by a door leading from the exterior of the building. The patient immediately addressed himself to us, but, just noticing him, I requested to be taken to where he had come from, and on passing out at the door through which the patient had entered, I was met by Gearey, who said that the patient had just been taken out of the left-hand compartment of the stable-like out-house, the door of which I saw was now again barred and padlocked, but Dr. Vause directed it to be opened.

The compartment was quadrangular, about 12 x 12 feet wide with a very high ceiling, but with no window or means of ventilation or of warming. The wooden floor was at the level of the ground and had been fouled. The odour of the place was most repulsive—a stale urinous odour of considerable standing.

The sole contents of the place were lying upon the floor and consisted of a mattress and three pieces of coarse canvas cloth in single ply. All of them were fouled. The mattress had a coarse canvas tick, and its straw stuffing felt hard and inelastic, as if it had been lain upon for some time. Gearey and O'Brien also saw this interior, and I then directed them to return to the waggonette.

Mr. Sager and I then accompanied the doctor back through the lavatory to the dormitory, where we found the patient sitting, and which we were now told was his room. He seemed to remember me somewhat, for he called me by the name of a medical gentleman in Sydney whom I am said to somewhat resemble (Dr. Scot Skirving). I felt to see what clothing he had on—a flannel shirt, a woollen jacket and trousers.

Dr. Vause said the patient was put in the outhouse when violent and specially ill, but no attendant remained in the outhouse with him, and that no attendant would see him between 10 p.m. and the morning—I presume 7 a.m., since when we first saw him he was being brought into the lavatory for his morning ablutions in the ordinary course of events.

I did not do much by way of an examination of the person of the patient, for it was more his surroundings that I came to inspect. How one of his eyes had become ecchymosed I did not inquire.

I enclose herewith a statement by Mr. Sager and one by Gearey and O'Brien, written down at my request immediately after the transaction and independently of each other.

Sydney, 21st May, 1894.

T. P. ANDERSON STUART, M.D.,  
Medical Adviser.

19. Are the facts stated in this report correct to the best of your knowledge? Yes, they are.
20. Have you anything to add to the statements you there make? I do not know that I have much to add to the statement of fact, but I have ample reasons to give in relation to the statements made. I do not think there is much objection taken to my statement or my report, because Dr. Manning, as far as I can understand him, agreed with it.
21. As a matter of fact, then, you found the patient, into whose case you visited the asylum to inquire, in the circumstances you mention in your report? Yes, exactly so.
22. You say that after seeing Dr. Vause you were taken to where the patient was, being led across a lobby through a small dormitory into a lavatory adjoining, and as you entered at the one end the patient entered at the other end by a door leading from the yard? Yes.
23. Before seeing Dr. Vause, did you leave two men near the building from which the patient was brought out and in which he had slept during the night? Yes.
24. Did you then insist on immediately going with Dr. Vause to the room from which the patient had been taken? Yes.
25. What was your reason for visiting the institution at such an early hour in the morning? I must fully explain to you the circumstances. I had an interview with the then Colonial Secretary, Sir George Dibbs, who informed me that a certain patient was said to be placed in circumstances which seemed to me to be absolutely incredible. I at once said to Sir George Dibbs, after hearing his statement, that so far as I could see there could not be any foundation in fact for the allegations made. I was referred to Messrs. Allen and Allen. I saw Mr. Arthur Allen, and heard from him certain particulars, and I told Sir George Dibbs of my interview with the Allens, with Gearey, and \* \* \*, the son of the patient. Sir George Dibbs said to me, "This affair must receive the fullest investigation, and you will have to make it." I said, "If it has to be done, how is it to be done." Sir George replied, "You must make your own arrangements. The statements say that the patient is being maltreated, and you must ascertain whether they are true or untrue." I realised that I should have some difficulty during the day-time to see the patient actually as he was in the place in which he was supposed to spend his nights. I knew by going later in the day I should not find him in the room in which he was said to have slept. Therefore, I made my visit early in the morning.
26. *Mr. McGowen.*] You say you arrived at the institution at ten minutes to 6 in the morning, but you did not find the patient until ten minutes to 7? Yes; that is so.
27. *President.*] Did not that fact strike you as being something out of the ordinary? It impressed me that it was, to say the least, very irregular. The patients were walking about the yard and grounds.
28. Then the patients did not seem to be under any control? None whatever. They were allowed to go about as they liked during the time we were waiting for somebody to come to us.
29. Referring to the room in which the patient had slept, do you not say that the wooden floor was at the level of the ground, and had been fouled; that the odour of the place was most repulsive—a stale urinous odour, of considerable standing? Yes.
30. Was there excreta lying there? Yes.
31. Were you impressed with the fact that the room had been carelessly cleaned? Yes; it had not been cleaned out after being used by the patient. There appeared to have been an attempt made to half wipe up the filth, and hurriedly make the room decent.
32. Do you think there had been proper steps taken to clean this room after its use as a sleeping apartment by the patient? No. As I say in my report, the contents of the place were lying on the floor, and consisted of a mattress and some pieces of canvas, all fouled.
33. What is your meaning of stale urinous odour, of considerable standing? I could detect it. Fresh urine has one smell, stale has another, and it was stale urine that we smelled on this occasion. More than that, the patient's son has informed me that he has visited the room at between 11 and 12 o'clock in the day, and still the smell was there.
34. Were there any beds in the room? It all depends on what you call beds.
35. You say that there were mattresses in the room? There was a mattress and three pieces of coarse canvas cloth, in single ply, all befouled. The mattress had a coarse canvas tick, and the straw stuffing felt as if it had been lain on for some time.
36. How was the ventilation of this room? It was absolutely insufficient. There was one small window screened, I believe, by a shutter. It was totally insufficient.

Professor  
Anderson  
Stuart.  
2 Nov., 1894.

Professor  
Anderson  
Stuart.

2 Nov., 1894.

37. Did you inspect any other part of the building? I did not; I only saw this one patient. My commission did not extend beyond this, but what I found and stated in my report is perfectly true.

38. *Dr. Garran.*] When you went in you say you had to wait for the head attendant? Yes; my report says so. When we went in we found no one at all; but near the office door, a little later on, we found an employee, a night-soil porter I think he was. He directed me to the head attendant, round the corner to the left. I saw no one at all until an attendant came to us in a sort of court-yard, and I asked him who was in charge. He said that an attendant was. Something took place which led me to believe or to suppose that he was not particularly anxious either to find, or for us to see the head attendant. I told him my name and the nature of my business, and that I must see the patient. He informed me that I could not see any patient without Dr. Vause's direction, and Dr. Vause was at his residence. I and Mr. Sager returned to the office, where we were informed that the head attendant would come down in a minute. We waited a long time, but he did not appear.

39. Then the head attendant was not in charge that night or early that morning? No.

40. Did you hear of or see any immediate attendant whose duty it was to look in upon the patient every two hours during the night? I did not; I only saw two men bringing the patient through the doorway leading from the lavatory.

41. Had you any opportunity of seeing the patient in his room before he was removed? No.

42. What opportunity was there for anyone to go into this room after you first arrived on the premises and before you saw the patient. Could anyone have gone there without being seen? I think not; for Gearey and O'Brien remained where they were while Mr. Sager and myself returned to the office.

43. Could they see anybody who went in that room? Yes.

44. Concerning this smell of which you speak: If a man confined in this room makes water during the night, and the room is well cleaned early the next morning, would the smell remain?

[At this stage Mr. Edmund Barton, Q.C., accompanied by Dr. Vause, appeared before the Commission. Mr. Barton applied for permission to attend during the sittings of the Commission as counsel for Dr. Vause.

Mr. Barton and Dr. Vause having retired, the Commission considered the application and unanimously decided to adhere to their former resolution that no parties to the inquiry should be represented by counsel.

Mr. Barton and Dr. Vause returned, and the President informed them the Commission considered that in the interests of all parties it would be better that counsel should not appear. They had already determined that Dr. Vause might be in attendance to hear every particle of evidence submitted to the Commission, and, furthermore, that he should be empowered to question all witnesses.

Mr. Barton thanked the Commission for their courteous receipt of his application, but at the same time requested that a note might be taken of his protest against the decision of the Commission.

Examination continued.]

45. *Dr. Garran.*] I was asking you about this urinous odour and the bad smell in the room; would there be any difficulty in keeping it free from such smell? I think there might be a considerable abatement. Utensils should be provided, but the difficulty is in making patients use them. The tendency of lunatic patients is not to use them, but they should be made to get up. In some instances they would not use these things, but they should be trained to it.

46. Do you think it possible to make such other arrangements that would prevent the patients fouling the floor? Yes; they should be made to get up two or three times a night if necessary. As a rule they do not like to be disturbed, and this mode of training might have a tendency to make them more cleanly in their habits.

47. Is there any objection to interfering with patients unnecessarily during the night? Yes, but what is unnecessarily—three times a night is not unnecessarily.

48. Do you think patients would want to make water three times a night? Yes; they would if they were roused up. That is part of the training. This frequent rousing is to train their nervous system into the habit.

49. Supposing a patient is opposed to this, do you think it would be better to disturb him than to let him remain? Yes. There is a certain amount of discomfort in getting up in order to evacuate and pass urine, but that is better than letting them do either or both while lying in bed.

50. Do you think it would be better to get them up as many as three times a night? Yes, I do. It would be better still to follow some advice which is given in a work published in 1894, entitled "Lunatic Asylums; their Organization and Management;" by Charles Mercier. His remarks appear to me to be so sensible that I will with your permission read them. Under the heading of "Dirty Habits" the author says:—"Patients who are of dirty habits need constant attention, and are a source of continual trouble in asylums, but, fortunately, by assiduous attention very much may be done to cure them of the objectionable customs." Going on to speak of the treatment, the author of the work I quote says:—"Patients who are dirty from sheer malice and from a desire to give trouble are a very difficult class to deal with. This category of patients is the most objectionable of all. Such patients are always made the tenants of single rooms in which they are for the most part left during the night to their own devices, and discovered in the morning in a condition of indescribable filth, and this cause is in many asylums unavoidable. But in an ideal asylum in which the number of attendants is not limited by necessary considerations of economy, such patients would have a special attendant to remain with them at night, and to prevent their indulgence in such practices. With the first of the two classes into which the patients of this category have been divided the prevention would then be very easy, and with the second it would not be difficult. Whatever the cause of this uncleanness may be every dirty patient should be trained into habits of cleanliness by being compelled to attend the closet, not only at frequent intervals, but, what is most important, at regular times. The nervous system, as a whole, and any special nervous mechanism of these particular functions is much the creation of habit that when once by persistent training the habit is established by exercising these functions at fixed intervals, and at regular times the nervous system will be broken into conformity, and the habit will at length become unmodifiable by the individual. For this reason patients, who are wet or dirty at night, should be taken up at least three times, and always at the same time every night, and given the opportunity of evacuating. \* \* \* \* \* Besides taking these patients out of beds, which should be done every three or four hours, the night attendant

attendant should at each visit—that is to say, every hour—examine their beds to see if they are dry, and if they should be wet they are to be at once changed, dry macintoshes and dry sheets placed upon the bed. Every such patient should be examined by the night attendant before he goes off duty, and every bed should be dry and clean when the day attendants come on.”

Professor  
Anderson  
Stuart.

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51. Take the case of a person past middle life, whose nervous habits have been formed, would it be easy to break him into new habits while in a demented condition? I think so. Such is my opinion, formed on the extracts I have read relating to such patients.

52. Then we have the alternative of two evils: one of a man being allowed to lie in bed in a state of filth, and the other that of probable annoyance—waking him up to answer the calls of nature? Yes; and I think the latter is the lesser of the two.

53. Do you know of your own knowledge whether it is irritating and possibly dangerous to wake patients during the night? I am of opinion that it is better to let them sleep if they can, but there should be throughout the night an attendant in a room next door; but there was no such attendant here in this case. The room was an outhouse, and the attendant had to come through a court-yard a considerable distance before being in proximity with the patient.

54. Do you know whether the attendant you saw was attached to this particular patient, or to others in the establishment? I do not know.

55. If an attendant were specially appointed to one patient, would it increase the cost of supervision? Yes.

56. You mention in your report that the building in which the patient had spent the night had the appearance of a stable; do you know if it ever has been a stable? I do not know; I did not make any inquiries on that point. Dr. Manning in his report called it an ugly building, and I in mine called it a stable-like outhouse. If the place had been a stable at any time, and had been converted into its present use, I say so much the worse.

57. *President.*] Are you perfectly satisfied that the ventilation is not as it should be—that is not up to standard? I am, unless you take the smell of a urinal as a standard.

58. *Dr. Garran.*] Are there any means by which this odour can be removed? I think so. The floor could be made to slant slightly, and if of wood it could be impregnated with paraffine oil or many other things. The floor might be of asphalt. It should certainly not be allowed to get into the state it was when a little trouble might keep it comparatively sweet.

59. Could this urine pass through the cracks of the floor to the ground underneath? I should think so.

60. Could not this be remedied? Yes; you could put down a floor and fill up the seams, or, as I said before, it might be of asphalt.

61. At the time you saw case No. 1, was he clothed? Yes; he had on a flannel shirt, a woollen jacket, and trousers.

62. Had he had his bath? He had not.

63. Did you know the state he was in when first the attendant went to see him? No.

64. Were you not allowed to go in the room? No; I cannot say that. As soon as Dr. Vause knew what I wanted he allowed me to go in.

65. But was not that after the lapse of a considerable time from your arrival on the premises? Yes; that is it. It was in the hope of seeing the patient in the sleeping room itself, or immediately as he left it, that I paid my visit so early in the morning. I did not see him until he was entering the lavatory. I had almost to force myself in. When I went to the institution I was fully persuaded that the stories I had heard were not true. I went in there in the spirit of one wishing to clear the besmirched character of a professional colleague, but when I reached the place, and saw the place, the facts came upon me as an absolute revelation, and then I said to myself, “It is all true.”

66. With regard to the covering, you say there were three pieces of coarse canvas cloth? Yes; there were three pieces of canvas.

67. Was there any blanket or coverlet? None.

68. Was there enough covering to keep a man warm during the night? No; they were three pieces of hard canvas. Dr. Manning says it was soft canvas.

69. Was it too hard for the patient to tear? It was a good deal too hard for this patient. I may point out that at Callan Park they have as covering a blanket, on both sides of which is stitched pieces of canvas.

70. In your opinion then this patient was not adequately clothed? He was not.

71. Do you know anything about the patient having a cold bath? I only heard something to that effect.

72. Was the weather at that time too severe for a patient in his state to have a cold bath? Yes.

73. Especially after having been cold perhaps the whole of the night? Yes; he should have had a warm bath to clean him.

74. Must you resort to a warm bath to keep a patient with the propensities of case No. 1 clean? Yes.

75. Would the patient have to go into the open to have a bath? Yes.

76. What was the nature of the weather on that morning? It was a bright, cold, frosty morning; and if it had been a wet morning it would have been just the same.

77. Then are your conclusions as follow:—That there should be better provision for passing excreta and micturating? Yes.

78. That the patient had not adequate clothing? Yes.

79. That his bedding was inadequate? Yes.

80. That the ventilation was not as it should be? Yes.

81. That the lighting of the room was insufficient? Yes; there was not sufficient light either for seeing or getting sweetness.

82. *Dr. Manning.*] What is your evidence about the cold bath? My impression is that he had a cold bath, but for certain I do not know of it.

83. Will you kindly give me the pages on which appear the extracts you have read from Mercier's work? Page 165, paragraph 3; 167, last paragraph; 168, second paragraph; and the last paragraph on page 169.

84. Do you think M. Mercier is referring in his work to patients of wet and dirty habits? Yes.

85. Do you think the same opinion would apply to acute maniacs and general paralytics? Perhaps not. It might apply to quiet patients.

Professor  
Anderson  
Stuart.

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86. Have you any actual experience in the treatment of insane patients? I was born in one, and brought up in two of the largest asylums in the world. I intended to have made a study of insanity, but I changed my mind. I have been, however, an inspector of asylums in various parts of the world, and I have been in many Australian institutions of a similar nature.
87. But in your experience have you been a medical officer at any one? No.
88. Do you think it would be desirable to disturb the rest of an acute maniac or an acute paralytic for the purposes mentioned in the quotations you have read? No; I do not think it would be advisable to disturb acute maniacs or paralytics.
89. *Mr. McGowen.*] In looking through your report I see, when you refer to the external aspect of the room in which you found the patient, you call it a stable-like outhouse, and then you go on to say, "the door of which I saw was now again barred and padlocked, but Dr. Vause directed it to be opened";—what is your meaning in the word "now"; was the door not barred and padlocked when you paid a previous visit? I had only seen it once in my life.
90. You say that the external appearance was stable-like? Yes; I think I said that, going on the assumption that it has been a stable.
91. Do you not also say that you saw the patient come out? I saw him immediately after he came out.
92. Did he look cold? Yes, he did.
93. Was he shivering? Yes.
94. Did he show any signs of great weakness? You must remember he certainly was not in good health. More than that, he is an elderly man, of spare build, but he did not seem very strong.
95. And was not his eye black? Yes, it was.
96. Did you see any indications of other bruises about his face? No; I merely saw that his eye was black.
97. Are you certain as to there being no ventilation, only one window, and no warmth? Yes. We saw it in the grey light of the morning; and what I saw was such a shock to me that it was quite sufficient to verify the facts, and lead me to believe that the story I previously heard was substantially true.
98. Are you satisfied that the odour was stale? Yes: there was more than one distinct odour. I am perfectly satisfied about that.
99. Do you think those in authority were justified in placing the patient in solitary confinement, and do you not think that such treatment would lead to suicidal tendencies? Those are matters of which I have no particular knowledge.
- 99½. Is it not a fact that this solitary confinement intensifies physical suffering and increases the mental malady? These patients are generally under the special care of some attendant, and when necessary to be removed to save annoyance to other patients they are kept by themselves, but not, as a rule, in an outhouse.
100. Do you think, then, that there should have been an attendant? Most certainly, but there was not one here.
101. Do you think that there should be light and warmth in the room? Yes; both absolutely.
102. Suppose the patient were to be destructive during the night, destroy his bed clothes or his night-clothes, would light and warmth be necessary in such cases? In this instance the patient is confined in an outhouse; left within four brick walls.
103. Do you think, then, that the management of this particular room and the treatment of the patient was satisfactory? In this particular case it certainly was not.
104. *Dr. Vause.*] Have you visited the asylum on many occasions? Three times, I think. The first time I saw yourself, the second time I saw a patient in your room, and nothing more.
105. Have you inspected the buildings? Yes; I think I saw the dormitories eight or nine years ago.
106. Had you ever seen the single bedroom in which the patient slept before? No.
107. Do you not think that the shivering appearance of the patient on that particular morning might be only the usual tremor of a paralytic? Yes.
108. Are you quite sure that the odour of which you complain was a smell of longer standing than one night? Yes; I spoke particularly of the urine, and there is a distinct difference between fresh and stale which I recognise.
109. Do you think it must have been there longer than one night? Yes.
110. Now, with regard to the warmth of the room, &c.;—if it were as cold as you say, do you not think that a delicate person would take cold by sleeping there? There is no saying. A person may be exposed to a great deal of cold and not catch cold. Not every person exposed catches cold, but it is for you to prevent such a possibility.
111. *President.*] I take it from your evidence, then, that you found the place in which the patient had been confined during the night in the most unsatisfactory condition? Yes.
112. Did you know anything of this room till you saw it? I did not. I went fully believing that the stories I had heard were absolutely untrue.
113. Then the complete effect of the whole matter on your mind was that case No. 1 was not being properly treated? That is the general effect.
114. Is there any statement you would like to make in connection with your report now before us? No; I wrote my report immediately on the impressions I obtained on my visit, and I arrived at the conclusion that the supply of clothes was inadequate, that the supervision was inadequate, and that there were no means for keeping the patient warm, comfortable, and clean. As to his medical treatment I know nothing.
115. Of course you only looked to the surrounding circumstances of this specific case and the statements made to you in relation to it? Yes; and my report is merely a relation of facts.

[Witness withdrew.]

TUESDAY,

TUESDAY, 6 NOVEMBER, 1894.

[The Commission met at 11 a.m. in the Board Room, Chief Secretary's Office.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
Esq., M.D., INSPECTOR-GENERAL OF THE  
INSANE.ANDREW GARRAN, Esq., LL.D.  
JAMES SINCLAIR TAYLOR MCGOWEN,  
Esq., M.L.A.

Dr. Vause was in attendance to hear evidence and examine witnesses in his own behalf.

Mr. Henry Gearey sworn and examined:—

116. *President.*] Do you remember visiting the Bayview Asylum on the morning of the 20th of May last? Yes.

117. Did you visit this institution in company with other gentlemen? Yes; with Professor Anderson Stuart, Mr. Sager, J. J. O'Brien, and Detective Goulder.

118. Did you all start together from the Queen's Statue and drive from there to the asylum in the wagonette belonging to the Board of Health? Yes.

119. When you arrived at Bayview Asylum, did you all enter the grounds together? Yes.

120. Did you walk down towards the back of the place where the kitchen is situated? No; only O'Brien and myself walked there; Professor Anderson Stuart and Mr. Sager proceeded towards the front of the building.

121. Did you meet any attendants? Yes; I met a man wheeling a wheelbarrow.

122. Do you know what he was doing with that barrow? He was removing nightsoil, I believe.

123. From any particular department? Not that I know of. I merely met him on the footpath.

124. Had you any conversation with him? I asked him if we were on the right way for the kitchen. He said, "Who goes there?" I said, "Oh, it is all right; we want to see Dr. Vause." We passed some remark about the weather being cold, and said no more.

125. Did he ask you the nature of your business? No.

126. What did you do further? We went round to the place where we found case No. 1 confined.

127. How did you know the locality in which that particular patient was supposed to be? I had been making inquiries for some considerable time, and had some idea as to where he was to be found.

128. Are you interested in the case? I am, most decidedly.

129. Have you known him long? Yes; he is a very old friend of mine, and when I heard that he was being brutally treated, I wished to know the truth or otherwise of the statements made to me. I had been told of his brutal treatment.

130. Who was your informant? I must respectfully decline to tell you, unless I am pressed.

131. Do you decline to answer the question? Yes; I must, unless I am forced.

132. We do not wish to force you, but, as you are aware, this is a Royal Commission appointed to make a diligent and full inquiry into the conduct and management of the Bayview Asylum. It is mainly through the information supplied by you that the charges were made against the institution, therefore it is necessary that we should get the information and know the source from whence you obtained it. Now, have you any objection to mention the name of your informant? No; I will mention the name, but I may say at once that he got his information from another person, and he would not tell me for a long time where he got that information from.

133. Was either of these persons at any time connected with the asylum? Yes; the first one was.

134. Was that first person to whom you refer a discharged servant of the institution? Yes; the first one. The men who gave him the information had never been in the institution, but the man who informed me had been.

135. What induced him to tell you? The whole thing came out in a purely accidental way. Several of us were sitting in my house having a general talk over a few glasses of grog, when this man asked me if I heard about the manner in which case No. 1 was being treated. I said, "What is the matter with him?" He replied that he was at the Bayview House, and he told me such things that I did not believe at the time. I went next day and asked him if what he had said on the previous night was true, and he said, "Yes." Then I asked him if he could prove it. He said, "Yes." Then I asked him if he would give me the name of the man who told him. He replied that it was all perfectly true, but that he could not give me the name of his informant. After making further inquiries I found out who the man was. A letter was produced, but still my informant declined to give me the name of his informant. I ascertained that the man was in the Police Force, and that I could not get any statement from him excepting through the Inspector-General of Police. I found out where the patient was, and I then got him out of the place. That is the substance of the matter.

136. Had you ever been to the asylum before May the 20th? Yes.

137. Was it purely in the interests and welfare of case No. 1 that you took this action? Yes.

138. Now, returning to your visit; after waiting a few minutes, did you see another attendant, who came and asked you what you wanted? Yes; a man whose name is I believe Doherty came to us. We also saw several of the patients—lunatics passing to and fro, and stopping to stare at us. While this was going on, Professor Anderson Stuart and Mr. Sager came back and asked us if we had seen any attendant. We pointed out one to them.

139. Did there seem to be any supervision over the patients then? No; it struck me that it was a kind of go-as-you-please arrangement.

140. What was your object in remaining in that particular part of the premises while Professor Stuart and Mr. Sager were elsewhere? I was acting under the instructions of Professor Stuart to steadfastly keep my eye on the place where case No. 1 was supposed to be confined. I did so, feeling that unless I did there might be some attempt made to smuggle him out.

Mr.  
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141. Is that the reason why you remained there, then? Yes, that was the object and the reason. When I first arrived at the building I could see that there was only one door, and I never took my eyes off that, for I had made an arrangement with Dr. Stuart not to leave that door until he returned.
142. After Professor Stuart and Mr. Sager left you, did you remain in the same place, and was it there that you saw passing to and fro the two attendants you mention? Yes; after Dr. Stuart, Mr. Sager, and the attendant left us, the same attendant came back and asked what patient I wanted to see; I replied, "No one." He then said, "Who are those gentlemen with you?" I said, "You had better go and ask Dr. Vause." The attendant then tried to push me away, and ordered me off the premises. I told him I should not go, as I was there on the order of Sir George Dibbs, and that I intended to remain until Dr. Vause came. He went away and consulted with another attendant, and the two came back with some clothes. They unlocked two doors in the building near which we stood.
143. How do you mean two doors? There were two doors together in one ward; he unlocked them both, and he went in the top door with the clothes.
144. Did those rooms connect with each other internally? No.
145. Then why did he open the two doors? To show me the patient I wanted to see, I suppose, or to see which patient I wanted to see.
146. Was there a patient in each room then? Yes, I believe there was, for I heard groaning and moaning, so there must have been someone in those rooms.
147. Did you see all that occurred during these proceedings? Yes, I believe I did, everything.
148. Did you see Case No. 1 himself inside the room? No, I did not see him until he came outside the door.
149. When he came out was he partially dressed? Yes, he had on a coat, trousers, and flannel shirt.
150. Have you any idea of what state he was in before these clothes were put on him? Yes; he could have had nothing on him at all.
151. Do you mean to say you believe he was perfectly naked in that room? Yes; he might have had a nightshirt on certainly, but if he had not he must have been perfectly naked.
152. Were the clothes he put on in a clean state? No; they were in a very dirty state. I thought they were far too dirty for him to wear.
153. Do you mean that they were merely soiled or particularly dirty? They were soiled and old, and like the clothes of a working man who had come out of a factory.
154. At what time did you see this? At 6:45 a.m.
155. When you saw him come out of that room was he being supported? Yes; on both sides.
156. Did he appear to be cold? Yes; he was shivering.
157. Do you think he was shivering from cold or disease? I think he was shivering from cold.
158. Are you quite sure he was not shivering from excitement? I don't think he was, but he was decidedly shivering, and seemed to dread crossing the yard, for when I first saw him, I heard him say, "I don't want a bath, I don't want a bath." He was expostulating with the attendants, saying, "Don't push me, don't give me my bath." When passing he said to us, "Good morning, gentlemen," and going further across towards the lavatory, I heard him say, "Don't push, I have not got my coat on yet. Good morning, gentlemen. I don't want a bath, I am too cold."
159. Were there any other persons about at this time? Yes; there were people loitering around, both patients and attendants, I think.
160. A few minutes afterwards, when the attendants had taken Case No. 1 across the court-yard, did you again see Professor Stuart and Mr. Sager? Yes; Professor Stuart and Mr. Sager, together with Dr. Vause and an attendant, returned to where Dr. Stuart left O'Brien and myself in the court-yard early in the morning. The door of the room from which Case No. 1 had been taken was then opened by Dr. Vause's instructions. On the arrival of Dr. Stuart and the others I said, pointing to the door, "There is the room," and Dr. Vause ordered the attendant to open the door.
161. Did you see all that was in the room? Yes; I did.
162. Did you examine the room and its contents carefully? Yes.
163. What did you see in the room itself? There was a sort of mattress lying on the floor; it was made of coarse pieces of canvas sewn together, and straw rammed into it.
164. Was it an ordinary made mattress? No; it was pieces of canvas sewn together, and stuffed with straw. There were also three pieces of sheeting made of canvas, measuring, I should think, about 3 feet square.
165. Were these sufficient to cover a man? No; certainly not.
166. In what condition were they? They were in a state of absolute filth, covered with fecal matter, saturated with urine, and stank something abominable.
167. What else did you observe in looking through the room? There was no ventilation.
168. No ventilation at all? Not that I saw. Nothing beyond an observation hole in the door and a shutter high up the wall, and this had not been opened.
169. Was there any light? No; except what came through the door.
170. Did you notice any window in the building? No; I did not examine it for a window; there was no light whatever. There was only a shutter, and that was closed up.
171. Did you notice that there were any ventilating bricks about the place? No.
172. Did you notice any over the door or near the door? No; I did not. To tell you the truth, I was very glad to get out of the room to obtain a breath of fresh air; the smell was most repulsive.
173. Did the floor seem to be damp? Yes, it was damp; it was wet, and there was a very foul smell.
174. Did you notice this foul smell? Yes; it was a smell of stale urine.
175. You say it was stale? Yes, I do. It was stale, and it must have been there for some time.
176. How do you know, or what leads you to that conclusion? My experience as a sanitary inspector tells me that the stench came from an old-standing cause. It must have been stale for the room to be in the state it was.
177. *Dr. Garran.*] Do you say you made other inquiries besides those of which you have spoken in regard to the treatment of this particular case? Yes; I found out and questioned the attendant who attended upon him.
178. From attendants who were in charge of him, or who had been? I got some from one source and some from another.

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179. Did you notice whether the room in which the patient had been confined was warm or cold? It was cold.
180. But if there had been no ventilation in it at all, and it being a comparatively small room would it not become slightly warm from the breath of the patient? I do not think so; it was a very cold morning, and I do not think the breath of a man would be sufficient to warm a detached building like this.
181. This is not a detached building, is it? The two rooms are detached from the main building.
182. *President.*] Is not what you mean that the two rooms are under one roof? Yes.
183. *Dr. Garran.*] Did you feel the room to be warm or cold? It was cold.
184. Have you any doubt in your mind as to the cause of the patient shivering? No; I believe he was shivering from cold for his face was drawn with pain, and when crossing the yard he looked to me like a man going to execution. He appeared to dread going to his bath, and complained that he was cold, and he was in such a condition that he could not walk without the assistance of an attendant on each side of him.
185. Did you follow him to the bath? No; I did not.
186. Do you know whether the water used was warm or cold? I do not for certain, but I know the attendants could not get warm water in the time I was there.
- 186½. Did you test the water at all? No.
187. Did you see him stripped? No.
188. Did you inform Mr. Jeanneret, then a Member of the Legislative Assembly, of these circumstances? I did; and at the outset he told me he could not believe it.
190. Had you any political reason for giving Mr. Jeanneret this information? No; I had not.
191. Did you hear of, or do you know anything concerning an anonymous written circular signed "Aristides"? Nothing beyond having seen one.
192. Had you anything to do with the authorship of that circular? No.
193. Do you know the writer of it? No; everything I have done in connection with this case, every paper or every line I have written concerning it, bears my own signature.
194. Are you quite sure that there was no window in that room from which the patient was taken? I quite certain about it being pitch dark. If there was a window it was covered up with a shutter.
195. *Mr. McGowan.*] What is your position in the Corporation? That of a sanitary inspector.
196. Therefore by the nature of your position have you not frequent occasion to judge of smells, and for instance can you tell the difference between fresh and stale urine? Yes.
197. Did you examine this room for the purpose of seeing whether it contained any other clothes with the exception of those put upon the patient? Yes, I did. There was nothing in the room besides the mattress and the three pieces of canvas sheeting to which I have referred.
198. Was there any chamber utensil in the room? No.
199. Was there an indiarubber chamber utensil in the room? No.
200. If there was a window there in that cell, had it been put up at all? No; the reason why I noticed this was that there were cobwebs on the shutter, and these cobwebs had not been broken.
201. Do you not say that you received your information from a man who had been an attendant at the institution for some time? Yes; there were two men living in Riley-street, and one of these who had been at Bayview House is now in the police force. This man is named Aleck Mackenzie. He told my informant about Case No. 1. Later on Mackenzie obtained a position in the police force and went to Goulburn, where he is now stationed. He gave the information to a transit officer, who told me, and I said it was of no use going any further unless I was prepared to prove my statements. My informant gave me the source of his information, and said his informant could not supply the proof except through the head of the Police Department. I then made further inquiries, ascertained the name of the warder attending on Case No. 1, and from one source and another I investigated the whole thing. In the course of my investigations I had to meet with many obstacles: in fact from the beginning of my inquiries till now every possible obstacle was placed in my way to prevent me making the fullest investigation into the matter.
203. At first did not Mr. Jeanneret feel disinclined to believe your statement? At first he did not believe me.
204. Was it not after repeated conversation with him that he placed any credence in what you said? Yes, it was. Mr. Jeanneret then referred me to Messrs. Allen and Allen, and asked me to make a statement of the facts to them. I did so.
205. After that did you go to Mr. Munro, of M'Arthur and Company, with Mr. Seymour? Yes.
206. Did you next go to Professor Anderson Stuart? Yes.
207. How did he receive your statement? He did not place any credence in it, and after further conversation said that if my statements were correct, the patient could not possibly live six more months.
208. Was it not from outside pressure only brought to bear by the patient's friends that you obtained permission to visit Bayview House on the morning you did? Yes.
209. Did you know that in taking the action you took you were risking your position as a servant under the Corporation of Sydney? Yes, I did.
210. How long have you been in the employ of the Municipal Corporation? Five years.
211. Still, knowing you risked your position, you determined to go to the room where you knew the patient was confined? Yes.
212. Did you stay in that small courtyard outside the door of that room the whole of the time Professor Stuart and Mr. Sager were away? Yes; I never left the vicinity of that door.
213. With regard to these pieces of canvas covering, do you not say that the largest piece was not more than 3 feet square? Yes.

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214. Were they rugs? Certainly not; they were merely pieces of canvas in a filthy state and saturated with urine.
215. Had the patient any clothing upon him before the attendant took his clothes into the room? He had nothing at all, except perhaps he might have had a night-shirt. The clothing taken in was dilapidated and dirty, and looked as if it had belonged to an engineer engaged in a workshop. The only wearing apparel he could have had on his body before these clothes were placed on him by the attendant must have been something very slight indeed. He wore a flannel shirt buttoned up in the front. I could not say if he wore anything under the flannel shirt, as it was buttoned close up to the throat.
216. Did you not consider it your business to make the fullest investigations possible? I considered it to be my business to ascertain whether it was true that the patient was being treated in the manner reported to me.
217. Did you examine his body? I did not. I merely obeyed my instructions to remain outside the room and see all that took place within the range of my vision.
218. *President.*] You spoke a few minutes ago about obstacles;—what obstacles were placed in your way while you were making these inquiries? There were obstacles in this way: Every person I went to see appeared to be under some constraint in the manner of giving information. I had to bring great pressure to bear, and it appeared to me that influence had been at work to prevent my getting what I wished to know. There was an attempt made to pooh-pooh all the allegations I myself made.
219. Then was there reluctance on the part of people whom you saw to give you information? Yes; decidedly so.
220. Have you any reason to assign for this reluctance? I can only suppose that they did not wish it to be found out that certain persons were shareholders in Bayview House, such persons, for instance, as the Hon. Edward Greville, M.L.C., and Mr. Copeland, a former Minister for Lands.
221. Do you know if these gentlemen are shareholders? I do not; but I have heard it reported that they are.
222. Do you think that was one of the main obstacles in the way of you obtaining the information you required? Yes; I heard it said that those gentlemen were shareholders—it was a common report.
223. Did you not say you risked your official position by making inquiries into this matter? I did.
224. What risk did you run? If Dr. Vause had found out that a visit was to be made on that particular Sunday morning, he might have had Case No. 1 shifted into the room he was supposed to occupy. I then should not have been able to prove my case, and should have been regarded on making my visit, if I had been unable to prove what I desired to, nothing less than a meddling fool.
- 224½. Would that have incurred any risk to you? Yes; I should have been shifted from my official position.
225. Then do you believe you would have lost your position under the Municipal Council if your statement had not been substantiated? Yes.
226. *Dr. Garran.*] Do you not say that all the clothes the patient wore on that occasion were coat, trousers, shirt, and boots? Yes.
227. Had he on any singlet? I cannot say.
228. Do you think he had any clothing on during the night? No, I do not think so, for I saw them carry in the clothing he wore when he came out.
229. Might not the patient have worn pyjamas during the night? No; I think not.
230. What did you see the attendants carry into the room? A serge coat, trousers, shirt, and boots.
231. Were there any other clothes lying on the floor of the room? No, none at all.
232. Is it your inference that during the night the patient had nothing on? Yes.
233. Do you believe that he was put into the room naked? Yes.
234. Do you think that when he was placed in that room over night his clothes were taken away from him, and he was left there in a state of nature? Yes.
235. Did you see any torn rags about? I did not. I saw nothing besides the three pieces of canvas.
236. Did you see any blanket inside the room? I did not. There was nothing in the room but the pieces of canvas of which I have spoken. Dr. Stuart counted these pieces of canvas, saying at the time "one, two, three," and put them all in a heap, one on top of the other.
237. *Dr. Vause.*] In what relation does J. J. O'Brien stand to you in the whole of this matter? He is a fellow sanitary officer. When I went to Professor Anderson Stuart I explained to him that in the course of any action I took I should like to be supported. I explained to him that I preferred to take with me one of my mates, a man on whom I could rely, rather than trust to an outsider or even a member of the Police Force. I explained that the man I proposed to take was altogether unprejudiced and knew nothing of the case, but at the same time he was one whom I knew and could rely upon.
238. *President.*] Did you write a report on your visit to the asylum? We did.
239. Does it read as follows:—

To the Secretary of the Government Medical Adviser,—

Town Hall, Sydney, 20 May, 1894.

Sir,

We have the honor to report that this morning at 5 a.m. we left Sydney with Professor Anderson Stuart, Mr. Sager, and Detective Goulder. Arriving at Dr. Vause's, Cook's River Road, at 6 a.m., we entered by the front gate, and not seeing any person in charge proceeded to the back entrance of the establishment.

We met a man wheeling a barrow who said, "Who goes there?" We replied we wanted to see Dr. Vause. After a few minutes Professor Anderson Stuart and Mr. Sager met us and asked if we had seen any attendant. We pointed out one to him. The attendant invited Professor Anderson Stuart and Mr. Sager to come round to the office.

Dr. Stuart, Mr. Sager, and the attendant then left us. We remained in the same place. A short time after this the same attendant came back and said, "What patient do you want to see?" We replied, "No one." The attendant said, "Who are those gentlemen with you?" We replied, "Ask Dr. Vause." The attendant then ordered us off the premises in a very rude manner saying they allowed no loiterers about here, and if we had any business we must go to the office where the other two gentlemen were, seeming very desirous to get rid of us. We replied we were waiting for Dr. Vause, and intended to do so until his arrival.

The attendant then left, and after an absence of a few minutes returned in company with another attendant carrying some clothes. They unlocked two doors, entered one room, and after ten minutes' absence came out of the room (6'45 a.m.) supporting a man between them in a shivering condition.

We recognised this man as Case No. 1. The patient looked at us and said, "Good morning, gentlemen. I don't want a bath. I am too cold." The attendants urged him to a quicker pace through another door. The patient said, "Don't push me, I haven't got my coat on yet."

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A few minutes later Professor Anderson Stuart, Mr. Sager, Dr. Vause, and the first attendant referred to appeared. The room which the patient was taken from was again unlocked, and we saw the interior. The contents of this room consisted of a straw mattress laid on the floor, and three pieces of some sort of sheeting. The room is of brick, about 16ft. high, about 12 x 12, no windows, no ventilation, having the appearance of an old stable.

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H. GEAREY.  
JOHN JOSEPH O'BRIEN.

Yes; that is the report we sent to Professor Anderson Stuart.

[Witness withdrew.]

Mr. John Joseph O'Brien sworn and examined:—

240. *President.*] Do you remember the morning of the 20th of May last, when you, in company with others, paid a visit of inspection to Bayview House? Yes.
241. Did you go there on the particular invitation of Mr. Henry Gearey? Yes; I am a brother officer of his, and he asked me particularly to go with him on this occasion.
242. Do you remember all the circumstances connected with your arrival at the Asylum? Yes.
243. Did you remain with Gearey near the building in which Case No. 1 was said to be incarcerated? Yes.
244. Did you see all that took place in connection with that inspection? Yes.
245. Do you remember that a certain door was opened, and that two attendants took clothing into the room? Yes.
246. When that door was opened did you carefully notice what articles of clothing the attendants took inside the room? Yes; they took in a coat, trousers, shirt, and a pair of boots.
247. Did you see them come out? Yes.
248. Did you see any other articles of clothing in the room? I did not. I saw no articles of clothing excepting those that the patient wore.
249. That being so, is it your opinion that the patient must have been put into that room absolutely naked? Yes; that is the only conclusion I can come to.
250. Did you see all that the room contained? I did.
251. What did it contain? A mattress and three pieces of canvas.
252. How large were these pieces of canvas? I should think about 4 feet by 6; they might be 4 feet by 5.
253. Were these pieces of canvas soiled? Yes; they were soiled both by excreta and urine, and were in a filthy condition.
254. How long have you been sanitary inspector? Nine years.
255. In the course of your experience have you had the opportunity of acquainting yourself with different smells? Yes.
256. Can you tell the difference between the smell of fresh and stale urine? Most decidedly.
257. Was there a stale odour in this room? Yes; it was a very stale odour. It was a most sickly smell altogether, and such a one that I was glad to escape from as quickly as possible.
258. Do you think there had been any attempt made to clean the room? All I can say is that the floor was smeared a bit.
259. Do you think there had been an attempt made to wipe up the mess during the interval in which the patient was dressed? Yes.
260. Did you examine the room to see if it was ventilated? Yes; but I saw no means of ventilation.
261. Did you see any window in the room? No; the room was that dark that it looked to me like a cell.
262. If there had been a window, you must have seen any light? I should think so. I did not see any light, and I feel positive there was no window at all.
263. Do you feel positive that there was no window in the room? Yes.
264. Did the air feel cold? Yes; it was a bitter cold morning—so cold that Professor Stuart, Mr. Sager, Detective Goulder, and ourselves had our top coats on.
265. Do you think that a man lying in that room all night would feel the cold? I should think he would, especially at that time of the year.
266. What was the floor of that room like? It was a boarded floor, nearly level with the ground.
267. Was the floor damp? It was wet from urine, and altogether a place not fit to sleep in; at all events, a place I should not like to sleep in.
268. Did you see the patient when he was removed from that room? I did.
269. Did he appear to you to be cold? Yes; he was in a shivering weak condition. He had to be supported by an attendant on each side. His eye was discoloured—black in fact.
270. Had you ever seen this place before? No. Mr. Gearey told me two days before that he specially desired me to go with him on this occasion. He asked me as a special favour to accompany him, and I gave my consent to go. He told me he would rather trust to me as a fellow officer whom he well knew than to a stranger. I therefore agreed to go with him.
271. Did you know, in point of fact, that Case No. 1 was at Bayview House? I did not until a couple of days before I visited the place, and when I was asked by Gearey to accompany him.
272. Concerning these pieces of canvas or anything else inside the room, did you find or see any indication of canvas sheeting or bedding torn to pieces? I did not.
273. Did you see any shreds of torn material about the room? No; I am quite sure of that.
274. Was it not so dark inside that you could not see these details? No; it was light enough for me to see that much.
275. Did you see any blanket in the room? I did not—only the three pieces of canvas.
276. How large are these pieces of canvas? I should think the largest was about 4 feet by 5.
277. Were the other pieces much smaller? I would not like to say. I was more impressed with the smell and general condition of the room.
278. *Dr. Garran.*] When the door was first opened, did you take the opportunity of putting your head inside to see the actual condition in which the patient was? No; I did not like to do so, for I did not know for certain whether he was there.
279. What actually took place while you were waiting outside the room? While Professor Stuart and Mr. Sager were round at Dr. Vause's house, an attendant came along and asked our business. We told him

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- Mr. J. J. O'Brien,  
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- him to ask Dr. Vause. He then ordered us off the premises, saying we were only loiterers about the place and had better go out. We answered that we were waiting for Dr. Vause, and meant to stay until the doctor came.
280. Were your instructions from Professor Stuart to wait outside that door? Yes.
281. Did you not look inside the room when the door was opened? No; I did not. I thought it best to strictly obey my instructions.
282. Are you quite sure as to the nature and number of the garments taken into the room by the attendant? I am quite sure it was a serge or part of a serge suit.
283. Are you reasonably convinced that the patient wore nothing more when he came out than was taken in by the attendant? Yes; I paid particular attention to the clothing they carried in, and I saw it was the same clothing the patient wore when he came out.
284. Might not the patient have had pyjamas under these clothes? I cannot say, but I should think not.
285. Was there light sufficient in the room to see cobwebs if they had been there? I did not look for them, so I cannot say.
286. Was there any smell in the room? Yes; there was a lot of mess and a smell of urine in the building.
287. Was the mess in any one particular part only? No; it looked smeared about as if there had been an attempt made to quickly wipe it up.
288. Might the patient have smeared it about? I cannot say.
289. Were the pieces of canvas or the coverlet stained? Yes.
290. Did you particularly examine what we may term the cover? Yes.
291. Was it a blanket? No.
292. Was there any blanket attached to it? No.
293. Was it a piece of canvas on which a blanket had been stitched? No; I am positive there was nothing of the kind.
294. Was it of sufficient length for a patient to lie on or sufficiently long to cover him? No.
295. Were there any signs of torn clothing in the room? No.
296. What other circumstances were there in connection with your visit? When we first went to the place—I mean to the neighbourhood of those two doors—I heard moans inside. The attendant who was with us retired for a moment to speak with another attendant. They then returned and ordered us away. We would not go, and then they unlocked the two doors, took in some clothes, and brought the patient out. When passing across the yard the patient said, "Good morning, gentlemen; I don't want a bath—I am so cold. Don't push me, I haven't got all my clothes on yet." He was then hurried away.
- 296½. Was there another room adjoining that from which Case No. 1 was taken? Yes.
297. Was there a patient in that room? Yes, I think so.
298. Did you follow Case No. 1 and the attendant to the bath-room? Yes, I followed them in that direction.
299. Do you know whether the water used for bathing the patient was warm or cold? I cannot say.
300. Mr. McGowen.] Are you sure that the foul mattress and the three pieces of canvas to which you have referred were the only articles in that room? Yes, I am positive of that.
301. Were there any sanitary arrangements in that room? No, none whatever.
302. Are you sure that there was no gutta-percha utensil in the room? There was nothing of the kind, I am sure.
303. Are you certain there was no utensil of any kind in the room? I am certain there was no chamber at all.
304. Were there any torn clothes about? None whatever.
305. Have you reasonable ground for supposing that the whole of the clothes worn by the patient when he came out of the room where the same clothes you saw taken in by the attendant a few minutes previously? Yes, I am positive of that, for I saw and was able to identify the coat, trousers, and boots.
306. Do you say you saw no window in the room? Yes; the room was quite dark, except for the light which came through the open door.
307. When the door was opened did not a certain amount of light enter the room? Yes.
308. And was that the only light that came within the walls? Yes.
309. Do you know whether there was a window or window-shutter high up the wall, about 18 or 26 inches in length, and 12 in width? Yes, I think there was; but I cannot speak with certainty on this point, as my attention was more particularly drawn to the patient, and the condition in which he was found.
310. Did you cast your eyes round this cell? Yes; I did.
311. Did you notice whether there were any cobwebs on the shutter? I did not pay any particular attention to that.
312. How far were you standing from these two doors? I should think about 12 or 15 feet, and 3 or 4 feet from the water-closets on the other side of the yard.
313. When the attendants came in the first instance carrying the clothes, were both the doors opened? Yes.
314. If you had taken five or six paces then could you have seen inside the room? Yes; but the attendant spoke in a threatening manner, and we did not like to force ourselves into the room. More than that, I did not know for certain in which room the patient was. If I had known I would have made my way there. The attendants, I am sure, desired to get rid of us if possible, and we, acting under instructions, did not like to force our way, and, therefore, we did not know what to do. Now, however, I regret I did not go into the room as soon as the door was first opened.
315. Had you any reason to believe when you were carrying out your instructions that Case No. 1 was in one of these rooms? No.
316. Did not Gearey take you into his confidence and let you know something of the mission on which you were engaged? No, not until two days previously, and then he did not tell me much.
317. From your experience as a sanitary inspector, are you able to detect the difference between the smell of fresh and stale urine? Yes; I am positive on that point.
318. Do you, as a sanitary inspector, have to visit and inspect Chinese dwellings in the City of Sydney? Yes.

319. Have you, in the course of your experience in that capacity, come across dwellings or rooms as bad as this one from a sanitary point of view? I do not think I have, and certainly I have not come across worse. - Mr.  
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320. If, in the course of your inspection, you had found a room in a similar condition to this, what would you have done? I should have reported it for prosecution, for I should consider it injurious to the health of anybody to remain in that room for a couple of hours.
321. Have you found any sleeping apartments, reported on them, and obtained a conviction in circumstances similar to this? Yes.
322. In cases no worse than this? Yes.
323. In some of the worst cases you have met in the course of your duty as a sanitary inspector, was the smell as bad as this? I never found a worse case, the smell was simply abominable, a nasty, sickening smell.
324. *President.*] Did you make a close examination into this matter generally? Yes.
325. Did you notice the walls of the room? Yes.
326. What were they? Brick walls.
327. Were they level all the way down to the ground? Yes.
328. Were they completely of brick all the way down? Yes.
329. Were they painted half-way down? I do not know, I fancy so. It is such a long time since I was there that I do not exactly remember.
330. Did you notice if there were wooden walls in the room? No, I do not think there were any wooden walls. I am not quite sure; therefore I do not like to say anything about it.
331. *Dr. Vause.*] In course of your evidence you refer to two rooms or two cells;—are you quite sure there was an occupant in each room—Case No. 1 in one room and another person in the other? I can only say I heard moaning in the other room. I am quite certain I heard a moan, and hearing that I came to the conclusion that there was somebody in the room adjoining the one from which Case No. 1 was taken.
332. *President.*] It has been given in evidence that there was a window in that room opposite the door considerably high up the wall, that it was closed and covered by a shutter, and that there were unbroken cobwebs over that shutter;—did you see any cobwebs there? It was a dark morning, not quite daylight, and I am of opinion that with a light thrown into the room through the open door no one could have seen any cobwebs. I feel positive that no one could have seen cobwebs at that time.  
[Witness withdrew.]

Edmund Sager, Esq., sworn and examined:—

333. *President.*] Are you Secretary to the Sydney Board of Health? I am. E. Sager, Esq.  
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334. Do you remember on the 20th May, in company with Professor Anderson Stuart and other persons, paying a visit to the Bayview House for a certain purpose? Yes.
335. Have you written a report in reference to that visit? I have.
336. Do you make in that report the following statement:—

Sunday, 20 May, 1894.

In accordance with the instructions of the Medical Adviser to the Government, I met him this day at 5 a.m. at the Queen's Statue, top of King-street; and the following is a statement of the occurrences which happened:—

At 5 a.m., at the Queen's Statue, Dr. Stuart, Detective Goulder, two municipal officers, and myself, met by arrangement, and proceeded at once in the Health Department waggonette to the Licensed House for the Insane kept by Dr. Vause, known as Bayview, Cook's River Road.

At about 5:50 a.m. the two municipal officers entered Bayview grounds. At about 6 a.m. Dr. Stuart and myself entered the grounds and proceeded to the office door; just outside the office door we met a man with a wheelbarrow, evidently removing nightsoil. Dr. Stuart asked him who was the officer in charge, and where he could be found. The man replied, "You had better see the chief attendant," and directed us to go round the main buildings to the left, where we would find the kitchen. On arriving at the yard adjoining the kitchen we found the two municipal officers. One of them pointed out a building in the yard resembling from outside appearances a stable, and stated that from the information he had received he believed that to be the building within which the patients slept. This building was situated at the side of a small courtyard, being bounded on one side by the back of the main building, on another by the kitchen block, the third being formed partly by the stable in question and partly by a blank wall; the fourth side was not entirely closed in, being formed by some building, at the end of which was evidently a urinal, and an open space (by which we entered); in this space two newly-dressed but not painted gate-posts had recently been erected, evidently for the purpose of putting up gates to complete the enclosure.

Two or three attendants came out into the enclosure from time to time; one of them was sent for the chief attendant. At about 6:15 a.m. the chief attendant appeared, and Dr. Stuart informed him that he had come by direction of the Colonial Secretary to see a patient. The chief attendant replied that no person was allowed to see a patient without Dr. Vause's permission, and invited Dr. Stuart and myself to go round to the office. This we did, leaving the two municipal officers in the before-mentioned enclosure. Arriving at the office door, the chief attendant rang the bell. It was, however, about twenty minutes before any reply was received; a female servant then appeared, and was directed by the chief attendant to take Dr. Stuart's card over to Dr. Vause, who was then stated to be at his residence, some little distance opposite. Dr. Stuart and I remained on the office verandah. Dr. Vause appeared at about 6:45, and Dr. Stuart informed him that he had come by direction of the Chief Secretary to see a patient whose friends had been complaining as to his accommodation and treatment. Dr. Vause said, "What patient?" Dr. Stuart replied (Case No. 1), and I wish you to take me at once to his room in order that I may see him before he gets up." Dr. Vause said, "Walk inside." We entered a room furnished as a sitting room and followed Dr. Vause through a door opposite the window, across a small lobby and into a room containing three or four beds; we turned to the right out of this room into an oblong room used as a lavatory. As we entered this room at one end the patient entered at the other. He had a black eye, appeared rather feeble and cold, had on a flannel shirt and clothes which did not appear to be clean. He shook hands with Dr. Stuart, and said, "I know you; you are Scot-Skirving." Dr. Stuart, turning to Dr. Vause, said, "I wish you to take me at once to the room just left by the patient." We left the room by the door we had seen the patient enter, and found ourselves in the court-yard before referred to, the two municipal officers being still there. Dr. Vause requested an attendant to open the farthest of the doors of the building resembling a stable—the door was open—and we entered the room, of which the following is a description:—

Size, about 12 or 14 feet square; height, about 16 feet; floor, wooden; no window; no ventilation; only opening, observation-hole in door with shutter.

Sole contents:—Old straw mattress, two pieces of torn and dirty canvas.

Dr. Stuart told the two men in the yard that they might return to the waggonette. We returned with Dr. Vause the way we had come. The patient was found in the dormitory above referred to, and Dr. Vause stated that when he was all right he slept in that room. In reply to questions, Dr. Vause stated:—

1. That the patient was placed in the single dormitory because he was noisy, dirty, and destructive.
2. That when there he had no night attendant.
3. That he was shut up about 7 p.m. and brought out about 7 a.m.
4. That an attendant generally looked to him about 10 p.m.

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In reply to a further question as to how long the patient had been occupying that room, he stated that he had been there for some little time, as he had not been good.

We wished Dr. Vause "Good morning," and retired, reaching the gates about 7 a.m.

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Secretary to the Medical Adviser.

337. Is that a correct statement of the facts of your visit? Yes.
338. Was there any delay before you could attain the object of your visit? There was some delay in the early part, but none after Dr. Vause had met us.
339. Before seeing Dr. Vause, had you any opportunity of traversing the ground and seeing some of the patients? Yes.
340. Did the patients seem to be at that moment under any particular direction or control? No. When we first entered the grounds we met a man with a wheelbarrow. He directed us to go round the main building to the left where we would find the kitchen block. When we got there we saw two municipal officers. We waited there for some little time, and whilst waiting one or two of the patients, I believe, passed by.
341. Were there only one or two? I think there were not more than two; as a matter of fact it was somewhat difficult to tell patients from the attendants. Several passed along; in all, I should think about six persons came along while we were there.
342. On your arrival at Bayview House, did you know for certain in which part of the building Case No. 1 was to be found? No; the facts were not known to me at that time.
343. Were any other members of the visiting party aware of this patient's room? I cannot answer that question. I had not been informed myself, except on the way out from Sydney that morning I heard Gearey tell Professor Anderson Stuart certain things. From his conversation I understood that he expected to find the patient in a detached building, which he called a stable.
344. After you arrived there, and had seen one of the attendants in company with two municipal officers, did one of them point out to you the building in which he supposed the patient had slept and had been found? Yes.
345. Did you observe that building, and its relation to the other buildings? Yes.
346. It has been given in evidence that you went round with Professor Anderson Stuart to see Dr. Vause? Yes. After some delay the attendant in charge came to us, the delay evidently having been caused by him dressing himself. We explained the nature of our business, and the authority under which we visited the Asylum. The attendant informed us that we could not see any patients without the authority of the Medical Superintendent. He asked us to go round and see the Medical Superintendent, and after some little delay a maid-servant came and took Dr. Stuart's card over to Dr. Vause at his residence some little little distance away. In the meantime Professor Anderson Stuart and myself remained on the office verandah. Dr. Vause came later on, and with him we entered the main building. We proceeded to the lavatory, and as we entered at one end Case No. 1 entered at the other.
347. Had you every opportunity of seeing the patient at that moment? Yes.
348. Did he seem cold? Yes.
349. Was he shivering? Yes.
350. Did you then pass on to the vicinity of the room where he is said to have been lying? Yes. As the patient came from the opposite door Dr. Vause was requested to show us the room from which the patient had been taken. Dr. Vause then took us into a court-yard outside the lavatory, the same place where we left the municipal officers, and directed an attendant to unlock the farthest of the two single rooms.
351. Was the other room open at all? It was not then.
352. Did you see it opened at all? Yes, I saw it open when we arrived, before we saw Dr. Vause. I saw an attendant open the door of what I may call No. 2 room and close it again. That was the room next to where Case No. 1 had slept.
353. Had you any opportunity of inspecting that No. 2 room? No.
354. Did you hear any moans come from that room? No.
355. Did you examine the room from which Case No. 1 had been taken? Yes.
356. Did you say it was about 12 or 14 feet square? Yes.
357. Did you go into that room? Yes.
358. Did you make a careful observation of all you saw there? Yes.
359. Did you see any provision for ventilation in that room? I did not. It was about 16 feet high, and looking at the top I did not see any apertures for ventilation or light.
360. Was there any distinct place through which light could enter the room? No.
361. If there had been a window, could you have seen it? I think so, if it had been a means of admitting light. My impression is that if there was a window in the room it must have been covered with a shutter or a blind.
362. We have been told in evidence that there was a window covered by a shutter, and that unbroken cobwebs were on that shutter, and I ask you, could those cobwebs have been seen while you were in the room? It certainly would not be possible to discern cobwebs at that time in the morning and with the light available.
363. If a person then was able to see cobwebs over a closed window shutter, he would naturally be able to see if there were a window in the room? I should think so; all I saw, however, was darkness. I never saw any window or window frame. I have heard of this window since, but when I was there and looked round the room I saw no sign of any aperture whatever.
364. If there had been any window do you think you would have seen it? I think so. I did not see either window, shutter, or cobwebs. My opinion is that it would have been impossible to have distinguished cobwebs in the room, for on looking round I saw nothing but semi-darkness.
365. In looking round the room did you see any provision for the comfort of the patient, such as sleeping accommodation? All I saw was a straw stuffed mattress and two or three pieces of canvas. The canvas was torn and of a dirty colour.
366. Was it soiled? I did not finger it to ascertain, but the whole of the pieces looked to me moist and rotten from dirt.
367. Can you give us any idea of the size of these pieces of canvas? They struck me as being rather small.
368. Can you say exactly what was the size? No.

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369. Did the size strike you as being too small to cover a human being? I should imagine they might have just done so if they had been laid out properly.
370. Were all the pieces of canvas the same size? I did not notice; they did not seem to be very large or small.
371. Did you think that they were sufficiently large to have covered a man? I cannot say for certain.
372. Did you hear any conversation between Professor Anderson Stuart and Dr. Vause? Yes.
373. Was the purport of this conversation to the effect that the patient had been placed in this room because of his dirty habits? Yes.
374. Did Dr. Vause make any statement concerning a night attendant visiting the patient? Yes; there was some statement made with reference to that subject. It was mentioned that Case No. 1 was put in the room about 7 o'clock in the evening, and that he was taken out about 6 o'clock in the morning.
375. Was anything said concerning the patient being seen by a night attendant about 10 o'clock? Yes, I think there was.
376. Was anything said to the effect that the patient had a special night attendant? I cannot say that there was any special night attendant, but from the conversation of Dr. Vause I was under the impression that the patient was visited each night about 10 o'clock.
377. Was anything said about the length of time the patient was placed in this dormitory? No, nothing definitely. I think it was said that he had been there for some little time.
378. Are the main facts you stated in your report correct? Yes, they are.
379. Have you anything further to add to what you have there said? No. I was simply asked to go as a witness of facts, and in my report I have stated truthfully what I saw on that occasion.
380. Did you see Case No. 1 on that occasion? I did.
381. What was his condition? He seemed to be trembling; in fact he was trembling.
382. Was he trembling from cold or excitement? I cannot say. He was either trembling with cold or excitement.
383. Did he seem to be properly clothed at this time? If he were going to have his bath he was sufficiently clothed for that purpose. He had on a pair of trousers, a flannel shirt, which was open a little at the top.
384. Had he a coat on? When he first came into the room I do not know, but it struck me that he only had on his trousers and shirt while going across the yard towards the bath. I am not quite clear as to whether or no he had on a coat.
385. Did the clothing appear to you to be clean or dirty? It struck me that the clothing was extremely untidy.
386. Did his clothes strike you as those that would have belonged to a person coming from an engineer's shop, or from the place where a mechanic might work? The clothing in question was dirty, but not of the order to which you refer. That might be called clean dirt. I could not examine the clothing carefully, but, taking a general view, I came to the conclusion that there was something wrong, because the clothing looked unnaturally dirty.
387. *Dr. Garran.*] Did you go into the bath-room? Yes.
388. Did you take the opportunity of seeing whether the water was warm or cold? No; we went straight to the room, but we did not wait to see the patient take his bath.
389. While examining the room from which the patient had been taken, did you notice if the mattress there had been soiled? Yes, I did; but I did not touch it. Professor Anderson Stuart made the examination.
390. Did you notice the state of the floor of that room? Yes; particularly in one place.
391. Did the room appear to you to smell foul? It did smell foul.
392. Did the room appear to you to be warm or cold? It did not strike me eitherwise.
393. Did the air of that room have a close smell? Yes; most certainly.
394. Did the room smell offensively? Yes; there was excreta on the floor, and there was a strong urinal smell.
395. Was there any utensil on the floor? No, there was not. I am quite sure of that.
396. Was there any torn clothing in the room? There was nothing there beyond the mattress and canvas sheeting.
397. Did you examine whether the material to which you refer was sheeting or canvas? It was canvas.
398. Was there any blanket? No; the canvas I saw was single canvas.
399. Was there any blanket stitched to the inside of this canvas? There was no appearance of any such thing.
400. *Mr. McGowan.*] Have you seen people subject to paralysis shaking and making movements of their hands, and also people shivering with cold? Yes.
401. Can you detect the difference between a person shivering from one cause or the other? No.
402. Do you think the patient was shivering from cold or from paralysis? I could not discern whether the shivering was caused by illness or by cold.
403. We have heard it in evidence that there was a window in this room, and that the shutter was down over it;—do you think it would have been possible for anyone to have seen cobwebs on that shutter? I should think it would be very improbable for anyone to see cobwebs there, for it would be as much as an observer could see to notice the shutter itself.
404. *Dr. Manning.*] There has been some little doubt about the clothing worn by the patient on this particular occasion;—can you tell us whether, in addition to the clothing you describe, including the Crimean shirt, the patient wore any singlet? If he did wear one, it must have been so low down that it did not come up within view as high as his neck. A singlet did not certainly reach the throat, but still there might have been one on the lower part of the body.
405. Referring to the patients whom you saw there early in the morning, when you saw them were they in an enclosed court-yard? No; it was enclosed on three sides, and there was being placed on the fourth side some newly-dressed, but not painted, gate posts, evidently intended for the hanging of a gate, which would complete the enclosure.
406. Did this court-yard contain closets? Yes; it was a place easy of access. We walked through the premises to the court-yard without being challenged by any person. There were some closets near one wall of the enclosure, and there were some gate-posts being erected, or had been recently erected, to complete this enclosure.

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407. *President.*] When you entered the grounds of the institution through the front gate, did anyone object to your presence, or did any attendant ask you the nature of your business? No; no one besides the man to whom I have referred, who came out through a little gate close to the main office. We walked over to him and asked where Dr. Vause could be found. He directed us to go round the block towards the kitchen.
408. Did he seem surprised to see strangers there at that early hour on a Sunday morning? No; he did not.
409. *Dr. Vause.*] Have you ever been at Bayview House before? I have not. That was the first and only time I visited the institution.

[Witness withdrew.]

WEDNESDAY, 7 NOVEMBER, 1894.

*The Commission met in the Board Room at the Chief Secretary's Office, at 11 a.m.*

Present:—

THE HON. SIR ARTHUR RENWICK, B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING, Esq., M.D., INSPECTOR-GENERAL OF THE INSANE.	}	ANDREW GARRAN, Esq., LL.D. JAMES SINCLAIR TAYLOR MCGOWEN Esq., M.L.A.
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Dr. Vause attended on his own behalf to hear evidence and cross-examine witnesses.

Mr. William George Dickson sworn and examined:—

- Mr. W. G.  
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410. *President.*] Have you ever been a warder at Bayview House? I was there for a period of six weeks or two months, in or about April or May, 1883.
411. Under what circumstances were you appointed to that position? I was walking down Hunter-street and saw an advertisement on a board, announcing that experienced warders were required at the Bayview institution. I applied for the position, and got it. On arriving there I found there were other warders engaged. I was somewhat astonished at the largeness of the staff. I made arrangements, and was specially engaged to look after Case No. 2. At the time I was engaged this patient had not arrived at the institution.
412. What were your special qualifications for this position? I had experience in the Ballarat Hospital for two and a half years, in the Clunes Hospital for twelve months, in Harcourt's Asylum for twelve months, and the Benevolent Asylum four months, and also in the Melbourne Hospital. Since then I have been following up hospital work.
413. As a matter of fact, then, has your life been devoted to this Hospital work? Not wholly so. My trade is that of a wool-sorter, but years ago I found things slack, and took to this hospital work.
414. What was your special duty when you were appointed to the position in Bayview House? I had no special duty. I never saw any Medical Superintendent when I went out there; I merely saw the head warder. I had no special appointment beyond answering the advertisement and being chosen for the position.
415. Who was the Medical Superintendent of Bayview House at this time? Dr. Vause; but I only saw him about four times during the whole of my stay at the institution.
416. What was the nature of the work you had to perform when you were appointed? At the outset, as far as my recollection serves, I had no special work set out for me; I was doing general odd jobs. One day, some little time after I had been there, Dr. Vause noticed me, and asked me the reason why I was behind in my work. I told him that there were three men in the ground doing no work at all, and that I was doing the whole of it. At the request of Dr. Vause I laid down a plan of work. He asked me to classify the work for the warders, and I did as I was requested.
417. Did you have any distinct engagement for this work when you went to Bayview House? No; I simply saw the head wardsman, but I did not receive any instructions from him or anybody else. The patient I had to look after had not arrived, and my first work, I think, was to clean out two cells. I was just simply engaged there, and started to work on any jobs I was set to do.
418. Did you not see Dr. Vause at all? No, I did not at the time of my engagement. When I went out there I was told that my patient had not come, and that in the meantime I was to do anything that might turn up.
419. Who was your patient? Case No. 2.
420. How long after your arrival at Bayview House was it before this patient appeared there? Some few days; perhaps a fortnight, but certainly not longer.
421. Concerning this particular patient, have you anything to say about his treatment while he was at the institution? Yes, I have. I always found the man to be quiet in demeanour, and there was certainly no necessity to treat him as a refractory patient. He was, however, placed in a dark cell every night in the week.
422. Which cell was he placed in? I cannot remember distinctly, it is so long since. It was somewhere adjacent to the main building.
423. Were these cells in a separate isolated building? Yes.
424. Were there two or three cells? Yes.
425. And were these cells in a separate building outside the chief buildings? Yes.
426. Did you attend this particular patient in this cell? I used to go with him at night with another warder and take his clothes away and put on his pyjamas. He was placed in a room where there was a bed on the floor. I know that room because of the door having an iron bar across it, the ends of which went into catches, one turned one way and the other the other.
427. Do you think you could recognise the cell in which he was placed if you saw it now? Yes; I am sure I could if the cross pieces are there.

428. Did you notice any cell adjoining this one? I think there was an adjoining cell.
429. Can you be positively certain about this? I do not like to be positive, for it is ten years and a half since I saw it, but my belief is that there were either two or three cells.
430. With regard to the treatment of this man, do you think he should have been treated as a refractory patient? Besides being shut up in that cell I think he was in every way treated fairly. In my opinion it was unnecessary to put him there, for I believe it would eventually drive him mad.
431. When you took him into this room had he his pyjamas on? No; we put them on after he went in.
432. What did you do with his clothes? We always took them out.
433. Can you tell us what sort of bedding arrangements there were in the room? He had an ordinary mattress on the floor.
434. Was it a straw mattress? I cannot say. It appeared to me to be an ordinary mattress.
435. Had he any blankets? Yes; there was a fair amount of blankets.
436. Was he a dirty patient or only refractory? He was not dirty, and he was not refractory, and it surprised me he was placed in solitary confinement. He complained to me of this treatment repeatedly, and told me that if it was not stopped it would for certain drive him mad.
437. Was he an excitable patient? No; he used to be very fond of reciting poetry, especially the writings of Burns and several other poets; in fact he always struck me as being sensible in his conversation and intelligent.
438. Was he subject to any periodical outbreaks of violence? No; as a rule he was quiet—beyond this tendency to recite poetry.
439. During the month or six weeks you had him in charge was this patient put in the cell every night? All the while I was there he was placed in the cell, and I had charge of him for fully a month.
440. During that month, then, was he placed in that cell each night? Yes.
441. And what do you say was the season of the year? It was April or May.
442. Do you know if the room was warm or cold at this time of the year? It was a close cell, and I do not think it could have been very cold.
443. Can you recollect any particulars as to how this room was fitted—was it comfortable, and light, and warm? The patient was left in the dark. There was, I believe, one window in the room, but it was always shut. I never saw it open. It was kept closed by a shutter.
444. Have you anything to say about any other patient which came under your observation while you were at Bayview House? Yes; there was Case No. 3.
445. What have you to say about him? When I arrived there he was the first patient I saw. He was strapped in a chair with a strap round his waist and muffs on his hands, fastened to the straps. The sight was quite a shock to me, for I heard, on making inquiries, that he had been sitting in that position from between 8 and 9 in the morning. I said, "That man wants a bath at once," and without consulting anybody I gave him a bath, although I had not been twenty minutes in the asylum. I consulted no one, and no one consulted me; and when I talked to the attendant about this case, before I took the action I did, he said it would be simply loss of time to bath a man like that.
446. What was the condition of this patient when you saw him? I found out that his legs were cramped and that his clothes were saturated with urine, and that when he tried to walk after being unstrapped, he could not do so without my help, as his legs were so cramped. I was not there a month before this patient could walk across the lawn by the aid of me holding him by the sleeve.
447. Was this patient subject to outbreaks? He was a perfect imbecile.
448. Was he a violent patient? No; he was harmless. He was so harmless that I used to laugh at the way they were treating him.
449. What do you mean by that? I used to see a man whom I think they call "Bob," and this man wrote reports about this patient. He used to sit down at night and write all that had been done during the day. I saw this once, and he was then writing about Case No. 3 reciting and so on, and his general conduct. I told him he was a cur for doing that, as I did not think there was anything to report on the case.
450. To whom was he reporting? I suppose he was reporting to the authorities of the asylum.
451. Was he authorised to do this? I believe so. I was under the impression that he had to report to the head warder in writing. He told me that he had to put it in writing, and I said that I would not by writing like that condemn a man for life; that I would rather leave the institution.
452. Would you conceal any facts concerning the condition of the patient? Certainly not.
453. Supposing the patient was suffering from excitement, or anything else, do you not think it would be your duty to report it? Certainly; I would report it verbally, but I think it would be a big mistake, for instance, to put down reciting poetry to undue excitement.
454. Then what is your objection to making this report? I do not think it was necessary. The subject was not worthy of mention, and after I expressed my opinion against such a report being made I seemed to be regarded by the other warders with black looks, and I felt that I did not occupy the same footing in the place as I did previously.
455. Is it not the duty of warders to report on all cases under their care? Yes; they should report to the medical officer in charge.
456. Who was making the report to which you refer? A warder in the institution who I believe had been previously employed as a gaol warder.
457. Was this ex-gaol warder making a report for the purpose of supplying the Medical Superintendent? I cannot say.
458. Was this report in the nature of a charge against a patient? I can only surmise that.
459. What is your general impression concerning the treatment of patients at Bayview House? I am of opinion that the sick and helpless are treated unfairly, and that in reference to these particular patients there is little sympathy between the staff and them. The patients mentally deranged and physically able-bodied are treated fairly well. They are supplied with good plain food, good beds, and have a fair amount of exercise outside on the lawn; but if the patients happen to be helpless and sick there is neglect, and a want of proper nursing.
460. Do you then consider that the warders are incompetent for the position they hold? Yes, I do; for at the time I was there I do not believe anyone of them had been in an asylum before.

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- Mr. W. G. Dickson.  
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461. Were there a sufficient number of warders engaged to carry on the work of such an institution? Yes, as far as numbers are concerned; but of all the attendants there were only two to look after the patients.
462. Do you think there were sufficient as regards numbers? Yes; but there were not enough skilful warders to treat the whole of the patients. The strong and physically healthy patients were fairly well treated, but the helpless and sick had not sufficient supervision. To give you an instance of the strength of the staff, I may say that one night I was attacked by eight patients. I was sleeping in charge of these patients. In another dormitory three warders were sleeping with one quiet man. I was attacked during the night, and there was a great struggle. One patient caught me by the throat, and if I had not used great force in pressing back his fingers and thumbs I might have been strangled. I had great difficulty in getting his hands off my throat. Dr. Vause came in about half an hour after the struggle began. This took place somewhere about 2 o'clock in the morning. After the occurrence two warders slept in the dormitory. This fact alone showed to me that there was some lack of management in conducting the institution.
463. Did Dr. Vause on this occasion come into the room immediately after the disturbance began? Not immediately; it seemed to me about half an hour. There was a great noise going on, and perhaps the time was not half an hour, but it seemed so while I was struggling.
464. Did any other warders come to your assistance? No; the nearest warder was far away at the other end of the building.
465. And did you manage to quieten these eight recalcitrant patients yourself? Yes.
466. *Dr. Garran.*] Who told you to put Case No. 2 into that room? I never put him there myself. I was not authorised to do so at all. When he was put into that room one of the warders came with me always. My being a new man on the premises I was asked to do odd jobs.
467. Did you merely assist in putting him into that room? Yes; I used to go with the other warder to the door. He went inside, and I stood at the door in case the patient made a spring to get out or escape.
468. Did he ever show any objection to being put there? Yes; he did—in a gentlemanly, quiet manner. He used to say that putting him in that room would eventually make him so ill that he would be driven mad.
469. Did you, on any occasion, tell the chief warder that, in your opinion, there was no necessity to put him in that room? Yes; several times I expressed the opinion that this isolated treatment was wrong and unnecessary.
470. Did you ever speak to Dr. Vause on the subject? No, sir; I did not.
471. In your opinion, did Dr. Vause exercise proper supervision over the place? It appeared to me that he did not, for the warders were allowed to do very much as they liked.
472. Did Dr. Vause ask you personally to do what you have told me you did? No.
473. Did you ever have an opportunity of telling Dr. Vause that this patient was immured in this cell? No; I only saw Dr. Vause on four occasions. The first time, I think, was on the night of a ball. I do not remember mentioning his case to him then.
474. Was the patient put in solitary confinement on the order of Dr. Vause or on the action of the chief warder? I suppose the head warder got his instructions from Dr. Vause. If he did not, he should have done so.
475. Do you say that you spoke to the head warder on the impropriety of putting him in that room? I told him it was not fair treatment many a time.
476. Did he say that the patient was placed there on the instruction of Dr. Vause? No, sir.
477. Then you do not actually know if it was done at the instance of Dr. Vause? No.
478. How often did you see Dr. Vause go round the premises for the purpose of inspecting the patients? Only once, I think. Only on one occasion, when I was cleaning boots. I did not like this particular occupation, as I thought it too menial. I complained to Dr. Vause about it, and at the same time told him that his warders simply did as they liked about the place. He said it was not so. After another word or two had passed between us he asked me if I would supervise the work, saying if I did so he would be much obliged.
479. How long was this before you left the institution? That was the first time I had an interview with Dr. Vause, and this was a few days after I got there.
480. Then, after you had been there a few days, did you, at the request of Dr. Vause, rearrange the work of the warders? Yes.
481. Did Dr. Vause make any regular visit or round of inspection at any particular hour? Not that I know of; I only saw him at that time to which I refer, and that was about 9 o'clock in the morning. As a rule, my duties took me away to the lawn with the patients, some short distance from the main building.
482. Did you see Dr. Vause drop upon the warders at any odd times unexpectedly? No; I only saw him on the occasion I tell you of.
483. In your judgment, then, was there any proper supervision over the warders? I do not think there was.
484. Did they do pretty much as they liked? So it seemed to me.
485. Do you think that some of these abuses of which you complain may have been the result of the warders' action, without the knowledge of Dr. Vause? Well, I do not blame the doctor entirely.
486. Was it possible for some of the attendants to place patients under restraint unnecessarily? Well, there was the case of the ex-gaol warder of which I have spoken, and two other cases.
487. Did these warders have power themselves to keep a patient under restraint without orders from the Medical Superintendent? Apparently they did.
488. In your experience, if you found it necessary to put a patient under restraint, and you did so without an order, was it your duty to report the whole of the facts to the Medical Superintendent? Yes, decidedly.
489. Do you think that these instances at Bayview House, to which you have made reference, were reported to Dr. Vause? I do not know; but I do not think they were.
490. Did the other warders know that you had supplied Dr. Vause with a plan or new arrangement for the supervision of the warders? I do not know.
491. Do you know whether your action in rearranging the work created any bad feeling amongst the warders? I do not know. Dr. Vause told me at the time he asked me to rearrange the work that the head warder would be going away before long, and I inferred that this would mean promotion for myself.

492. Why did you leave the institution? I was called into the office one day and told to go. I do not know that there was any charge made against me. Dr. Vause said to me, "Here is your money," and he paid me all that was due, and one week in advance. I went away quietly. I do not know what complaint he had to make, but I know of no wrong-doing on my part.

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493. Did Dr. Vause give any reason why your services were dispensed with? No, he did not give me any reason; that is, no particular reason. He said something, and I replied, "Very well doctor; I was going all the same."

494. *Mr. McGowen.*] At what time of an evening was case No. 2 put into one of these two isolated rooms? Just about dark every night.

495. Would not that be before 6 o'clock? I think it would be between 6 and 7.

496. What time was he taken out of the room every morning? About half-past 7 or 8 o'clock. He used to be given his bath then.

497. Was that room a dark cell? It was a refractory cell.

498. Was there any light admitted into the room in the early morning before you and the other warder took him out? No. There was a small window with a shutter over it, and that shutter was always down.

499. Was that room cleaned out every morning? Yes. I am quite sure of that, for I recollect doing it myself.

500. Was that patient then kept in that room every night between eleven and twelve hours? Yes.

501. Were there any night attendants on duty? No. No one but the other man and myself.

502. What time did the attendants go to bed at night? Ten o'clock.

503. What time did they get up in the morning? They are supposed to get up at 6 o'clock, but sometime they might be a little later.

504. Therefore was there any proper night attendant? No.

505. Did anyone look into that room during the night? No.

506. Did anyone look through the observation hole in the door? I do not think there was an observation hole in the door at all.

507. Then, so far as your knowledge goes, did anyone look in on that patient or any other patient that may have been placed in those rooms from the time they were put in at night until they were taken out in the morning? No, not that I know of. I never looked myself nor saw anyone else.

508. Now concerning case No. 3—was he always strapped in the chair in the manner you describe? Not always.

509. Did he ever have any friends come to see him? I heard that a lady came to see him. I never saw her myself.

510. When she came to see him was he released from the chair? Oh, decidedly no.

511. Do you say that on your arrival at the institution, and when you saw case No. 3 strapped in the chair, you were compelled by a feeling of humanity to take him out of that chair and give him a bath because his clothes were dirty and wet from urine and fecal matter? Yes.

512. Were these dirty clothes kept on him then? I can only recollect the one occasion. He was taken out of my charge after I had given him a bath, and taken him into the house.

513. But were his clothes changed after his friends came to see him? Oh, yes; when his friends came to see him he was on the lawn, and in much better clothes than he was when I saw him first. After he had received better treatment and was kept clean he improved rapidly.

514. *President.*] In reference to Case No. 2, did you hear him complain frequently about being put into this dark cell? He complained very much indeed. He complained when he was going in, and used to say it would drive him mad, and he complained to me on one occasion when he was outside on the lawn.

515. Did he complain to you of being afraid to go into this cell? No, he was not afraid, but he seemed to regard it as ignominious treatment.

516-17. Was he comfortable in that room? Yes, fairly so, except being isolated.

518. Did he say to you that such treatment would eventually drive him mad? Yes; he told me that on several occasions.

519. Do you think he was perfectly sane or insane? I cannot speak with certainty upon that point. I know that he was jolly, genial, and generally good tempered in his manner.

520. Could he read and write? Yes.

521. Did you ever see him out of temper? Never.

522. Did you think he was a sane man? I cannot go so far as to say that; but many a time I thought he had no business there.

523. Did you hear that ten years later he died in the madhouse? Yes, I heard something about it; but at the time to which I am referring my opinion was that he was a persecuted man.

524. Do you think that his treatment at Bayview Asylum had anything to do with his subsequent malady? It might have increased the dose, as it were.

525. Are you under the impression that if he had received other treatment at the time the result would have been different than it was? I cannot say. It would be very hard for me to say that.

526. Did you ever make any such statement? No, never.

527. *Mr. McGowen.*] Was any medicine ever given to Case No. 2 for the treatment of bodily disease? I never saw any.

528. *Dr. Manning.*] Did you ever hear that he recovered, and lived for some years with his family? No; I never heard of that.

529. Did you ever hear he made an attempt to escape from his confinement? I know he offered me £50 to get him out of Bayview House, and I told him I could not do that, and would not listen to him.

530. Did you ever hear that he made his escape from the Reception House? Yes; I heard he made his escape. I think it was by the aid of a key he made himself.

531. Do you know that he was put in this cell particularly owing to repeated attempts to escape in which he perilled his life? No.

532. Do you know that he attempted to get away from Bayview House on more than one occasion? If he had while I was there I think I should have known it; as I said before he offered me £50 to get him away, but I said I could have nothing at all to do with such a proposal.

- Mr. W. G. Dickson. 533. *Dr. Vause.*] Did you ever hear of this patient making a rope while he was at Bayview House? Never.
- 7 Nov., 1894. 534. Where did the attack take place to which you refer? In the large dormitory, where there must have been ten or a dozen beds.
535. And how many patients did you say attacked you? There were about eight, I think. It was early in the morning, and there was a great noise and scuffle.
536. How many attacked you actually? Four made the attack, the direct attack.
537. Was that dormitory on the same floor as the dining-room? It was on the ground floor.
538. In what way was case No. 3 fastened down? He was wearing a pair of ordinary muffs, and there was a strap fastening him round the waist in the chair.
539. Was it not a sheet? No; it was a leather strap, made purposely.
540. Could the patient move while he was in that position? He could move his feet a little, but he seemed cramped.
541. Was that leather strapped there for the purpose of keeping him from falling out of the chair, or was it there for restraining him? It would answer both purposes.
542. How was it fastened? It was loose enough to give him room for slight movement, but he could not get out of the chair.
543. Might it not have been placed there to keep him from falling out, and thus make him secure from injuring himself? I put it down to the laziness of the warder. I have put him in the chair myself and put the strap round him, but I used to leave his hands free, so that he was under no unnecessary restraint.

[Witness withdrew.]

Mr. Alan Farquharson sworn and examined:—

- Mr. A. Farquharson. 544. *President.*] What are you, Mr. Farquharson? I am an employee at the Bayview House Asylum.
- 7 Nov., 1894. 545. Do you know anything about Case No. 1? Yes; I know something about it. It was my duty to attend on that patient throughout the day on every second Sunday.
546. Where you at Bayview House when he was first taken there? No, sir. He was there before I went.
547. Do you remember when this patient was put into a solitary cell? No, I do not remember that.
548. What do you remember about his case? I remember he used to sleep in a detached building, and sometimes I took him out of this place in the morning. He used to be put in the cell about 6 or half-past 6 at night, and when it was my day on duty I have taken him out of that place. Sometimes I would put him in on a Sunday night.
549. When you put him in this cell did you go in yourself? Yes.
550. Was the bedding all right? Yes.
551. Was it clean, and dry, and fresh, and fit for a man to sleep on? Yes. The bedding was taken away every morning and put back at night.
552. Were the patient's clothes taken from him? Yes. He had pyjamas put on him, and his clothes were taken away for he was in the habit of tearing them up.
553. Did you ever see him put into that cell quite naked? Never on any occasion.
554. What clothing did he wear when he was taken into the cell? It was the usual custom to take him from his room—his sitting-room—in his ordinary clothes; to take off his clothes and put on the pyjamas.
555. Did he always have his pyjamas on when he was left in the cell? Yes; they were always put on then. He was never put in the cell naked.
556. Are you perfectly certain about that? I am perfectly certain.
557. How long was he put to sleep in that cell? I do not remember when he was first put in, and I was only there every second Sunday.
558. Do you know if there have been any alterations made in the lavatory since you were in the habit of putting Case No. 1 to sleep in that room? Yes; it has been shifted. Hot water has been laid on and other conveniences have been added.
559. Was the hot water laid on before the complaint was made about the treatment of the patient? No, sir.
560. But it has been laid on since? Yes.
561. And have other things been done? Yes.
562. How did Case No. 1 get a warm water bath before the hot-water service was laid on to the lavatory? Two cans full of hot water were carried there every morning for the patient's bath. I have seen it done myself.
563. And during the time you were there was the patient always placed in a tepid bath? Yes.
564. When on duty there on every second Sunday, did you remain during the night? No; I used to go away at 6 o'clock, after putting the patient to bed. I know nothing of the proceedings that took place at night.
565. *Dr. Garran.*] Did you begin your duty on the Sunday morning? Yes.
566. Did you take the patient out of the cell on those Sunday mornings on which you were on duty? No; not always. He was taken out before I came over.
567. Did Case No. 1 ever complain that he did not want to have his bath? Yes, frequently.
568. Did he ever say it was too cold? I think so.
569. Did you know of him having a cold bath? No; I never gave him one.
570. Did this patient dirty his room? Yes; very badly.
571. Was there a utensil in his room? Yes; I have seen it myself.
572. Would he use it? Never.
573. Did you ever see him use it? No.
574. When you put him into this room did it smell from a stale odour? No; I never smelled one.
575. Did the room smell in the morning? Yes.
576. Was the patient in the habit of tearing his clothes? Yes.
577. Did he ever tear his pyjamas off during the night? Yes; it was a frequent habit. I have seen him tear them off while I have been standing near him, and I have found him naked on opening the door.

578. Did he ever appear to be shivering or suffering from cold on these occasions? He always was very shaky. He was shaky during the day. Mr. A. Farquharson.
579. Do you think this shakiness to which he was subject was the result of disease or cold? I do not know what was the cause of it. 7 Nov., 1894.
580. Did he always have a tremulous movement of his hands? Yes.
581. Did you ever find this sleeping-room early in the morning not in a dirty condition? No, I did not.
582. Was it then in your experience invariably in a dirty state? Yes, it was.
583. *Mr. McGowen.*] How long is it since you received the subpoena to attend here and give evidence before this Commission? I received notice to be present on Saturday afternoon last.
584. How long have you known that a Royal Commission was to sit to inquire into this affair? I cannot say.
585. Have you known it for a week or a fortnight? Yes.
586. Have you had any conversation with Dr. Vause since you have known this Commission was going to sit, or since you received an intimation that you were to give evidence? The only conversation I had with Dr. Vause was that I told him yesterday that I had to go to Court.
587. Did any word pass between you as to the nature of the evidence you were to give here? Not a word; I am quite certain upon that point.
588. Can you say how long it is since Case No. 1 was placed in that room? I cannot say; it may have been six months, but not nine months.
589. Did you also say that his pyjamas were put on him every night? Yes.
590. Did you see them put on on a Sunday night? Yes.
591. How do you know how he was found on Monday morning? Oh, I may have seen him occasionally as I am all over the place.
592. Do you know if any other of the attendants brought him out of that room naked? I do not think they did for I used to take his big overcoat to him.
593. Why did you do that? Because he had to cross the yard.
594. Did you take the overcoat because you thought he would be cold in crossing the yard? No; I used to take it because I thought some of the female attendants might be about.
595. Does your evidence as to finding the patient naked in this place only apply to every second Sunday morning? Yes; I have only seen him once since.
596. Is there a shutter in the room? Yes.
597. Was it nearly always down? No, not always. If it was a cold night I pulled it down; if it was warm I left it up. I used to pull it down by a string from the back.
598. Did you ever notice any rats about the place? Yes, sometimes.
599. Is the place infested with rats? No, it was not what you might call infested, but there are a good many about.
600. Did you ever hear any talk amongst the other warders, or anybody else, as to the treatment meted out to Case No. 1? No, I cannot say honestly that I did hear any particular complaints. I have heard some say that it was a shame.
601. Why did they say it was a shame? I think some of them thought he was cold.
602. How did they make this out? Because he would not keep his clothing on.
603. Did you always find the remains of his pyjamas in the room every morning? Yes.
604. Therefore he would have to have a new suit of pyjamas every night? Yes; nearly every night, as far as I know, he did have a new suit.
605. Do you know anything about night attendants being engaged at the asylum? No, sir.
606. Did you ever hear anything in reference to Case No. 4? Yes.
607. Did he meet with an accident on one occasion? I do not know for certain.
608. Have you not heard that he cut his head open? Yes; I believe he injured the back of his head by falling out of bed.
609. Did you ever hear that the flesh of the cut on the back of his head had been eaten by rats? I heard that rats had eaten it, or some of it; that is simply all I heard.
610. And did you hear that the rats came when this man fell out of bed and cut his head and ate part of the flesh? Yes.
611. Did you hear some of the warders say that the rats had also gnawed the flesh to the bone on the back of his hands? Yes.
612. Will you give the Commission the names of the men you heard say that? It was a man named Copley I heard say it.
613. Where is he now? He has left the institution, and, I believe, he has gone to South Africa.
614. Did you hear any other witness say it? No.
615. Did you ever see Dr. Vause under the influence of liquor? No.
616. Did you ever see him drunk? Never.
617. Lately, have there been a lot of clothes purchased at the institution? I do not know.
618. How do you know that the place is overrun with rats? Sometimes I used to see them.
619. Did you ever find any boots that had received the attention of rats? Yes.
620. Have you seen patients' boots that have been eaten away by the rats during the night? Yes.
621. What sort of a place is the dead-house in connection with the institution? A small, square, wooden building.
622. Are the rats very prevalent in that particular part? I have seen some rats there.
623. In fact, do you think that rats are plentiful all over the building? No; I do not say all over the building; they are mostly about the kitchen.
624. Were there any in the room where Case No. 1 slept? No.
625. Or where Case No. 4 slept? Yes; there were rats there.
626. Have there been many attendants discharged since the 20th of May? No, sir; there have not been many.
627. I want to know particularly, have there been many discharged? Not many; those that have left have gone on their own accord.
628. Do you know the names of the men who have left? Yes.
629. Who are they? There is Copley, Pat, and Mick. I only knew their names as Pat and Mick. They left within a week of one another.

- Mr. A. Farquharson. 630. Can you not give the surnames of these men, Pat and Mick? No. They left of their own accord, and went to the Clarence River.
- 7 Nov., 1894. 631. Do you know John Doherty? Yes.
632. Was he one of the men who was seen supporting Case No. 1 on the morning of the 20th May? I do not know.
633. Do you know a man named O'Brien at the institution? Yes.
634. Do you know if Doherty was a gaol warder at one time? I do not.
635. Can you give me any other names of warders or attendants who have left Bayview House other than those you have mentioned? Those are all I know.
636. Were you about to leave, or likely to be discharged? I think I was likely to be discharged.
637. Why did you stay on? Because I asked Dr. Vause to allow me, and he did so.
638. Did Dr. Vause ask you to stay on? No; I asked him.
639. Have there been many improvements made to the room occupied by Case No. 1 since the morning he was discovered, on 20th May? I think the room has been painted or whitewashed on the outside, but nothing has been done to the inside.
640. Are you positive that an india-rubber utensil was in the room every night you put the patient there? Yes; it was always there.
641. Are you perfectly sure no conversation has taken place between you and Dr. Vause to influence you in your evidence? I am sure there has not.
642. *President.*] Did you attend to the room adjoining the one from which Case No. 1 was taken? No.
643. What was it you say concerning the shutter? The shutter was occasionally pulled up. If it was a hot night I pulled it up, and if it was a cold night I left it down.
644. Do you particularly remember the day on which the inspection was made by Professor Anderson Stuart and others? Yes; that was the morning of the Sunday which was to be my day on.
645. We have had it in evidence that there was no torn clothing in this room on the Sunday morning the inspection was made; we have heard it said that there was not a shred to be found;—what do you know about this? All I can say is that he was taken out early, and I did not take him out.
646. Would you not have expected to find torn garments there.
647. Did you afterwards find any portion or fragments of garments about? Yes. I do not remember one occasion on which I have entered the room that I did not. I always found something torn.
648. *Dr. Garran.*] Did you ever hear of anyone having been attacked by rats? Yes.
649. Did you ever hear of rats having eaten the flesh of a wound on Case No. 4? There was some talk about that.
650. Whom did you hear it from? Copley was the man who mentioned it. I think it was Copley's assumption that the rats did so.
651. Do you think that the house is unusually full of rats? No; I do not think so, for an old building like that.
652. Is there any attempt to keep them down? Yes; traps are set about the place, and there are also cats kept to keep them down.
653. Do you know whether Dr. Vause keeps a certain book for discharged servants to sign, stating that patients, while under his care, are properly treated? No; I do not know.
654. Do you know that if a warder or attendant is about to leave, and he refuses to sign this book, the doctor refuses to give a certificate of character? I do not know.
655. *Dr. Vause.*] Were the pipes laid, and the taps fixed, and everything else done, for the supply of hot water to the lavatory previous to this supposed scandal? Yes; the hot-water service was complete with the exception of supplying the water. Everything was ready for the water supply.
656. When you took the Case No. 1 out on any occasion, did you always find his pyjamas scattered about the place? Yes.
657. Were they soiled? Yes; he was a very dirty patient.

[Witness withdrew.]

Mr. Reuben Alfred Peet sworn and examined:—

- Mr. R. A. Peet. 658. *President.*] What are you, Mr. Peet? I am a painter, employed at Bayview House. I have been there two years. I am there every day, and about every part of the building, painting and repairing.
- 7 Nov., 1894. 659. Do you know some of the patients? Yes; I come in contact with them every day.
660. Do you also know the warders? Yes.
661. And have you always seen everything carried on in a decent and orderly way? Yes.
662. Do you remember Case No. 1 being there? Yes.
663. Did you ever have any conversation with him? Yes.
664. Was he an excitable sort of gentleman? Yes; I have often seen him very excited.
665. Do you remember whether he used to sleep in a room on one side of a small court-yard, and have his sitting-room in the main building? Yes; I believe he slept there.
666. Do you remember his being placed in one of these two cells? Yes.
667. Have you been colouring that cell lately? Yes.
668. Did you ever see him put into that room? No; but I have seen him taken out of it in the morning.
669. Do you remember how long it is since he was first put in there? I have no accurate knowledge of it.
670. Have you ever heard any conversation amongst the patients and warders about it being a hardship to put the patient in that room? Yes.
671. Did they say he was being hardly treated? Yes; the opinion seemed to be that they did not like the idea of a man in his position being in a place like that.
672. Have you seen him taken out on a number of occasions? Yes; when I have been passing to and fro to my work.
673. Have you ever seen him in the room itself? No.
674. Have you been sufficiently near to look into the room? Yes.

675. When you have looked into that room, or when you have seen the patient, has he always had his clothes on? Yes, he was partly dressed.
676. Was he wearing clean clothes? Yes.
677. Was he then on his way to his bath? No, to his sitting room.
678. Was he shivering or shaking? No, not that I am aware of.
679. Have you ever heard any other patients complain about their treatment? No; they all seemed to be quite happy and contented. I have seen some excited occasionally.
680. Was Case No. 4 a patient there during your time? Yes.
681. Did you hear any talk about rats having eat the flesh of the cut in his head when he was wounded? No.
682. Are the rats an annoyance about the place? Not that I know of. I have seen them there, but not in numbers more than one could expect in an old place of that kind.
683. *Dr. Garra.*] Did you ever go into this room occupied by Case No. 1? Yes.
684. Did it smell sweet? Yes.
685. Was there any stale smell about the floor? There was no smell whatever.
686. *Mr. McGowan.*] Do you not say that you went into a room where there is no window, and that it smelt sweet? Excuse me, there is a window.
687. Was it always opened? It was always opened when I went in. I occasionally visited the place, and when I went into the room the window has been partly up.
688. What time did you go into the room? Oh, I get there about 10 o'clock in the morning.
689. Would that be three hours after the patient was taken out? Yes.
690. Have you done any painting in that room, or made any other improvements to it lately? None whatever.
691. What is the name of the patient or attendant who said it was not fair to treat Case No. 1 like this? He was an attendant named Alick Mackenzie.
692. Did you hear anybody else complain? No.
693. Did you ever hear of Case No. 4 falling and cutting his head? I heard of his meeting with an accident, but I do not know how it occurred.
694. Did you ever see him? No, sir.
695. Did you ever hear any remarks about rats coming and eating the back of the man's hands or head? No, sir.
696. How long was Case No. 1 put in this room of a night? I cannot say.
697. Was it for twelve months? No.
698. Was it for nine months? I do not think so.
699. Do you think it was more than eight months? I do not.
700. How long was it then? I think it was between six and seven months.
701. Did you ever see any of his friends on a visit to him at Bayview House? Yes; Mrs. \* \* \* came one day, and saw him in the sitting-room.
702. Did you hear any conversation between them? No, sir.
703. When relations came to see him, did they always meet him in the reception-room? Yes.
704. Did you ever hear or know Case No. 1 to say, "I don't sleep here, I sleep in the stable"? Yes, very often.
705. What did he mean by saying that? I think that was the name he had for the place he had slept in for the six or seven months.

[Witness withdrew.]

Mr. Edward Erickson sworn and examined:—

706. *President.*] What are you, Mr. Erickson? A wardman at the Coast Hospital, Little Bay.
707. Were you ever engaged at Bayview House? Yes, about two years ago.
708. What position did you occupy? That of an attendant.
709. Was Case No. 1 a patient there then? No.
710. How long were you employed there? About two years.
711. Had you every opportunity of seeing the working of the institution? Yes.
712. Had you any similar experience elsewhere? No; that was my first engagement.
713. What were your special duties there? Those of an ordinary attendant, to assist in keeping the place clean, and to look after patients.
714. Had you certain patients relegated to your care? No.
715. Had you any specific duties during the day-time or at night? I slept with thirteen patients, and looked after them during the night-time.
716. Were there any other warders engaged at the same time as yourself? Yes.
717. At what time did you commence work in the morning? Shortly after 6 o'clock.
718. And when did you go to bed? About 10 o'clock at night.
719. Were there certain parts of the institution for the confinement of refractory patients? Yes.
720. Were there any confined there while you were an attendant? Yes.
721. Do you know whether it was the custom at night-time to prepare hot milk, cocoa, &c., for these patients? No.
722. Do you know if night attendants looked in upon these patients? No, sir. When I was an attendant, I generally went to the cell-door at 10 o'clock, immediately before going to bed, and looked through the observation hole to see that all was right.
723. Were there any outbreaks during the night-time while you were there? No.
724. Were the patients generally well conducted? Yes.
725. Do you know anything about rats over-running the place? No.
726. Did you notice any difficulties in connection with the management while you were there? I did not.
727. Were you satisfied with the general management of the place? Yes; I left on my own account. I got a fair discharge, and shortly afterwards went to the Coast Hospital as a wardman.

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- Mr. E. Erickson. 728. *Dr. Garran.*] While you were at the institution did it strike you as being well conducted or otherwise? It was well conducted.
- 7 Nov., 1884. 729. Did you notice any patients subjected to what you might call cruel treatment? No.
730. Why did you leave? I left on my own account, and never had any disagreement with Dr. Vause.
731. *Mr. McGowan.*] Were you asked previously to give evidence in this inquiry? Yes, and I declined to come.
732. When did you leave Bayview House? In 1892.
733. When you left did you have to sign a book stating that the institution was conducted on proper lines? Yes, I had to sign a form to that effect.
734. Was your signing that form made a condition before you could obtain your reference? I understood it was the usual thing.
735. Was it not made a condition that before you got a reference you must sign a book kept by Dr. Vause to the effect that the institution was properly managed? No, I will not say that as far as the reference is concerned. I could not swear that I had to sign any paper before I got my certificate.
736. What do you mean by saying that signing such a document was the usual thing? People who had been there before told me of it, and I heard something to the effect that if there was anything wrong at the institution some paper could be signed.
737. Do you know if they had to sign this book before they got a reference? I cannot say.
738. Do you know if they had to sign that paper as a condition before they had a certificate of good character? I cannot say that.
739. Do you know if it were necessary that such a paper or statement should be signed? I know it was the custom, or I understood it was the custom that people leaving the Asylum should sign.
740. Was it not possible that people leaving the Asylum might refuse to do so? Of course it was; if I had seen that the place was improperly conducted I should have refused to sign it. In the course of my experience it was not so.
741. Were you ever engaged in that kind of work before? No.
742. How was it that you came to leave the institution? I gave notice to Dr. Vause once or twice that I would leave. I had found out by experience that my nerves could not stand the work. I could not stand sleeping with the patients.
743. Were any of the patients of a refractory nature during your period of service in the institution? No; I cannot say that there was any distinct outbreak, but they disturbed me so that I could not sleep.
744. Do you know the room where these refractory patients were confined? Yes.
745. Do you mean the rooms near the court-yard? Yes.
746. Was there in those rooms good bedding accommodation for the patients? Yes.
747. What was that bedding accommodation? There was a mattress, a couple of sheets, a couple of blankets, a couple of pillows—like any ordinary bed.
748. Was there a chamber utensil? Yes, and a chamber utensil.
749. Were the ordinary day clothes of the patient left in that room? No, they were taken away.
750. Were the patients left to go to bed naked? No; not always. Some were allowed to wear pyjamas, but those who do not possess pyjamas were put to bed and properly looked after before the attendant left.
751. Was it the usual practice of such patients to make water on the floor or on the bed? Yes; as a rule. They were very dirty.
752. Was it the usual practice for these rooms to be kept clean after they had been used by the patients? Yes; they were kept clean. They were cleaned every morning.
753. Were these rooms clean before Dr. Vause made his usual rounds? Yes.
754. Did he make those rounds every day? Yes; as far as I know.
755. Did you notice whether there was an indiarubber chamber utensil in each of these rooms? Yes; but in the room where I slept earthenware chambers were used.
756. Do you think that the patients taken out of these particular rooms early in the morning suffered from cold? They did not seem to suffer.
757. Did they ever complain of cold? No.
758. Do you think the place was very much overrun with rats? No.
759. Did you ever hear any complaints or see where the boots of patients had been injured by rats? No.
760. *Dr. Manning.*] Are there any rats at the Coast Hospital? Yes.
761. *President.*] Did you, while you were an attendant at Bayview House, see anything wrong about Dr. Vause? No.
762. Was he always sober and in his right mind when he was making his rounds? Yes; as far as I know.  
[Witness withdrew.]

Mr. William Little sworn and examined:—

- Mr. W. Little. 763. *President.*] What is your occupation, Mr. Little? I am chief attendant at the Callan Park Hospital for the Insane.
- Nov., 1894. 764. Do you remember Case No. 1 being brought to Callan Park on the 20th of May? Yes; I do.
765. Since then has the patient been under your observation more or less? Yes; he has.
766. In what condition, speaking generally, has he been? Very excited.
767. Have you any previous experience of him? None.
768. How has he been since being an inmate of Callan Park—I mean in his habits? His habits have been wet and dirty, day and night.
769. Have you had to put him under any form of restraint since he has been there? No; not particularly so.
770. *Dr. Garran.*] Does anyone sleep in the same room with him? No.
771. Is he put in a room by himself? Yes; he sleeps in a single room.
772. In what clothing does he sleep? We put him in a night-shirt.
773. Does he show any tendency to tear it? Yes; occasionally.
774. What kind of mattress do you use for his accommodation? Sometimes a straw one and sometimes one made of hair; but he will not have a hair mattress if he can help it. He throws it on one side, and asks for a mattress made of straw.
775. Is he in the habit of dirtying his mattress? Yes.

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776. Do you leave a utensil in his room? Yes.
777. Does he use it? Sometimes he does, but he seems to prefer to dirty the floor.
778. Does he dirty that as well as his mattress? Yes.
779. Is he supplied with the ordinary blankets and sheets? It all depends upon the state in which he is.
780. Does the room he occupies smell bad in the morning? Yes.
781. Do any attendants look after him during the night? There is an attendant on watch to see him all night through, if necessary. This attendant remains in a room adjoining. He is there for the purpose of attending to any immediate requirements, and to see that the patient does not get cold during the night.
782. Did you ever have a thermometer in this room? No.
783. Is this room off the corridor? Yes.
784. Is the patient bathed every morning? Yes.
785. What is the temperature of the bath you give him? I do not know for certain; it is about 98°, I think.
786. Does he ever complain about his bath being cold? No; he appears to enjoy it.
787. Does he tear his clothes during the day-time? No; not so much now as he did at first.
788. Do you regard him as a troublesome patient? He is one of the worst in the asylum, and he wants constant watching.
789. Does he show any disposition to destroy his clothes in the day-time? Sometimes he does, but not so much as at night-time.
790. Did you think it necessary that he should be particularly watched, so that he should not destroy his clothes at night? When he arrived at Callan Park at first he was very destructive, and an attendant used to go in and cover him when he had stripped himself.
791. When he was first at the asylum did he frequently undress himself at night? Yes.
792. *Mr. M'Gowan.*] How often has he torn his night-shirt since he was admitted on the evening of May the 20th? Once, twice, and three times a night when he came at first, but he has been better of late.
793. How do you account for this change—that he has been better of late? Because I think he has improved mentally and physically.
794. Did you strip him when he arrived at Callan Park? No. I saw him stripped.
795. What was his bodily condition? I noticed he had a black eye.
796. Did you notice any other bruises on his body? No; I noticed no other bruises at all. I saw him on the following morning, but I did not notice any bruises on his body.
797. What is his general condition now? He seems to be better mentally and physically, and much quieter than he was at first.
798. Does he ever complain of being cold? No.
799. Does he complain of being cold in the morning when he is taken out of the room? No; I have never heard him complain.
800. Does he use the chamber utensil now? He does now, but he would not at first.
801. Therefore do you think there is a marked improvement in his condition now? Yes; he is much better than when he came to Callan Park.
802. *Dr. Monning.*] Do you say Case No. 1 is much better now than he was when he came to Callan Park Asylum? Yes.
803. When he first arrived at that institution was he worse than now? Yes; he was one of the worst patients we ever had to deal with.
804. Has your experience extended over many years? Yes; I have had nearly thirty-two years' experience.
805. Do you say that Case No. 1 was one of the worst patients you ever had to deal with? Yes; he was a most difficult case. He was one of the worst I have known.
806. Do you think it advisable that he should sleep in a single room? Yes, I think it would be advisable; because I believe if he were put where there was any company he would be liable to become more excited.
807. Do you think that under such conditions he would become violent? Yes. He was extremely restless, and appeared to wish to resist. In fact, when people went near him he would throw things at them.
808. Do you think it was best he should be by himself? Yes.
809. Is the single room he now occupies warmed at all? No, sir; not with any special heat.
810. Are any of the single rooms warmed? No.
811. Have you in your charge fully 100 or more of those single rooms? Yes.
812. Have you ever seen any of these specially warm? No.
813. Has it ever been found necessary to warm any of these rooms? No.
814. It has been given in evidence that this patient has destroyed clothing;—have you a list of the clothing destroyed by him? I have not personally, but Dr. Blaxland has a list up to the 9th of September. That was before the patient was able to be dressed.
815. How many weeks elapsed before you were able to dress him at all? I cannot tell exactly. We used to make him sit by the fire in a dressing-gown in the day-room for a considerable time. I do not think we got him out until about August.
816. In your opinion is he actually getting better? Yes.
817. Do you think he is suffering from acute mania? He is suffering from acute mania, I think.
818. Are you aware that sometimes the urine of acute mania is exceedingly strong? Yes.
819. Can you tell whether it is fresh or stale? No; I only know that it is very strong.
820. Are the single rooms occupied by this class of patients as a rule extremely filthy? Yes.
821. Are they worse than what might be expected to be seen by a sanitary or lodging-house inspector in the city? Yes; I do not think the keepers of a lodging-house in the city or anywhere else would ever see rooms in such a state as these.
822. Is this extreme dirtiness a usual occurrence with patients of this kind? Yes.
823. Have you seen many cases of this kind in the asylum? Sometimes I have seen as many as twenty rooms filthily dirty in the course of one morning.
824. Was Case No. 1 in a shaky condition? Yes.
825. Was he shaky when he came to Callan Park? Yes.
826. Is he shaky now? Yes; in his hands and feet.

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827. Did --- express any regret at the removal of the patient from Cook's River? Yes; she said the removal was against her wish.
828. Are you aware that there are two modes by which cases of this kind are treated—one by placing the patient in a single room and locking him in and visiting him occasionally, giving him night attendants, milk and cocoa, and so forth? Yes.
829. And the other by having someone outside the door to attend to him when necessary? Yes.
830. Was exceptional treatment necessary in case No. 1? Yes; I think it was.
831. Have I ever spoken to you about the patient's treatment? Yes.
832. Have you not said to Dr. Blaxland that it would be much better to shut him in a room by himself? Yes; I thought he was a man who should be kept alone, and constantly watched, because of his irritable manner.
834. Did you think that it would be better to shut him up in a room than that he should be irritated by constant supervision? Yes; I thought so.
835. How many attendants have been constantly waiting upon him? One at night and one in the day. At meal-times sometimes it took two to feed him at first; in fact, it did for the first two or three months, but now it takes only one.
836. In reality, then, has he had practically three attendants waiting on him the whole time? I should think so, on an average.
837. How often did they look in upon him at night? I think they would visit him about every half hour to change his linen if it were dirty, or if necessary for any other purpose.
838. What is the usual custom at Callan Park observed in making night visits? Generally the custom is to visit each hour; that is the usual thing, but every half-hour if necessary.
839. Are you careful at Callan Park in dealing with wet and dirty patients? Yes; we try to give them rest at night, but still we endeavour to train them into good habits.
840. Do you think it would be a proper thing, in the case of an acute maniac, to rouse him from his sleep two or three times a night to get him to go to the tub or to pass water? No; I do not think so; I should rather be inclined to let him sleep.
841. *Dr. Garran.*] In the case of a patient generally suffering from sleeplessness, what do you think is of the most importance—to rouse him for the purpose of keeping him clean, or to let him sleep? I think I would let him sleep, as sleep in such cases does a great deal of good.
842. If you were on night duty would you allow the risk of a patient dirtying his bed rather than disturb him in his sleep? Yes.
843. Do you think that in a case like this the patient should be left all night without any observation? No; I think he should be seen at least every two hours.
844. Do you think his bed should be changed if necessary? Yes.
845. *President.*] From your evidence, then, am I to take it as your opinion that it would be desirable in the case of this patient that someone should see him during the night, and make as little disturbance in doing so as possible? Yes.
846. Since the patient has been at Callan Park has he been kept under such observation at night-time? Yes; we have always had him under observation. We have always kept his sleeping-room door ajar, so that we could see him through it.

[Witness withdrew.]

TUESDAY, 13 NOVEMBER, 1894.

[The Commission met at 11 a.m. in the Board Room, Chief Secretary's Office.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
Esq., M.D., INSPECTOR-GENERAL OF THE  
INSANE.

ANDREW GARRAN, Esq., LL.D.  
JAMES SINCLAIR TAYLOR MCGOWEN,  
Esq., M.L.A.

Dr. Vause was also present to hear evidence and cross-examine witnesses in his own behalf.

Mr. Alexander Mackenzie sworn and examined:—

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847. *President.*] What is your occupation? I am at present a police constable, stationed at Goulburn.
848. Were you formerly employed as an attendant at Bayview House? Yes.
849. When were you first engaged at this institution? On the 13th of November, 1893.
850. How long were you so employed? From the 13th of November, 1893, till the 1st of March, 1894.
851. Do you remember Case No. 1 being at the institution? Yes.
852. Had you anything to do with the attendance on him? I had.
853. In what respect? I used to attend to him every second day. I used to be with him from the time he left his room in the morning, and I also used to clean out his room every morning.
854. Were you the person who attended on him every second day? On an average I attended him about four days a week, but I had to clean out his room every morning.
855. Which room do you refer to? The one that he used to call a stable.
856. Does your memory serve you sufficiently well for you to recollect for what length of time he was put into that stable,—and do you remember the first occasion on which he was placed there? The first work I had to do there on the afternoon of my arrival was in connection with this room, and all I know is that Case No. 1 was put in that room on that same night.
857. At what time was he put in the room? About 5 o'clock at night, I think.
858. Was that on the evening of the 13th of November? Yes.

859. Was he at this time being placed in that room every afternoon or every evening? Yes, as far as I saw.
860. Did he complain to you at this particular period about being placed there? Yes; as a matter of fact he was always complaining about being put in that room.
861. Do you know whether he was put to sleep in any other part of the building? Not while I was there. He had never been in any other room—that is, in the wards—to sleep while I was there, but he used to be there during the daytime.
862. What do you mean by saying he used to go elsewhere in the daytime? He was allowed to go about the ground and into one room in the main building, across from the court-yard, which divided it from the detached place in which he slept.
863. Was this room upstairs or downstairs—I mean the room he was allowed to use during the day? It was downstairs on the ground floor.
864. While you were there did many visitors call to see him? I think visitors used to come to see him about three times a week.
865. Who visited him on these occasions? I only know personally that the visitors were his wife and son. I think his wife visited him twice a week and his son once a week.
866. When he was visited by these relatives was he taken out of the room he usually occupied in the daytime, or did they see him in that room or in the grounds of the institution? He was always taken into a special room near the office.
867. Was he taken into a room just off the office? Yes.
868. Did you in the course of your duty ever see him at night after he had been placed in this solitary cell? Yes; I may have done so occasionally.
869. Was it partly your duty to watch him at night? No.
870. How was it, then, that you came to visit him occasionally at night? Sometimes before we went to bed at 10 o'clock I used to go there and look through the observation hole to see that the patient was all right. Another attendant, named James Copley, would go with me.
871. Did anyone see the patient after this hour at night? Nobody saw him until the next morning.
872. Are you quite sure of that? Yes, I am.
873. Are you positive that no attendant was on duty to see that patient after 10 o'clock at night? There was not.
874. Was any provision made, supposing the necessity arose, to give that patient, or any other patient a drink of cocoa, or milk, or anything else, if he were restless or hungry, and required nourishment, or the attention of an attendant? No; there was no provision whatever for any emergency like this. The kitchen was locked up every night, and there was no other place where we might make a warm drink or anything else for a patient.
875. Was it then, impossible to get nourishment of this kind during the night? Yes, as far as I know, it was.
876. If there had been any provision to supply these things would you have known of it? I think so.
877. Now, returning to Case No. 1, was he undressed before he was put into this room at night? Yes; I have undressed him myself as many as four nights a week.
878. When you performed this duty did you leave any flannels, or pyjamas, or night clothing of any kind on the patient? No; he had nothing of the kind on, except, I think, on about half a dozen occasions while I was there.
879. On the half-dozen occasions did he wear night clothes? He wore on these occasions a singlet or small flannel shirt, which I left on of my own accord, for mere pity's sake, as he asked me to leave it on because he felt so cold.
880. Are you quite sure that he was not supplied with pyjamas at night? No; well, I never supplied him with pyjamas.
881. Are you quite certain of that fact? Yes.
882. Do you mean to tell us that he was put into that room quite naked? Yes.
883. Quite naked? Yes.
884. Do you mean to say it was always so, except on exceptional occasions, when you took pity on him and left his singlet on him? Yes, I do.
885. Was any indiarubber utensil placed in this room for his convenience? No; never to my knowledge.
886. Are you quite certain about this? Yes, certain. There was only one about the place, and that was used in the next room by Case No. 5.
887. From your observation of Case No. 1, was he, while under your care, of an excitable disposition? It was very seldom that I saw him excited. If he did become excited at all he was never in any way dangerous.
888. On the occasion of these outbreaks did you consider him a dangerous patient? No. As far as I am concerned I would at any time have slept with him without the least fear of being attacked.
889. Were not his general habits very filthy? No, they were not.
890. Not at all? No.
891. Not at any time during the period you waited upon him? No.
892. Were not his habits of a filthy character at all? No.
893. How, then, do you account for the state in which he was found in the morning, when sometimes his body and the room would be covered with excrement, and so on? All I can say is that he was put in there of an evening, and if he wanted to do anything he did it on the floor. The room was quite dark. He could walk about, and it is quite possible he might tumble in the filth. During the whole time I attended to him he was most particular. When I took him to the water-closet he was very particular in his habits.
894. Did Dr. Vause visit him frequently? He used to see him about once a day while on his general rounds about dinner time.
895. But was he not, as Medical Superintendent, fairly attentive to him? What I have told you is all I saw.
896. Was it usual for Dr. Vause to have any conversation with him, and so on? It was usual for him to pass a few words as he was going over to his private house.
897. Was it your impression that Dr. Vause was as attentive to Case No. 1 as you would expect him to be to a patient of his character? I did not think it was right or suitable treatment to shut him up in that place at night.

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898. Did you ever see Dr. Vause or speak to him as to why he was put in that room? No.
899. Do you say that during the whole of the period from November to March, while you were at the institution, you did not see this patient display any violence or become more than ordinarily excited? There was one day on which he came in and complained about the food. He became somewhat excited and tried to undress himself, and kicked his plate across the place.
900. What happened then? Dr. Vause told me to take him out and lock him up in the room.
901. Had he any clothing on him then? No.
902. Did this happen at dinner-time? Yes.
903. How did this happen? I think there was an attendant named James O'Brien with him, and I believe he was changing the patient's clothes at the time. It was the custom to put on better clothes when it was known that the patient was to be visited by his friends.
904. Is that a rule in the institution? Yes; it was the practice on all occasions during the time I was there.
905. Are you perfectly certain that there is no provision made for the supply of warm milk, cocoa, or any other suitable drink or food for patients during the night? Yes, I am certain.
906. Do you mean to tell us that no attendant looks in upon patients in any case after 10 o'clock at night? None; not on any ordinary occasion.
907. Was there another patient in the room adjoining that in which Case No. 1 slept? Yes.
908. Was he treated in the same way as Case No. 1? Exactly in the same way, as far as I know, excepting he might have been taken out a little earlier in the morning than the Case No. 1 was. The latter patient was never taken out before half-past 8 or 9 o'clock.
909. Have you had any experience in any other institution for the accommodation of the insane besides Bayview House? No; it is the only occasion in which I have been engaged in a lunatic asylum.
910. Do you remember the character of the food that was supplied to Case No. 1 and other patients at Bayview House? Yes, I do.
911. Was the quality of that food good, bad, or excellent? The quality was not good.
912. What had you to object to in the food? The meat was not what it should be, the milk was sour, and, in fact, neither of the commodities was fit for a human being to eat.
913. Do you mean so say that this description applies to the food which was supplied to private patients? Yes; as far as I saw. I can only speak of private patients, for I have no knowledge of the Government patients.
914. Was the same kind of food supplied to the attendants? Yes; it was very little better, and oftentimes we went for a week without tasting good meat.
915. Did you not infer a few moments ago that on the occasion of visitors going to the asylum there was a certain amount of deceit practised, inasmuch as better clothes were placed on the patients when they were taken to see their friends? Yes.
916. Has this practice been in force on many occasions? It was always enforced on every occasion visitors came while I was there.
917. Was this practice followed when the official visitors (the doctors and others appointed by the Government) came to the institution? It was done in Case No. 1. With the other patients it might not be so easy to do it, because they might be down on the lawn at the time; but in the case of this patient he was always specially dressed when the visiting doctors and official visitors appointed by the Government came to the institution.
918. When these visitors came did they see the patients in their own particular room? No; they might see them in the dining-room or in the reception-room.
919. Did they see them in their own rooms at all? No.
920. Do you remember Case No. 6? Yes, I do.
921. Was he a dirty patient? Yes; he could not help it. He could not do anything for himself at all.
922. Did this patient receive any particular attention from the attendant in regard to keeping him clean? No.
923. What attention did he receive in the way of insuring his cleanliness? He got a bath once a week; on Saturday afternoons only.
924. Was it your impression that in the matter of cleanliness this patient was very much neglected? Yes.
925. In your opinion, did this neglect arise from carelessness or oversight? He was a private patient. We never got any orders to bath him, and we had enough to do to carry out our other duties.
926. In other words, then, do you mean to say that, as far as attendance was concerned, you were short-handed at this time? Yes; certainly.
927. Do you remember Case No. 4? I do.
928. Did he on any occasion receive an injury to his head? Yes; I was there when he did it.
929. How did that accident occur? I was attending to him during part of the time I was there. One night I put him to bed about 9 o'clock. After I had taken his clothes off and put on his night-shirt, I left him sitting in the bedroom while I went into an adjoining room for a chamber. He got up and tumbled against the wall and cut the side of his head.
930. What did you do? I sent for Dr. Vause at once when I saw that he had cut the side of his head.
931. Did the wound bleed much? No, it did not. It was a wound about a quarter of an inch long.
932. Did it take some considerable time for that wound to heal? Yes, it did.
933. Do you remember particularly the room in which Case No. 4 slept? Yes, I do.
934. Were there any rats in that room? Yes; I have seen them there myself.
935. Now, I want you to be careful, and remember you are on your oath; it has been given in evidence here that the patient was attacked by rats;—is that a fact? Yes, it is.
936. Within your personal knowledge? Yes.
937. Did you see it? Yes, I did.
938. Did you complain to Dr. Vause about this occurrence? No, I did not; but I complained to the head attendant.
939. Was any attention paid to your complaint? No; not at the time.
940. Will you describe all that took place in connection with this particular instance? Immediately after the accident I could not imagine what was the matter with the patient. He used to jump up and sing

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sing out, "Oh, oh, my head," about every five minutes. In the morning I found that his pillow was covered with blood. I looked at his head, saw a larger wound, but could not see what had done it. The next night he started singing out again. I got up, struck a match, obtained a light, and saw a rat jump out from the back of his head, which was bleeding then. The next morning I told the head attendant of this occurrence, and he told me to close all the doors the next night. I told him that there were some holes in the room through which the rats could come. I closed the doors as I was instructed, but the next night the rats came again. There was a big bandage on the patient's head, but the rats gnawed this open and got at the wound again.

941. Then did the wound become larger because of the attacks of the rats? Yes; it became about this size. [*Witness measuring on his hand a space nearly the size of his palm.*]

942. What size do you say the wound became? It was about 4 or 5 inches in circumference.

943. Was this sleeping room attended to after that? Yes; the carpenter came in the next day and put pieces of tin over the holes the rats used to come through, and after that things were much better.

944. Have you anything further to say with regard to your experience while you were there as to the management of the institution as a whole;—for instance, in your opinion, were there sufficient attendants to maintain good order and management? While I was there I always thought there were not sufficient attendants.

945. Do you think that there was any laxity in the management of the institution? As far as I could see there was no proper system for carrying out the work.

946. Having seen as you say all these defects in the management, and particularly the circumstances in connection with Case No. 4, did you make any complaints to Dr. Vause? No; I did not.

947. To whom did you complain? I made complaints to the head attendant.

948. Who was the head attendant while you were there? John Doherty.

949. And did you make the complaints to him? Yes.

950. Did you complain to Doherty about the treatment of Case No. 1? I did. I told him that there was only a common bag stuffed with straw put in the patient's room. As soon as it was put in there the patient started picking at the bag, and eventually got the straw out. Then he would try to get inside the bag himself, and sleep that way through the night. I told the head attendant about this, and expressed the opinion that it was a shame the patient could not get a better bed. I asked him to get an order from Dr. Vause at his first convenience, and I then, on the first afternoon on which I had an opportunity to go to town, would get some canvas and make a proper mattress on which the patient could sleep. On the first occasion I spoke to the head attendant nothing was done. I asked him a second time, and he said he would tell Dr. Vause. Later on he told me that Dr. Vause had said they had got the canvas in stock, but it would take a sailor or sailmaker to make it up. I told him there need be no trouble about that, as I would make it up myself, if they would give me the money to get the canvas. I believe Dr. Vause consented to get this canvas. I received the money to purchase it. I came into Sydney on one of my afternoons off. I bought the canvas at the American Novelty Store. I took it out to Bayview House, and I made the mattress myself.

951. Prior to this, was not any mattress provided at all? No; only a common bag stuffed with straw.

952. Was it a bag made of the ordinary sacking? Yes.

953. Did you observe if Case No. 1 suffered from cold when he was sleeping in that room previous to you taking these steps? Yes, I went in one night with Copley. I saw that the patient was shivering with cold, and then I said it was a disgrace to the country that he should be put in a room like that.

954. Was it cold or warm in the room on that occasion? It was cold at night, and warm in the morning, when there was a suffocating filthy foul smell.

955. Do you know when and how often this room was cleared out? Yes, it was cleaned out every morning; but in damp weather the boards would not dry, and I considered there was a great fault because the boarded floor of the room was so close to the ground.

956. Was there any window in that room? There was a hole high in the wall, opposite the door, and this had a shutter on the inside and two or three bars on the outside.

957. Do you know how often this shutter was opened? Yes, it was opened every day.

958. Every day? Yes; and in the warm weather sometimes it was left open at night, and that was the only means of ventilation I saw.

959. Did you notice if there were any ventilating bricks in that room? No, I did not see any.

960. Supposing I were to tell you that there are such things there—what would you say to that? That they must have been put there since I was there. Perhaps there were some outside, but they did not come inside.

961. Did you notice whether there was any wooden panelling inside this room? Yes, I did.

962. Was it always in a fair condition? Yes.

963. Concerning the smell in this room—did it always strike you in all times of the day as being offensive? Yes.

964. Was it always the smell of stale urine? Yes, it was.

965. Did you ever try to take the smell out? Yes, I used to try to scald the floor well in dry weather. It was no use doing so in damp weather for the room would not dry, and I attribute this fact to the floor being so close to the ground.

966. Remember you are on your oath, and do you mean to tell us that Case No. 1 was not a dirty patient, and that he kept himself clean? Yes.

967. And if he had the opportunity to do so he would have done so? Yes.

968. But that he was put into a dark room and could not do so? Yes.

969. *Dr. Garran.*] Were you engaged by Dr. Vause himself when you joined that institution? Yes.

970. Did you report yourself to the doctor on your arrival there? Yes.

971. Were you engaged specially to look after Case No. 1? No.

972. Did Dr. Vause set you to do that work? No, he merely handed me over to the chief attendant.

973. Did he put you to work? Yes.

974. What did he specially instruct you to do? Nothing particular on the first day I went there, but he told me to stop with the patient and keep my eye on him, and to attend to him for that afternoon.

975. Had you ever been in a lunatic asylum before? No.

976. Did you know the nature of the work you would have to do? No.

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977. Did the chief attendant give you any special instructions as to your duties? He showed me some rooms that I had to clean out. I had to do most of this dirty work, because the rule of the institution was that new hands should take this work when they came on.
978. Is it usually the case that when an attendant first arrives at the institution he is put to do this kind of work? Yes.
979. Is that regarded as a lower kind of position which the last new comer must occupy before promotion? Yes.
980. When you first attended Case No. 1 was he of an active and restless disposition? I cannot say that he was restless, but he was very active, especially in his walking.
981. Was he able to walk you down? Yes.
982. Had he then plenty of physical vigour? Yes; he had.
983. Did you ever find him disposed, during the daytime, to tear his clothes? Very seldom. He did on one or two occasions tear his trousers. He used to like to work his fingers into the seams and tear the stitches out.
984. Did he show any disposition to undress himself during the daytime? No.
985. You mentioned something in your evidence a few minutes ago to the effect that on one dinner-time he undressed himself and kicked his food away;—can you explain the circumstances of that occasion? Yes; he, with other patients, had come in from the lawn, and they were then going to the dining-room to dinner. I believe he was having his clothes changed, and some patient annoyed him, and he became annoyed and a bit excited.
986. Was anybody in charge of him then? Yes; another warder.
987. Did he see him undress himself? Yes.
988. Were his clothes put on the floor? Yes; he undressed in the public room, and kicked over the plate which was for his food at dinner-time.
989. Now, coming to night-time;—did it usually take two attendants to undress him? No; I always undressed him myself without assistance, and never experienced any difficulty.
990. Were you told to leave the patient in this room without any clothes on? Yes.
991. Who told you to do that? The head attendant.
992. Did you receive definite instructions from the head attendant to leave him in that room naked at night? I did.
993. Do you know whether these instructions originally came from Dr. Vause? I do not know.
994. Did you not ask the chief attendant if Dr. Vause had given these instructions? I do not think so, but he told me, and I understood that these and other instructions were given him through Dr. Vause.
995. Did you ever speak to Dr. Vause personally about this case? No.
996. Did you ever make any report to him? No.
997. Did you report anything to the head attendant? Yes.
998. Do you know whether he was in direct contact with Dr. Vause? No.
999. Do you know whether Dr. Vause knew how Case No. 1 was treated? No.
1000. Did Dr. Vause ever come on the scene when he was being put into this cell? No; the only time I ever saw Dr. Vause was at that dinner-time which I have spoken about.
1001. I want to know if Dr. Vause had any knowledge of his being undressed and put away naked every night into that cell? I cannot say if he had any knowledge.
1002. Did Dr. Vause ever make a round during the evening, up to 10 o'clock at night, when you and the other attendants went to bed? No.
1003. Did he ever go round before the patient was taken out at 6 o'clock in the morning? No; I never took him out at 6 o'clock, it was more often between 8 and 9 when he was removed.
1004. During your experience at the institution was it the custom them to take him out of this cell between 8 and 9 o'clock in the morning? Yes.
1005. When you went into the cell of a morning did you ever see him shivering, as if from cold? Yes.
1006. Was there any mattress on the floor? Yes.
1007. Have you not mentioned in your evidence that he was in the habit of dirtying the floor, then walking about and treading in the ordure? Yes.
1008. Have you any other theory as to how he got into a dirty state? No; I have not.
1009. Concerning that window;—did you ever open it? No.
1010. So that if you did not release the patient until between 8 and 9 o'clock in the morning he would be in the dark in this room from the break of day until he was taken out? Yes.
1011. Was it not your duty to let down that shutter so as to throw some light into the room, say as early as 6 o'clock in the morning? Sometimes I would let it down, and then the head attendant would put it up again.
1012. Did you receive any instructions concerning the opening and closing of this shutter? No.
1013. Were you then left to your own devices? Yes.
1014. While you were attending on Case No. 1, was he in the habit of talking to you? Yes, frequently. Sometimes he would talk to me as often as every two hours. He was very fond of telling me his troubles, and sometimes he would cry and bemoan his fate, and he has said "I was not mad when I came here, but I am mad enough now."
1015. Did he appear to know where he was then? Yes, he did.
1016. So far as you know, was there any attendant told off for night-duty? There was none. We had to work as many as sixteen hours during the day, and there was no one for night-work.
1017. Did everybody in that institution—I mean the attendants, of course—go to bed at 10 o'clock at night? I can speak of the males, and can safely say that every male attendant was in bed by half-past 10 o'clock at night.
1018. Was there no one to patrol the place at night? There was not.
1019. Was not there anyone to give an alarm, supposing a patient were taken ill? No, except those who were sleeping with patients.
1020. Did you not say it was your custom to look in upon patients with Copley before you went to bed at night? Yes.
- 1021.

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1021. Were you instructed to do this? No; we went of our own accord.
1022. Did you on these occasions go into this room where Case No. 1 was confined? Yes.
1022. Was it the custom to find any mess about the floor then? Sometimes.
1024. Did you bath him in the morning? Yes.
1025. In warm water? Yes.
1026. Where did you get the warm water? We used to get it from the pantry.
1027. Did you not tell us that you have seen Case No. 1 shivering and shaking as if from cold? Yes.
1028. Did you ever, while he was shaking and shivering, put him in a cold water bath? No.
1029. During the whole of the time you were there was the patient put into a cold water bath? No.
1030. Did he as a rule dislike the idea of having his bath? Yes; there was some reluctance on his part about the bath. Sometimes he would complain about the cold, and altogether he didn't care about the bath.
1031. Do you know the temperature of the water? No; but the water was warm.
1032. From what you say am I to understand that the patient really did not like a bath? No, he did not.
1033. Or, in other words, he was not a bathing man? No, he was not.
1034. Do you say that it was your duty to clean up the floor of the room in which he slept? Yes.
1035. Do you think it was any fault of yours that this room continued to smell all day? No.
1036. Do you think it continuing to smell all day was because it had not been properly cleaned? No.
1037. Do you think that with ordinary care and cleanliness the smell could be got out of the floor? I do not think so, if a patient had occupied it all night.
1038. Do you know if that room smells now? I do not know; it is sometime since I was at the institution.
1039. Do you think that with proper scrubbing you could make that room clean and keep it sweet? No, I do not, especially, as I said before, in damp weather it is impossible to get it dry, as the floor is too near the ground.
1040. Do you put down the continual smell to the fact that you could not get the floor dry? Yes.
1041. Have you any other reason why you could not get the smell out of the room? No.
1042. Did you scrub it out properly? Certainly I did. Sometimes I scrubbed it out with a hard broom and hot water, and even then I could not get it clean and sweet.
1043. Do you think that room had been previously neglected? Yes, I do.
1044. Are there any other parts of the asylum where the floor gets wetted and dirtied in the same way? That is the only room of its kind I know of where this is done. Case No. 4 used to be in the habit of getting up in the night and making water on the floor.
1045. Was it the custom for this room in which he did that to be scrubbed out? Yes.
1046. And was the urinous smell taken from it? Yes.
1047. Do you think that it was because the room occupied by Case No. 1 became saturated with this filthy matter, and owing to the dampness caused by its position when the weather was not fine, that you could not get it dry? Yes.
1048. And that because you could not get it dry the stale smell was continuous? Yes.
1049. And you say that room was properly attended to? Yes; as well as it could be.
1050. If it was not properly attended to was it through no fault of yours? No.
1051. *President.*] When you were engaged at this institution did you sign any memorandum of agreement? Yes, I do.
1052. Was it to this effect, "That whilst in the employment of the said A. J. Vause of the abovenamed asylum, to report to the said A. J. Vause, or to whom he may appoint, to act on his behalf there within twenty-four hours after the occurrence, any improper or insulting language or violence used by any person towards any patient or patients therein; also any neglect or inattention shown to them or injury sustained by them. That the said \_\_\_\_\_ will keep a watchful care over all such patients; treat them with proper care, attention, and civility, and prevent their escape from the said asylum"? Yes.
1053. Did you at any time record any such occurrence in connection with this memorandum of agreement? No; I never reported any occurrence of that kind to Dr. Vause.
1054. Did you report anything of the kind to the head attendant? Yes, but I got tired of doing so.
1055. Why did you not go to Dr. Vause and make these complaints? Because I did not like to; I did not like to speak to him, as he did not speak pleasantly to me.
1056. How was that? He spoke to me as if I was something beneath him, and as a consequence I never spoke to him only when I went into his office for my wages.
1057. I see there is appended to the memorandum of agreement a statement "that you would solemnly declare that during the time you have been in Dr. Vause's employment every consideration was paid to the care, comfort, and recovery of the patients in the establishment, to the best of your knowledge and belief";—do you remember signing anything of that kind? No; I was asked by his housekeeper to sign something, and I did so once; but after that I would not sign anything more. I said it was not my fault, and I would not sign anything more.
1058. Can you say that you could conscientiously agree to signing that declaration to the effect that every consideration was paid to the care, comfort, and recovery of the patients in the establishment? No.
1059. *Dr. Manning.*] How often was case No. 5 put in the single room? When I went to the institution he slept upstairs. I could not say on which day he was removed from there, but he was placed in that room every night for a good bit.
1060. What do you mean by saying a good bit? It may have been a month or more.
1061. It may have been how long? I do not know exactly; he was there when I left.
1062. What were the circumstances under which you left the institution? I was dismissed.
1063. Do you think you were wrongly dismissed? Yes; I do.
1064. Did you afterwards write to a man named Geary something to this effect: "That you know Case No. 1 was not getting justice, and to see that he got it would be far sweeter to you than any other form of revenge"? Yes.
1065. Had you any previous experience in asylum work? No.
1066. *Mr. McGowan.*] Do you know, Mackenzie, that all you are saying now is said on oath? I do.

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1067. Do you also know that if what you say is not true that you are liable to be prosecuted for perjury? Yes.
1068. Do you know that as a constable? Yes, I do.
1069. Has it not been stated that you were dismissed from Bayview House? Yes.
1070. When you were engaged at Bayview Asylum did the person who engaged you examine your testimonials? Yes.
1071. Have you any testimonials with you now? I have not at present.
1072. Do you possess any recommendations of good character? Yes, I do.
1073. Will you mention to the Commission where they are from? Yes. I have one for eighteen months' service under the Gas Company at Townsville, in Northern Queensland. I have others—two or three—from former employers in the old country. I have one from Dr. Sinclair, who was acting for Dr. Vause at Bayview House.
1074. Was that during the time Dr. Vause was recovering from an accident? Yes.
1075. What is the gist of that testimonial? That I was straightforward, trustworthy, sober, and attentive to my duties.
1076. Since leaving Bayview House have you been able to join the Police Force? Yes.
1077. Was it necessary that you should have good testimonials to do so? Yes.
1078. In the course of your evidence do you not say that you complained to the head attendant, not only in regard to the treatment of Case No. 1, but also in reference to other patients; and saying, in so many words, that it was a scandal that such treatment should be allowed? Yes.
1079. And was not the treatment changed when you reported it? No.
1080. When you went to the head attendant, did you complain on several occasions of the way in which certain patients were treated? Yes.
1081. Did you consider that after having received your orders from the head attendant that it was your place to make your complaints to him? Yes.
1082. Did you think it was your duty to go direct to Dr. Vause? No. I thought it was my duty to go to the head attendant, because I feared that I might be charged with insubordination if I went over his head to Dr. Vause to make any complaint.
1083. Have you not said in the course of your evidence that you were in the habit of having conversation with Case No. 1 during the day-time? Yes.
1084. Did he ever say anything to you why he tore his singlet or pyjamas occasionally while confined in that room at night-time? Yes. He said, "As long as I am kept in that damned stable I will tear everything they give me."
1085. Have you not said that sometimes, but on very rare occasions, he became violent and excited? Yes. As a rule he was not very excitable; he would get a bit excited sometimes, but he was never violent to himself or anybody else.
1086. When he became excited did he remain so for any length of time? No; he was soon out of these tempers—sometimes in five or ten minutes.
1087. Do you think that you could have slept in that room with him without any fear? Yes; without any fear of violence.
1088. Do you think he would have attacked you? I am quite certain he would not.
1089. Was he always restless at night? Yes; he was restless, but not violent.
1090. Are you perfectly sure that during the whole four months you were there there was no indiarubber or any other utensil placed in his room? No, there was not.
1091. How many utensils did you see while you were there? Only one.
1092. Where was that? It was usually in the room Case No. 5 occupied, and it was the same room occupied previously by Case No. 7. It was in there when Case No. 7 was there, and Case No. 7 occupied that room when I went there first.
1093. Was he an excitable patient? Yes.
1094. And was the same treatment meted out to him as was meted out to Case No. 1? No; not as far as sleeping accommodation was concerned. He got a mattress, blankets, and sheets.
1095. Do you not say that it was your idea to get a mattress and make it up for Case No. 1? Yes.
1096. Was not this suggested to you by the head attendant? No; I talked to the head attendant about it first.
1097. Did you not suggest in any way that you should be supplied with money to get this mattress? I said that if they would give me the money I would go down town on my day off and get the canvas.
1098. So that you went down town and got this on your holiday? Yes.
1099. What is the rule of the institution about these holidays? We used to get a day every fortnight, from 10 o'clock in the morning till 10 at night. We had an afternoon off once a week, from 5 till 10 o'clock.
1100. And on one of these holidays, in the few hours you had for recreation, did you obtain the material for this mattress? Yes.
1101. Were there any other kind of mattress used in that room? Yes; there was one put there which had been soiled by another patient—a dirty patient (Case No. 6). It was so soiled that case No. 1 would not sleep on it; he said he would sooner sleep on the floor, and he shoved this mattress on one side.
1102. Was that a straw mattress? No; it was a hair mattress.
1103. Was it taken out of the room after this patient refused to sleep on it? Yes; it was taken out the next morning. It was in the room all the night; he had thrown it into one corner, and he told us in the morning that he would not sleep on a dirty thing like that.
1104. Did he try to destroy this mattress? No; he simply threw it on one side.
1105. After you had made the new mattress and filled it with straw, and put it in the patient's room, did he use it? Yes; while I was there he did.
1106. Did you leave it there? Yes.
1107. In regard to the covering used in this patient's room—were there any blankets on the canvas? No.
1108. What was the nature of the covering then? It was some sort of rug made of two pieces of common rough canvas.
- 1109.

1109. Was there any blanket attached to this covering? I think there was a piece of blanket on one breadth of canvas.
1110. Do you not say that after you made this mattress the patient used it while you were there? Yes.
1111. Did you not also say that he used to make water all over the room and often on his bed? Yes.
1112. Did he ever dirty his bed too? He used to do it on the floor.
1113. And did he sometimes do it in his bed? I cannot say. He used to pull his bed from one end of the room to the other, but I think he must have done it sometimes because it looked like that.
1114. During that time the covering, the mattress, and the straw would be soiled with urine and other matter? Yes.
1115. Was it the same during the months you were there? Yes.
1116. How often did you rip that mattress open and take the straw out? Once, I think.
1117. Did you get instructions to do it? No.
1118. In these matters were you left to do as you liked? Yes.
1119. As a matter of fact then, as far as your experience goes, if you liked to neglect certain patients you might do so? Yes.
1120. If you chose to give a patient a cold water bath instead of hot water you might do so? Yes.
1121. If you liked to leave the same filthy straw for the use of the patient, might you do so? Yes.
1122. Was there anyone to supervise you at all? No; it was left to myself to do these things.
1123. Did you ever hear Case No. 1 say that he would be quiet in his department if he were left out of this room? Yes; he has said he would be quiet if they would give him better accommodation. He said he would be quiet if they would put him in what he used to call the satin room. If he were put into that, he said, he would behave himself like anybody else.
1124. Sometimes then would he talk in a sensible manner? Yes; sometimes for an hour at a time, and then he would wander away again.
1125. When his friends came to see him he was put into another room altogether? Yes; always.
1126. Did his friends ever see him in this room which he called a stable? No; they never even saw him in the room he was allowed to occupy during the day. He was always taken on these occasions to a room off the office.
1127. Did you ever get any intimation when his friends were coming to see him? Oh, yes.
1128. Were you well aware of it then? Yes; when his friends came to the institution they were kept in the office, and word was sent over to get the patient ready. He was then taken to them.
1129. Were his clothes changed on these occasions? Yes; they used to change his clothes and take him in.
1130. Were you ever near by when he met his friends? No.
1131. Did you ever hear any conversation between himself and his friends? No.
1132. Did his friends pay regular visits to him at stated times? Yes; I think they did. They used to come about three times a week.
1133. Do you think that the patient knew when his friends were coming? No; not until they came.
1134. Do you know if he looked forward to these visits? At times he used to speak about his wife coming, and there were occasions when Dr. Vause advised the visitors not to see him because he used to get excited. Two or three times, I think, he was got ready to see his friends, and then the message would come along to say it would be better for them not to see him that day.
1135. Did you ever get any information as to when the visiting doctors were about to examine the place? Yes; always.
1136. Did you always, when Dr. Manning, the Inspector-General of Insane, was coming? Yes; he always went to the private house first.
1137. Did you then receive an intimation that the Inspector-General was there? Yes.
1138. Did you also receive a similar information when the visiting doctors were there? Yes.
1139. What did you do then? We used to take up the old carpets, put down new ones, and make other changes.
1140. Was the whole aspect of the asylum changed for these occasions? Yes.
1141. Are you positive you always received this information? I am. Some of the patients used to notice this, and one, Case No. 8, used to say he could see us making arrangements when the visiting doctor came.
1142. Did Dr. Manning ever pay you a surprise visit? No, never while I was there.
1143. Have you not said to the President that the food supplied to the patients was not good? Yes.
1144. Was it the same kind of food that the attendants got? Yes.
1145. What did your breakfast usually consist of—I mean the ordinary one? Sometimes, mostly always, a sort of stewed steak, bread and butter, and sometimes we got chops.
1146. Was it the same thing every morning? Yes, very little change.
1147. Do you not say that this is not good? Well, I thought it was kept in the place too long—kept there until it became unfit to eat.
1148. Did the food seem to smell high? Yes.
1149. Did this occur very often? Yes, very often.
1150. Was any complaint made by the attendants about the state of the food? Yes; we went to the kitchen and complained about it to the head attendant, and he said he would see about these things. After several complaints he told us he could not give us any more, and that we could not get anything else.
1151. Coming to Case No. 4, do you not say that the rats ate flesh from the wound on his head? Yes.
1152. Did he sleep on a bed and bedstead? Yes.
1153. Then must the rats have climbed on to the bed? Yes; and I saw one go from under his pillow one morning.
1154. There is another case mentioned—Case No. 6,—was he so paralysed as to be utterly unable to do anything for himself? Yes; he was even so bad that he could not eat the food when it was put before him.
1155. Do you mean to say that this man, helpless as he was, only got a bath and a change of clothes once a week? Yes.

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1156. And when did he get this attention? On the Saturday afternoon.
1157. Every Saturday afternoon? Yes.
1158. Supposing he might have been suffering from relaxation of the bowels, and was helpless to aid himself, did he receive any special attention? Not necessarily.
1159. Did you ever undress him? Yes.
1160. Were his trousers in a filthy condition then? Yes.
1161. Did you ever dress him in the morning? Yes.
1162. Did you ever put the same trousers on him in the morning that you took off the night before? Yes.
1163. Had you any instructions to do other than that? No.
1164. Had you any other trousers to put on the man? Yes; there were a lot of trousers belonging to him, but the seats were all rotted away by filth. He had two lockers full of clothes, but all the trousers were all alike, rotted away. He had only one clean suit kept for his wear on the occasions when his Mrs. came to visit him.
1165. Was there any provision to afford him fresh clothes under ordinary conditions? No.
1166. Then must he not at times have been in the most frightful state? Yes; we had to change his sheets every morning.
1167. But still did you leave the same pants on him every day? Yes; we used to put a clean pair of drawers on him, but all of those belonging to him were nearly as bad as his trousers, because of their dirty and filthy condition.
1168. *Dr. Garran.*] Do you say that Case No. 1 did not like his clothing changed? It appeared to me that he did not like to be bothered to have his clothing changed.
1169. Had he any preference for better clothes or inferior clothes. He used to like the two pairs of trousers that he had torn. He liked to have his trousers open, and was fond of getting his fingers into the seams.
1170. In these clothes, then, was he decent enough to be taken into company? No.
1171. Did he care to have them changed? No.
1172. Was he in the habit of attempting to destroy his better clothes when they were put on him for the purpose of receiving visitors? No; we used to tell him that he was going to see Mrs. \* \* \*, and then we could get on his clothes right enough.
1173. Would there have been difficulty if he had not been persuaded? I think he would have gone in as he was if we had allowed him.
1174. Was Dr. Sinclair medical officer in charge while you were there? Yes.
1175. Did Dr. Sinclair, while he was at Bayview House, make any special rounds at night? Not that I know of.
1176. Nor at 10 o'clock at night before the attendants went to bed? No; he did not.
1177. Do you mean to say that he, as medical officer in charge, did not make any visit to the room in which a patient like Case No. 1 was kept? Not that I know of.
1178. Was Dr. Sinclair in full charge of the establishment? Yes.
1179. Did he make any general round? Yes.
1180. Did he ask you where Case No. 1 slept? No.
1181. Did you tell us that Case No. 1 said if he got back to what he called the satin room he would be all right? Yes.
1182. Do you think if he had been put back in that room he would then have damaged his clothes? I do not know.
1183. Do you know how long he occupied that room? No.
1184. *Dr. Vause.*] Did you complain to either Dr. Sinclair or Dr. Ramsay in connection with the food? No.
1185. Did you make any complaint through the head attendant? Yes. I know, too, that on one occasion Dr. Ramsay visited the dining-room where there was a cupboard in which food was kept. He ordered bread and butter and other things to be taken outside because he thought the food was affected by flies.
1186. Did you ever hear any complaints made by either of the attendants? No.
1187. Did you not make a stronger mattress for Case No. 1 because he tore up every other thing that had been placed in his room? No; I made him the mattress because I wanted him to be more comfortable than he was before.
1188. Was it a stronger mattress than the one he used before? Yes.
1189. Do you think it would be as comfortable for him as the one he had previously used? Yes; I think so, because it was very much thicker.
1190. Did he tear up the other mattress? Yes; I think he did; but I know he said he could not sleep on it, as the straw punished him by coming through the old bagging and sticking into his skin.
1191. Have you seen any of the members of this Commission before to-day? Yes.
1192. Who have you seen? I have seen Dr. Manning, for one.
1193. Anyone else? Yes; I saw Mr. McGowen last night.
1194. Did you ever go over any of your evidence with him? No.
1195. Did you tell him anything about what you have told us to-day? No; I did not. I spoke to him about things in general, but said nothing as to the nature of my evidence to-day.
1196. What did you talk about while in conversation with Mr. McGowen? About the treatment of the patients generally, and about the treatment Case No. 1 received while there.
1197. Did you speak just in the way of a general conversation, and go over the matters connected with Case No. 1 and other patients? Yes.
1198. Was Case No. 6 cleaned every time he dirtied himself? No.
1199. Were you in charge of him? Yes.
1200. In the day-time? Sometimes.
1201. Did you ever have to clean him? Yes.
1202. Did you ever neglect to do so? No.
1203. How did you know that anyone else did? He must have been neglected, judging by the state in which he was. There were not sufficient attendants to look after him properly.
1204. How many attendants were there? Sometimes three, and sometime not as many regular attendants.

1205. Were there not five attendants besides two outside? No.

1206. Is this your signature [*handing to witness the butt of a book containing the obligations, general rules, and instructions for attendants and others employed at the Bayview House Private Hospital for the Insane*]?

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Yes.

1207. Did you sign this obligation,—“I hereby promise during the period of my engagement to obey the rules of the institution, to promote so far as I am able its objects; to be careful of its property; to avoid gossiping about its inmates or affairs; neither to use nor to have in my possession any intoxicating liquors, and to endeavour generally by my own conduct and demeanour to sustain the reputation of the establishment. I consider myself bound to perform any duty assigned, although not of a nature I usually perform, should I be required to do so by the Superintendent. If anything improper is done in my presence, or to my knowledge, I consider myself bound to report it to the Superintendent. I understand and acknowledge the right of the Superintendent to discharge me without warning for acts of unkindness to the inmates, intemperance, disobedience to orders, incivility to superiors, or any transgression of the rules, my wages being thereby forfeited. This agreement shall be understood to operate in conjunction with the Memorandum of Agreement signed on entering the asylum; also, any Lunacy Act or Masters and Servants Act that is or may be enforced within the Colony”;—do you remember signing that? Yes.

1208. Do you remember reading it before you appended your signature? No; I know I signed it as a mere formality.

1209. Did you know what you were signing when you affixed your name to that document? No, I did not; I thought it was an ordinary agreement.

1210. When you were signing that document was Dr. Vause present? Yes.

1211. Did Dr. Vause read it over to you? Yes.

1212. Are you perfectly sure of that? Yes.

1213. So that you were asked to sign a document, the contents of which you were unacquainted with? Yes.

1214. Did you have put before you a similar paper to this that I hold in my hand—it is known as general rules and instructions for attendants and others? I had a paper of some kind; I do not think it was like the one you hold in your hand. It was a printed paper torn from a book, and about one-third the size of that you show me. It certainly was not the same size as that before you.

1215. Do you know whether the piece of paper you had supplied to you contained the same conditions as those in this one;—I mean to say as far as you could grasp the matter? Yes; I think they were much about the same.

1216. Did you carefully read the paper you then got? Yes, I read it.

1217. Did you make yourself familiar with its contents? Yes.

1218. Did you do your best to carry out the instructions contained in that paper? Yes.

1219. Why were you dismissed from the institution? The only reason I know of was this:—I went to the office every night to see if there were any letters for post. I went there on one wet night with a top coat on and asked as usual if there were any letters or papers to go to the post. I went into the office, but did not take off my hat. Mrs. Gilchrist, the lady superintendent, as I was passing out told me that I had not taken off my hat. I replied to her that I did not think that it was necessary, as I did not see anyone to take my hat off to. I also said, “I consider that I should only take off my hat to my superiors.” I also said to her, “If you will mind your own business I will take care of myself.” I heard nothing more about it. I went to the post next day, and about 2 o’clock on the same day word came to me that I was wanted at the office. I then went round to the private house and I was informed that my services were not required any longer.

1220. Did you not say that you had passed through the office as often as you liked without taking your hat off? No.

1221. Are these the grounds upon which you were discharged from the institution? Yes.

1222. How long have you been in communication with a man named Mr. Gearey? I cannot say for certain, but I think it was about last April—that is the date as near as I can remember.

1223. Do you know if he was given any names of the attendants or nurses connected with the institution? Yes; I think he was.

1224. Do you know if Mr. Gearey was in communication with any of the people whose names had been supplied to him? Yes; I think he was.

1225. *Dr. Garraan.*] Do you admit that you signed a book handed to you without having read what it contained? Yes, I do.

1226. Do you know whether when you signed that you were committing yourself to conform with the introductory clause in that book? I do not know.

1227. Do you know whether that first clause said, “I hereby promise during the period of my engagement to obey the rules of the institution; to promote as far as I am able its objects; to be careful of its property; to avoid gossiping about its inmates or affairs; neither to use or have in my possession any intoxicating liquors, and to endeavour generally by my own conduct and demeanour to sustain the reputation of the establishment”;—did you sign to conform to this? I suppose I did.

1228. Does not the obligation also point out that if you had any complaint to make you should report to the Medical Superintendent? I do not know; I only know that I had to report to the head attendant.

1229. How do you reconcile that you should only report to the head attendant when it is said that it was your distinct duty, according to the rules and instructions, that you should immediately communicate to the Medical Superintendent any peculiarity you might observe in any patient and every instance of neglect? I do not know how it came about. I was told to report to the chief attendant.

1230. Did you not observe that you were to report any abuses or neglect to the Medical Superintendent? If it was in the book I signed I suppose I should have done so.

1231. But does it not state distinctly in the paper that was given to you that you were to report any abuses to the Medical Superintendent? Yes.

1232. And yet do you admit that there were great abuses and that you did not report them to the Medical Superintendent? No, I did not.

1233. Have you got a copy of that document which you signed then in your possession? No, I have not.

1234. Did you read it over when it was given to you? Yes; I am sure I read it over, but I do not think it was of the same nature as that you read to me now.

1235.

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1235. *Mr. McGowen.*] Do you not say that your first communication with Gearey was made in or about last April? Yes; as near as I can remember.
1236. Was that date after Case No. 1 had been taken out of Bayview House? No.
1237. How did you become acquainted with Gearey? I got a letter from Gearey through another friend of mine in town. This friend wrote to Mr. Gearey and told him certain things. He then wrote to me.
1238. Was that how you were introduced to Mr. Gearey? Yes.
1239. And did you then find out that Mr. Gearey took a great interest in the case? Yes.
1240. Did you, on Mr. Gearey's solicitation, furnish him with certain particulars? Yes; I did.
1241. And are those particulars the sum and substance of the evidence you have given here? Yes.

[Witness withdrew.]

Mr. Thomas Kernaghan sworn and examined:—

- Mr. T. Kernaghan.  
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1242. *President.*] What are you, Mr. Kernaghan? I am a warder at Callan Park Hospital for the Insane.
1243. How long have you been at that asylum? I think about two years and two months.
1244. Do you remember Case No. 1 being brought there? Yes.
1245. Have you had experience in the treatment of excited patients during the period as a warder at Callan Park? Yes.
1246. Was Case No. 1 in an excited condition when he was admitted? Yes; he was very excited at the time of his admission, and he was much more so afterwards.
1247. Did you see him undressed for the first time after he had been admitted? Yes.
1248. Were there any bruises on his body? No, sir; not that I am aware of.
1249. Was he in good bodily and physical condition—was he well nourished? I should say he was just about middling.
1250. Was there anything peculiar in his appearance? No; except that he had a black eye.
1251. What was the general character of the patient as regards his habits? There is a great change in him now in this respect. When he first arrived in Callan Park he was very dirty in his habits, but now he shows a marked improvement.
1252. Do you mean to say he is now more cleanly than he was at first? Yes; very much more so.
1253. When he arrived at the institution was he in an excitable condition, and in the habit of tearing his clothes? Yes.
1254. In your experience, have you seen more excitable patients than Case No. 1? Yes; I have at times.
1255. Would you describe him as one of the excitable patients? He was when he was first admitted.
1256. Is he as excitable now? No.
1257. Do you look in upon him at night? Well, not during this month.
1258. Did you when he first arrived at the institution? Yes.
1259. Does he now sleep in a room by himself? Yes.
1260. Does he require to have his bedding or clothing changed at night? He did very often when he first arrived, but not so much now.
1261. *Dr. Garran.*] Do you consider that he has contracted much better habits now as compared with when he first was admitted to Callan Park? Yes.
1262. Does he tear his pyjamas at night? No.
1263. Does he complain about suffering from cold? No.
1264. Do you give him a bath every morning? Yes.
1265. Does he ever show any reluctance to having his bath? No; he will get up at once as soon as I tell him his bath is ready. In fact, he appears to enjoy his bath.
1266. Do you not say that he has grown much quieter of late? Yes.
1267. Do you think that his quietness of late is due to any failure of strength, or that he is more contented and better in health? I think he has grown physically stronger and quieter.
1268. Is he in the habit of taking long walks? No.
1269. Do you think that while he is taking walking exercise he tires the attendant who goes with him? Oh, no; he does not.
1270. Do you consider that he is in better health now than he was when he arrived at Callan Park? Yes, certainly.
1271. Do you think he shows any improvement in his habits? Yes.
1272. Do you say that an attendant looks in upon him on two or three occasions during the night-time? Yes; an attendant sits in front of his door, which stands ajar sometimes, and this attendant throws his lamp upon him during the night, and sees that he is alright.
1273. Is there a special attendant on duty to look after him then? Yes.
1274. I mean is there an attendant at night-time besides the one during the day? Yes.
1275. Does this patient take the entire work of two attendants? Yes.
1276. Are there many patients in Callan Park Asylum who get two attendants to look after their requirements? No; he is the only patient.
1277. Is he, then, exceptionally well attended to? Yes.
1278. Does he show any disposition to tear his mattress, his sheets, or bed-clothes? No; I see no disposition in this direction while I am with him.
1279. Does he try to tear his usual wearing apparel? He is always fiddling with the buttons of his clothes, but I do not see him make any attempt to tear them.
1280. What kind of mattress does he sleep on now? A hair mattress.
1281. Did he sleep on a hair mattress when he was first admitted? No; on a straw one.
1282. Since his admission, then, he having improved in health and habits, he is supplied with a better mattress? Yes.
1283. Is he also supplied with blankets and sheets? Yes.
1284. Is he usually quiet during the night? Yes.
1285. Do you ever notice him being restless, walking about as if he wished to shift his bed? Sometimes he will get off the bedstead and pull the mattress and pillows about.

1286. Does he put the mattress on the floor as if he wished to sleep there rather than on the bedstead? Yes; sometimes.
1287. Does he get a straw mattress sometimes, and does he pull that about the floor? Yes; he seems to prefer a straw mattress to the other one.
1288. Does he grow tired of the horse-hair mattress? Yes. He seems to want a change, and he asks for a straw mattress, because he seems to think there is something electric in it.
1289. Has he asked you to change his mattress at night? Yes.
1290. After it was changed, would he lie down on the floor and go to sleep? Yes.
1291. *Mr. McGowan.*] Did you strip him as soon as he arrived at the institution? Yes.
1292. Did you give him a bath at once? No, sir, we gave him a bath the next morning.
1293. When you gave him this bath, did you discover any discolouration on his body? No; I did not.
1294. During the first four days of his residence at Callan Park—that is, from the 20th to the 24th May, I use these dates just as a matter of fixing the 24th as the Queen's Birthday—how did he behave during the daytime? He was very restless.
1295. Did he tear his clothes? Yes.
1296. Did he show the same disposition in the night-time? Yes. He got blankets, and he used to tear them up.
1297. Was he in the habit, then, of making water on his bed? Yes. He would do so on the bed, on the floor, or on any other place at all, during the first days of his confinement at Callan Park.
- 1298-9. Does he now use the chamber utensil at night? Yes; and in the daytime he will say when he wants to go to the closet? I go with him and unbutton his clothes and button them up again.
1300. So that now, from having been a dirty patient, he is much cleaner and more rational by going to the water-closet in the daytime and using the chamber utensil at night? Yes.
1301. Do you think in his general health he is much stronger? Yes; much stronger.
1302. When he is walking about, do his legs appear to tremble? Yes, a little; but not so much as they did at first. He appears to suffer from paralysis to such an extent that when he takes his food his hands shake. At first it used to take two attendants to feed him.
1303. Is this shaking less now than when he first arrived at Callan Park? Yes.
- [Witness withdrew.]

*Mr. T.  
Kernaghan.*  
13 Nov., 1894.

Mr. Thomas Ramsay sworn and examined:—

1304. *President.*] What is your occupation? I am at present engaged as an attendant at Callan Park Hospital for the Insane.
1305. How long have you been so engaged? For over ten years.
1306. Consequently, then, you have had a considerable amount of experience? Yes.
1307. Do you remember Case No. 1 being brought to Callan Park? Yes.
1308. Where you present when he was undressed? Yes.
1309. Did you see him undressed? Yes.
1310. Did you notice any bruises on his body? No, sir; I did not take any notice.
1311. Did you notice if one of his eyes was black? Yes; one was a little discoloured.
1312. Was he in an emaciated condition when he was admitted? No; I cannot say that he was emaciated. He certainly was thin and in rather poor condition. I do not say that he was even in poor condition, but he was thin.
1313. Was he excited at the time of his admission? Yes.
1314. Did he continue to be so for some little time? Yes, during all the time I had anything to do with him, from the 20th of May to the end of the month.
1315. Was that not about eleven days? Yes.
1316. And while you had to deal with him during that period, was he what you consider to be an excited patient? Yes, very.
1317. Would you class him as one of your most excitable patients? Yes, he was very excitable and troublesome.
1318. Were his habits dirty? Yes, he was what we call a wet and dirty patient.
1319. Was he destructive as well? Yes.
1320. Did you attend upon him at night-time? Yes, while I was on night-duty. It was my duty to see him every hour.
1321. Did he sleep well? Some nights he would sleep a little. Some nights he would not sleep at all. I have known him to go two nights without sleeping.
1322. Was he on those occasions an unmanageable patient? He was not strong, but at the same time he was a hard patient to deal with.
1323. In what way? He was most restless and fidgetty, and he was a wet and dirty patient.
1324. When he was first received did he sleep upon a straw mattress? Yes.
1325. Did he use a straw mattress all the time he was under your care? Yes.
1326. Was he in the habit of tearing that mattress? I do not think he tore the mattress, but I know he tore his bedclothes.
1327. Was he at this time a passionate man? Yes, he would get into a passion about nothing at all.
1328. Do you know if he is much improved now? I cannot say, for I have only seen him twice since the time of which I speak, for I am now working outside.
1329. *Dr. Garran.*] Have you occasionally looked through the observation hole upon him during his restless nights? Yes.
1330. Was he in the habit then of pacing about his room? No, he was not strong enough for that.
1331. How did the restlessness show itself? He was in the habit of tossing about and moaning.
1332. Would he keep his bedclothes over him? No.
1333. Was he in the habit of taking off his pyjamas? Yes.
1334. Would he strip himself? Yes; he would take anything off, and tear up the night-clothes he wore.
1335. Would you then go into the room and reclothe him? Yes.
1336. When you went into the room on these occasions was he quiet in his behaviour? No; he did not seem to like it, and he appeared to wish to get his clothes off.

*Mr.  
T. Ramsay,*  
13 Nov., 1894.

- Mr. T. Ramsay.  
13 Nov., 1894.
1337. Did he, then, object to you putting on his clothes? Yes, at times he did.  
 1338. Do you think he would rather that you should have left him alone? Yes.  
 1339. Would he do this thing more than once, or say two or three times in the night? Yes; he was continually doing it.  
 1340. Did he always tear his clothes off? Yes; he was very destructive at this time.  
 1341. Did he, then, destroy a good many garments? Yes.  
 1342. On other nights when he was not so restless would he remain quiet? Yes; sometimes he might sleep from 11 o'clock to 2 o'clock in the morning, and then he would get on to the floor. Sometimes in the fore part of the night he would be restless and destructive, and then go to sleep.  
 1343. Supposing that in the fore part of the night he soiled the bed clothes or bed, would it be somebody's business to clean up the mess? Yes; there is an attendant whose duty it was to clean it up.  
 1344. If the floor became soiled, would you succeed in taking away the smell? Yes.  
 1345. Could you do so without any difficulty? Yes, without any particular difficulty, for we use particular stuff for that purpose.  
 1346. Do you mean that you use disinfectants? Yes.  
 1347. And by the use of this did you manage to get the urinous smell out of the wood or out of the floor? Yes.  
 1348. Have you rooms at Callan Park which are perpetually soiled in this manner? Yes.  
 1349. And yet do you manage to keep the floors clean and the apartments comparatively sweet? Yes, I think so.  
 1350. Do you ever hear of any complaints of smell of stale urine? No.  
 1351. Are there any rooms in which there is a perpetual smell of this nature which you cannot get out? I do not think so. We might not be able to remove the smell for a few hours or a day, but we do effectually get it out.  
 1352. Does the room which is occupied by Case No. 1 contain a window? Yes.  
 1353. Do you regard him as a restless patient? Yes; I think he would be restless anywhere.  
 1354. Does not this restlessness wear itself out? It lasts for a considerable time. Sometimes in the first part of the night, sometimes in the latter part of the night, and sometimes all night through.  
 1355. Do you then regard him as a most uncertain patient? Yes.

[Witness withdrew.]

Mr. Alexander Robinson sworn and examined:—

- Mr. A. Robinson.  
13 Nov., 1894.
1356. *President.*] Were you once employed as an attendant at Bayview House? Yes.  
 1357. How long ago? I left there on the 7th February, 1890.  
 1358. How long were you employed at that institution? In all about five years, but in two separate periods.  
 1359. Did you leave on one occasion, and then return to the institution? Yes.  
 1360. Why did you leave on the first occasion? I left to improve my position.  
 1361. Why did you leave on the second occasion? Because I disagreed with Dr. Vause. A patient complained bitterly of the food he was receiving, and I, as senior attendant, reported it to Dr. Vause, and Dr. Vause informed me that he thought I was running the place on wrong principles, and that I had better leave. I said, "All right, I will leave"; and I left.  
 1362. Did you ever have any difficulty in appealing to Dr. Vause? No, sir.  
 1363. Could you always go straight to him and tell him of any complaint? Yes.  
 1364. Did any attendant again complain to Dr. Vause at any time while you were there? I think so.  
 1365. Were you asked to sign any document when you left the institution on the final occasion? Yes, I was.  
 1366. In that document was it stated that during the time you had been in Dr. Vause's employment every consideration was paid to the care, comfort, and recovery of the patients in the establishment? Yes.  
 1367. Did you sign that paper? No.  
 1368. Why did you not sign it? Because I could not say conscientiously that the patients had been so treated.  
 1369. Why do you say that? The food was not right, for one thing. Very often the steak was tough, and not sufficient in quantity. When I made any complaint about this by going to the cook in the kitchen, I was only snubbed for my trouble, and when I spoke to Dr. Vause about it he told me I had better leave.  
 1370. Was that the general state of affairs in that institution? Yes. The patients were in a state of rebellion, and when I made a complaint about the matter, and explained to Dr. Vause how things were, he told me it was about time I left, as I was not running the place properly.  
 1371. Do you know anything about the interior working of the institution? Yes.  
 1372. Can you say anything about the beds and bed clothing? I can only say that from outward appearance the beds looked all very well. There were quilts, and sheets, and carpets, but they were only used when inspections were on. They were taken up and taken off after the inspections were over.  
 1373. In other words, do you mean to say that these quilts, and carpets, and sheets were only used for purposes of show during the time of official inspections? Yes.  
 1374. Were these things removed at all other times? Yes.  
 1375. Is it also true that the dresses of patients were made ready for official visits? On the male side the men were always kept badly dressed, but some attention was paid to them on the day of inspection. On these inspection days, when the doctors or official visitors were expected, things were very different.  
 1376. When these visits were made were you aware they were about to take place? Yes; we got word.  
 1377. How did you get word? Word used to be passed along when friends came, saying that Mr. So and So's friends were coming, and see that you get his better clothes put on him.  
 1378. While you were there did you ever administer medicine to the patients? Yes; I used to administer sleeping draughts. These had been previously mixed up by Dr. Vause, measured out carefully so that there could be no mistake.  
 1379. Was everything, as far as the administration of medicines was concerned, carried out satisfactorily? Yes; the only medicines I saw administered were these draughts. 1880.

1380. What kind of night attendance was there on the patients? I never saw a night attendant at all during my time.
1381. What time did you get up in the morning? Usually about half past 5 and from that to 6 o'clock.
1382. Did you remain on duty all day till 10 o'clock at night? Yes.
1383. What attendants saw patients during the night-time? None at all, except in the single rooms.
1384. What attendance was given to the patients in the single rooms? None at all after 10 o'clock at night.
1385. As a general rule, did not an attendant see patients after this hour of the night—not even in exceptional cases? On exceptional occasions, when a patient was noisy, an attendant might go to see him.
1386. Supposing there were to be an outbreak, was there any attendant near to appear on the scenes? None nearer than those sleeping with other patients in the main bedroom of the dormitory some distance away.
1387. Do you remember an isolated building consisting of two rooms kept for the use of patients? Yes.
1388. Do you know if single patients were placed in these two rooms? Yes, they were.
1389. Who looked after them at night? No one.
1390. Supposing there were an outbreak in the night-time, who was the nearest attendant? The one sleeping in the back room nearest to this detached building. I know that on one occasion a patient confined in one of those rooms broke down the wall during the night, pulled the bricks clean out, and made his escape from the room without being heard.
1391. Did this occur in one of the two rooms you have specified? Yes; he was confined in one of these two rooms—the easterly room of the two.
1392. Did he escape from it? He got through the wall all right and into the yard, where he had a pillow-slip over his head. He was discovered by one of the housemaids coming through the yard early in the morning. He asked her for some clothes. She gave the alarm and he was captured.
1393. At what time did this happen? The patient was discovered between 5 and 6 in the morning.
1394. Was there any provision made for supplying hot water, warm milk, or cocoa, or food, during the night? Never in my time.
1395. Supposing a patient had been ill and required such attention was there any attendant on hand to administer to him? No.
1396. What was the name of the patient who made his escape through the wall on the occasion to which you refer? He was Case No. 9.
1397. Do you recollect the date of this occurrence? Not exactly; but it was during the last part of the second period of my time at the institution.
1398. When visitors came to see patients at Bayview House were they taken to the room where these patients generally passed their time? No; the interviews between the patients and their friends always took place in a room near the office.
1399. Do you know of any special cases where patients have been neglected in their treatment beyond those you mentioned while you were there? No; not any special cases, but I have known that patients who were incapable of grumbling had no notice taken of them. Patients who could grumble received attention, but patients incapable of complaining had no notice taken of them at all.
1400. Can you mention one individual who would come under this definition? Yes; there was Case No. 10—very little notice was taken of him.
1401. Why was this? The doctor did not make his rounds. He used to go on to the lawn and see cases there, and if patients were so helpless as to not be able to go on the lawn they would not be seen.
1402. How often did Dr. Vause go his rounds—did he make a daily round? No.
1403. Are you certain that Dr. Vause, as Medical Superintendent of the institution, did not make his rounds at a stated hour? No. On the male side I have heard patients say, "I wonder what has become of Dr. Vause. I have not seen him for a week."
1404. Do you mean to say that for a week at a time you have not seen Dr. Vause make his rounds of the institution? Yes; I do.
1405. *Dr. Garvan.*] Were these solitary rooms much used during your time at Bayview House? Yes.
1406. Were there any destructive and violent patients while you were there? Yes.
1407. Patients who tore their clothes and destroyed their bed clothing? Yes.
1408. Did you ever know of any patient being locked up in any of these rooms without clothing? No.
1409. Did you ever know of patients put into these rooms tearing up their clothes? Yes.
1410. Would such a patient remain unclothed all the night? Yes.
1411. Have you ever seen patients come out without clothing from this room? Yes.
1412. Did they ever complain of being cold? No; I have never heard them complain of cold. Patients like these do not as a rule take cold physically. Mental excitement seems to keep them warm.
1413. Have you ever seen patients come out of that room shivering with cold? No.
1414. Have you seen a good many destructive patients? Yes.
1415. Was there any option but to put them in these single rooms? No.
1416. Do you think it would be safe to leave them in alone, or should somebody be with them? I do not think it would be possible for anybody to stay with them.
1417. Do other patients have attendants sleeping in the same room with them? Yes.
1418. Do you think that when patients are placed in these solitary rooms they should have someone with them? No; I do not think there is any necessity.
1419. Have you ever known anyone put into these rooms uselessly? No.
1420. Has it always been absolutely necessary when they have become destructive to do so? Yes.
1421. Have you ever known patients to be placed in these rooms without a direct order from the Medical Superintendent? No; I think they are never put in without orders.
1422. *Mr. McGowan.*] Do you not say that you were altogether about five years at the institution, and that you finally left in March, 1890? Yes.
1423. Were you head attendant all the time? No. I went there as a junior hand on both occasions, but when I left there I had become, by promotion, senior attendant.
1424. Were you head attendant at any time during the period of your first engagement? Yes.
1425. How long were you there before you were made head attendant? I think, as far as I can remember, I was there about four or five months.

Mr.  
A. Robinson.  
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- Mr. A. Robinson,  
13 Nov., 1894.
1426. Was it the usual thing that when a man first arrived at the institution he was put to more menial work, and afterwards worked his way up? Yes.
1427. Had you any previous experience in asylum work? Yes; I came from England, where I had had five years' previous experience. I had a reference from the Wadsley Asylum, in South Yorkshire.
1428. How long were you there? About five years.
1429. According to that then you had had five years' previous experience in England as a warder in an asylum? Yes.
1430. And after you had had four or five months at Bayview House, were you promoted from the position of junior attendant to that of head attendant? Yes.
1431. Therefore, in that period would not the men previously over you have been discharged? Yes.
1432. What other attendants were there at the institution during the five months at most you were there? I think there were two others, and I took the place of the head attendant, who left.
1433. Did you leave of your own free will? I did on the first occasion.
1434. Did you get a reference from Dr. Vause when you then left? Yes.
1435. Did you leave with mutual agreement with Dr. Vause? Yes.
1436. Why did you go back to the institution? Owing to the general depression I had great difficulty in getting outside employment, and as I could not work at any calling, I thought I would return to that at which I had had some experience.
1437. Did you, therefore, go to Dr. Vause and ask for re-employment? Yes.
1438. How long a time elapsed between your leaving Bayview on the first occasion and going back on the second? About a year and a half.
1439. Were you satisfied with the mode in which the asylum was conducted when you went there first? I cannot say that I was thoroughly satisfied. I never was thoroughly satisfied with the place.
1440. Were you asked to sign a paper when you left in the first instance, asserting that while you had been in the employ of Dr. Vause that the institution had been properly conducted? Yes.
1441. Did you sign it? Yes.
1442. And did you then get your reference? Yes.
1443. On the second occasion when you returned to the asylum, did you go as a junior hand? Yes.
1444. How long were you there on that occasion? About six or seven months.
1445. Were there two or three attendants above you at that time? There were two above me.
1446. Were you appointed head attendant again before you left on the second occasion? Yes.
1447. Therefore, did these two attendants who were above you leave the institution in the space of these six or seven months? Yes; one was dismissed, and the other left of his own accord.
1448. Did you complain to Dr. Vause with regard to the state of the food, and also tell him that the tea was unfit for use? Yes; I did complain that the meat was very tough, and that there was not a sufficient supply. We would sometimes have chops for breakfast, and sometimes we would get cold meat, and the patients would grumble about this. We could not even get that sometimes. I reported to Dr. Vause the way things were going on, and he told me I had better leave. At the end of the month he handed me a document to sign, affirming that every consideration was paid to the care and comfort of the inmates. I could not sign this, as I knew it was not correct. Then Dr. Vause put my cheque on one side and said, "Very well, I will not pay you."
1449. Did he subsequently pay you? Yes; he sent the money over afterwards, on the next morning.
1450. Did he refuse to pay you? Yes. His brother-in-law, Mr. Bailey, I think, asked me why I did not sign, and further wished to know if I did not think I was acting foolishly. I replied, "I may be acting foolishly, but I am acting conscientiously."
1451. Did any other warders complain of the treatment of the patients and the food;—was it the custom for them to come to you as the head attendant and make these complaints? The attendants very often did so.
1452. Would you have thought that they were passing you by if these attendants had gone direct to Dr. Vause to make these complaints? No. I told them that I thought it would be much better if they took the complaint direct to Dr. Vause.
1453. When you did not get any satisfaction from Dr. Vause in the matter of food, did you ever complain to Dr. Manning, in his capacity as Inspector-General of the Insane? I did not; but when I left the institution I made a report to Dr. Manning.
1454. What did you do? I went to Dr. Manning, and made a similar statement to the one I have made to you to-day. I do not know what followed.
1455. Was there any intimation ever made to you when the visiting doctors arrived at the institution to make any inspection? No.
1456. When the Inspector-General of the Insane, Dr. Manning, came to the institution was any intimation sent to you? No.
1457. When did Dr. Manning generally make his rounds? Between 9 o'clock in the morning and 5 o'clock in the afternoon.
1458. Did you ever complain to Dr. Manning with regard to the difficulty you had experienced in interviewing Dr. Vause? No; but I did complain to Dr. Manning that Dr. Vause had not made a daily inspection.
1459. Do you not say it was the custom to give the patients sleeping draughts at night? Yes.
1460. Did you consult Dr. Vause about this practice? Yes. It would be on my telling him that a patient was restless that Dr. Vause would prepare these sleeping draughts.
1461. Would it be, then, acting on your report as to the condition of a patient that Dr. Vause would mix the medicine, and hand it to you to administer to the patient without seeing the patient himself? Yes.
1462. *Dr. Vause.*] Was not Dr. Vause familiar with the condition of the patient to whom the draught was administered? Yes.
1463. Had he given a similar dose or doses before? Yes.
1464. Are you perfectly satisfied that as far as the administration of medicine is concerned Dr. Vause was careful with the patients? Yes; I have no doubt about that.
1465. Is not your complaint about the tea that it floated on the water when it was in the decoction stage? No; that was not it. The complaint was against its black colour. It was like ink; it was not fit to drink, and there was no taste in it; and the patients said then: "If you do not report this to Dr. Vause we will report you."

1466. Was there any complaint made from any other part of the house? I do not know.  
 1467. Was it not a rule that the patients in the single rooms should be visited every two hours during the night? Never while I was there.  
 1468. Where did you keep the stores, such as tea, milk, and sugar? They were locked away.  
 1469. Were not the stores available during the night if you required any? They were not.  
 1470. Were the daily stores locked away? We did not see any except our daily allowance, and we only got our daily allowance.  
 1471. If you wished to get a cup of tea or milk for yourself or for a patient during the night, could you get it? No: there was nothing left over from the daily stores.  
 [Witness withdrew.]

Mr.  
 A. Robinson.  
 13 Nov., 1894.

WEDNESDAY, 14 NOVEMBER, 1894.

[The Commission met at 11 a.m., at the Board Room, Chief Secretary's Office.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.  
 FREDERIC NORTON MANNING,  
 Esq., M.D., INSPECTOR-GENERAL OF THE  
 INSANE. | ANDREW GARRAN, Esq., LL.D.  
 JAMES SINCLAIR TAYLOR MCGOWEN,  
 Esq., M.L.A.

Dr. Vause did not attend this sitting.

Maggie Macleod sworn and examined:—

1472. *President.*] Were you at one time connected with Bayview House Asylum? Yes. I left there about two months ago.  
 1473. How long were you employed there as an attendant? About eleven months.  
 1474. Do you remember the date when you first entered upon your engagement there? On or about the 22nd of last November.  
 1475. When you were engaged did you sign a certain paper? Yes, I did sign a paper; but I did not know what it contained.  
 1476. Was that paper read over to you before you signed it? No, sir, it was not.  
 1477. Was a copy of a printed paper handed to you to read at the time? No; I never received one to read. I was merely sent into the office when I arrived at the institution, and asked to sign the paper put before me.  
 1478. When you left Bayview House did you sign any paper? No, I did not.  
 1479. Why did you not sign one? Well, I would rather not say.  
 1480. But you must tell us your reason. We only want to hear the truth about the whole matter, and you are brought here for the purpose of telling us the truth. You have nothing to fear, so will you tell us the reason you had for not signing it? I had been told that Dr. Vause made people leaving the place sign a paper to say that patients had been well done by. I did not believe they had been well done by, so I did not sign it.  
 1481. Had you had any previous experience in an insane asylum before you took this engagement? I had never had anything of the kind.  
 1482. While you were there were you under some superior officer? Yes.  
 1483. Who was it? A matron named Bridget Morrissey, and also Jessie Fuller, who was acting matron.  
 1484. Did you receive your instructions from these persons? Yes.  
 1485. Was there anyone else besides the persons you name who occupied the superior position? There were these two as matron and assistant matron, and there was also a Miss Jones, who is now deceased.  
 1486. Did that Miss Jones die only a day or two ago? Yes.  
 1487. Did she die since this inquiry commenced? Yes.  
 1488. What were your duties when you first arrived at the institution? I was second in No. 2 ward, and after the head nurse left I was put in charge of No. 2 ward, and occupied that position for about five months. That is, I was head nurse at the Government end. I think I had been in this position somewhere about six months, when one day Dr. Vause sent for me and told me to make arrangements to go. I asked him for what, as in my own mind I knew I had never been found fault with. He told me that I had been giving information about the place. I was some relation, second cousin, to a man named Alick Mackenzie, and I was told that I had been giving information to him.  
 1489. Had Mackenzie left before you were sent for? Yes; some six months before, I think.  
 1490. Was the reason why you were told to leave that you were suspected of giving information? Yes; but when this was first mentioned to me it was a false accusation. I told Dr. Vause it was a false accusation at the time, but he would not listen to me. I have given information since about the working of the place and the treatment of the patients.  
 1491. Did you, when you were at the institution, sleep in a room that has since been turned into a box-room? Yes.  
 1492. Were there any rats in that room? No; I did not see any rats, I think, but there were other things.  
 1493. What other things? It was full of vermin.  
 1494. What vermin? Bugs. From the very first day I entered it I was in a state of misery.  
 1495. Are you sure there were no rats? No; I do not think there were any rats while I slept there.  
 1496. Are you certain about the other vermin you name? Yes; they were everywhere—in the beds and everywhere else.  
 1497. Did you make any complaint about this? Yes; I complained to the matron.  
 1498. What did the matron say? She said it was no use complaining; she could not get the doctor to do anything.  
 1499. But could you not speak to the doctor? No; I only saw him when he came about the place on his rounds.

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1500. At what hour did he make his rounds? He used to come over just before dinner-time, but we would never see him after then.
1501. Do you know those single rooms or cells? Yes.
1502. Did you ever see any patients there? Yes.
1503. Were women locked in these cells? Yes; from half-past 5 or 6 o'clock at night to 6 o'clock the next morning.
1504. Was there any provision made for attendance on these women? Not one of any kind whatever.
1505. Were these nine or ten single rooms or cells rather dark? Yes; there was a slip of a window, and that was all. The place was without an observation hole. There was only just a slip of a window.
1506. How did you look in upon the patients? We never did look in upon them at night.
1507. What time did you begin work in the morning? From half-past 5 o'clock.
1508. And what time did you leave off at night? Sometimes about 7 o'clock; sometimes later. Not till 10 o'clock if there was anything wanted.
1509. Well, then, we will say up to 10 o'clock;—was there anyone watching these cells at all after 10 o'clock at night? No; not in the early part of my engagement. There was some provision made for a night-nurse after Case No. 1 was taken away. One of the day-nurses used to go on night-duty. Then we would take it turn and turn about.
1510. Do I understand that, instead of putting on a special night-nurse, you split up the extra duty and took night-work in turns? Yes.
1511. Was that not done all the time you were there? No.
1512. Was it done prior to the inquiry into Case No. 1? No; there was nothing at all done then, not one single thing.
1513. Were the patients supplied with comfortable bedding? No; they were simply put in on straw. They were stripped and put in their rooms, and a bag of straw would be put in with them.
1514. Do you mean to say they were stripped quite naked? Yes; they were all quite naked, and they only had this straw.
1515. Were they supplied with sheets, or blankets, or any other bedding? They had no sheets or anything else. There were only sheets for two of the patients put into two of these cells during all the five months I had anything to do with them.
1516. Were some of these young women? Yes.
1517. Would it not be very unpleasant for them at particular recurrent times to be put into these rooms in that way? Yes; certainly.
1518. Did you ever complain about this state of affairs? Yes; often and often. I have not only spoken about this, but I have also complained as to the way in which the patients were clothed and fed. It was simply shameful.
1519. Was not the food of fair quality? It was very common, as common as could be.
1520. What did the patients generally get for breakfast? I never saw them get anything but rough chops, cooked badly, on one day, and a rough meat stew put before them the next day.
1521. Did they have any tea? Yes; such as it was.
1522. Were they not supplied with plenty of bread and butter? No; down at the Government end they only used to get dripping or treacle. There were as many as fifty-two patients down there, and they were allowed, so the sub-matron told me, 2lb. of butter a week.
1523. Do you mean 2lb. of butter each? Oh, no; for the whole lot of them.
1524. Was not that absolutely insufficient for them? Yes. We used to scrape and scrape so that they each had a bit.
1525. What did they have for dinner? They used to have a sort of stew made from rough meat, mainly necks of mutton, I think.
1526. Did they have any soup? Yes; they used to be served with soup twice a week, and then it was very poor in quality.
1527. In the evening, what did they have for supper or their last meal? Generally bread and treacle, or bread and dripping—nothing else.
1528. Were they not supplied with bread and butter? No; there was none left for them to have.
1529. Was there not any change so that you might have roast meat one day and boiled meat the next? No; we mainly had boiled necks of mutton. I never saw any other joint there.
1530. Was there not a dietary scale hanging against the wall in the rooms of the institution—a scale showing what food the patients were to have every day? No.
1531. Was there not any systematic arrangement for the proper feeding of the patients and attendants? No.
1532. Were you obliged then to take just what came from the kitchen and distribute it as best you could? Yes; and very often I have gone down to the kitchen and tried to get more, and I was told that Dr. Vause would not allow any more.
1533. Who told you this? The cooks have told me this.
1534. And who gave them their orders? Dr. Vause, I suppose. Things were so bad that on one occasion I saw Dr. Ramsey, who was acting for Dr. Vause, and he gave me an order to get better things, but they were never supplied, although I tried to get them.
1535. Did you tell Dr. Ramsey afterwards about this? No, I had not the chance. He went away suddenly one day, and did not come on duty any more, so I could not tell him.
1536. When the female patients were visited by their friends were these friends sent into the dormitories with the patients, or to any of the ordinary rooms? No.
1537. Where did they meet their friends? Generally the patients were taken into a nice room near the office. Sometimes they would be taken into the new house, upstairs to one of the nice new rooms.
1538. Was there any special preparation made for patients to meet their friends? Yes; they used to be dressed in their best always.
1539. Do you know a patient name case No. 11? Yes.
1540. Did her daughter complain about the state of her underclothing? Yes.
1541. Did her daughter examine that underclothing? Yes. Her daughter gave her quite a trousseau, but in a little while she had not got a good thing left. She had no underclothing fit to wear.
1542. Was it the general rule for all patients to have their clothing changed when they saw their friends? Yes, always.

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1543. Did you always get notice as to when the friends would make these visits? Yes; we always received notice, and were told to get the patients ready.
1544. Would the patient then be dressed differently? Yes.
1545. In ordinary circumstances was the dress worn by the patient sufficient in quantity? No, for they only had on a gown, as a rule.
1546. Can you tell this Commission whether the ordinary dress supplied to the patient was clean and suitable clothing? Really and honestly it was not. You must know there are some dirty persons, and if we took the soiled clothes off the patients there was nothing to put on them; they would have to go about naked.
1547. Do you mean to say then that there was an inadequate supply of clothing? Yes; quite so.
1548. Are you referring to Government or private patients? I refer to both. We used to change the clothes about. If a Government patient had no clothes we would take them from private patients, and put them on the Government patients.
1549. Was there a room in which the surplus clothing of patients was kept? There was supposed to be one, but there were only a few common print gowns in it, and they were mainly kept for show.
1550. Do you say there were some dirty patients? Yes.
1551. Did you change their clothes when necessary? No; we could not, for they had no other clothes to put on.
1552. What did you do with them then? Just left them as they were.
1553. Do you remember this patient, Case No. 11? Yes.
1554. Was she much neglected while you were there? Yes.
1555. Was her body frequently covered with vermin? Yes.
1556. Where was she kept in the institution? She was put down in the Government end of the yard until the trouble in regard to Case No. 1.
1557. Was she exposed to the rain? Yes; often and often. She used to lie in the yard, and sometimes on the verandah, in all kinds of weathers. She was left to roll about as she liked in her own dirt.
1558. Was she not a private patient? Yes.
1559. Did you not take her out of that? No; and if we made any complaint about her we were sent about our business by Dr. Vause.
1560. Where there frequent changes in the nursing staff while you were there? Yes; constantly changes were being made. There are only three nurses there at the present time who were there while I was there.
1561. With regard to Case No. 11, is it true that on one occasion, when her daughter visited her, a silk dress was put on her body over her dirty clothes? Yes.
1562. Was it on that occasion that her daughter made the complaint? Yes.
1563. Do you remember Case No. 12? Yes.
1564. What were the particulars of that case? She was put in a single room.
1565. Was she there a long time? She got a great amount of shifting about; and she was given draughts made of stuff which caused her to become very stupid. I had to give her a drug every day at tea-time. It was given to me in a bottle, and I measured it out according to instructions, and put it in her tea every night.
1566. Who told you to do it that way? The matron. It used to affect her so that we had to keep the patient on the couch; and she used to lie on the couch in the Government end. She was a private patient, and paid for, but she never slept in the private ward until her father came to see her. She always slept in the Government end.
1567. Did you know Case No. 13? Yes; and she was a private patient, and put in amongst the Government patients; Case No. 14, another private patient, was put there too.
1568. Was it a frequent occurrence for private patients to be mixed up with Government patients? Yes; at all times.
1569. Are you quite certain of what you say, and willing to abide by all you say? Yes, I am; and I say, as I have said before, that it was a disgraceful state of affairs.
1570. Do you regret that you have to serve in a place like that, where the arrangements were so bad? Yes, I am very sorry I ever did. I was glad to get away. I never made any secret of the way in which patients were treated, and I said that if ever I were asked about the place I would not hesitate to say all I have told you.
1571. Did these patients, when they were put into these cells without a window, complain about their treatment? No, they never complained; they were too quiet.
1572. Did they simply submit without saying anything? Yes, mostly, there was only one bad patient that I remember—only one that might be called destructive and violent.
1573. Why then were they put in these single rooms;—do you think it was for the sake of convenience, and to save trouble? Yes; and to save the expense of getting more attendants to look after them.
1574. Did you hold the decided opinion you have expressed to-day when you left the institution? Yes.
1575. And is it, your opinion, now true? Yes; and I have never made any secret about it.
1576. *Dr. Garra.*] Who told you which patients were to be put in these single rooms? The matron.
1577. In putting them in there did you act under her distinct orders? Yes.
1578. Do you know if she got her orders from Dr. Vause? I do not know. When the patients were put in the straw, I believe, Dr. Vause blamed the matron, and said he did not know it was done, and she said it was done with his knowledge.
1579. Do you say that there was only one violent patient who needed to be kept in such confinement? Yes; Case No. 15, and she used to tear her clothing.
1580. Did you have to put the muffs on her? Yes.
1581. Did you put muffs on her during the night-time? No.
1582. Was she in the habit of tearing her clothing at night, or her bed-clothing? No; she had nothing to tear. If she had any clothing she would have torn it.
1583. Do you think that if you had clothed her she would have stripped herself? Yes.
1584. What did the patients do with the straw? They would open up the bag, take the straw out, cover themselves with it, and throw the bag away on one side.
1585. Was that all the covering they had at night? Yes.
1586. Do you mean to tell us that women were put into these cells quite naked, without any night-clothes, and with nothing but straw to cover them? Yes; I am quite certain of that.

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1587. Did you look in upon any of them at 10 o'clock at night before going to bed? No; I was not on night-duty.
1588. Was it anybody's duty to do so? No; not until a private patient got away.
1589. After that did somebody go round? Yes; I think so.
1590. And when patients were seen at this time of night were they found lying under the straw? Sometimes.
1591. Were there some twenty women in these rooms? No; I think there were only about twelve.
1592. And do you not say they were put in here without any necessity? Yes.
1593. And that they had no covering at night except straw? Yes.
1594. Could you at any time of night, if you had wanted it for yourself or a patient, have obtained a cup of tea, cocoa, or warm milk? No; you could not get it.
1595. Do you mean to say it would not have been possible to make yourself a drink of tea? No; it would not have been possible. There was no convenience for that even if we had provided the tea. There was no fire nor gas by which we could make anything warm either for the patients or the nurses.
1596. Are you quite sure about this? Yes; I am quite certain of it.
1597. Do you say that the women never slept in sheets? I do; there were only two used sheets during the whole time I was there—Case No. 16 and another patient.
1598. Are the sheets on those beds kept only for show then? In my time I always took the sheets off the beds at night; they were folded up and put away. They were put on again in the morning, but never used at night. If they had been used at night they could not have been used for long, as they would not have been sufficient numbers for a change.
1599. What covering did the patients use then? Anything they could get.
1600. Were there any blankets? The quilts were taken off.
1601. What did the patients cover themselves with? A small blanket if there was one, but very often there was only a bit of one, and they covered themselves with anything they could get hold of.
1602. Did they sleep in night-dresses? No.
1603. What did they sleep in then? Nothing. They never had a night-dress in my time.
1604. How many women slept in that ward? Fourteen.
1605. And do you mean to say that they did not wear night-dresses? There was only one had a night-dress until some were made lately. Some coarse brown calico was bought, and Dr. Vause got the coachman's daughter to come in and make it up.
1606. Are you referring now to the Government patients? Yes.
1607. Were the private patients treated better than this? Yes. They would have things of their own and some very few things were supplied by the asylum.
1608. Did they often complain of the cold? Yes, often.
1609. How often were the private patients taken to the bath? Once a week, on Saturday morning.
1610. How often were the Government patients bathed? Once a week on the Saturday afternoon.
1611. So that the Government and private patients had a bath once a week? Yes.
1612. Was the food of the private patients better than that supplied to the Government patients? No; it was even worse, for they never had any change at all.
1613. Had you any previous experience in asylum work, so that you would be able to compare what you have seen at Bayview House with the working of other institutions? No.
1614. Did you ever make any complaints to Dr. Vause personally? No; he would never speak to the nurses.
1615. How often did he come round the institution? He never came round after 2 o'clock, only when the other doctors were there, and then we used to get notice that the visiting doctors were coming.
1616. What notice do you mean? We used to hear about twenty minutes or half an hour before they came to see the patient.
1617. Did the visiting doctors ever drop upon you suddenly? No.
1618. Did Dr. Vause ever visit you suddenly? No; we got all our instructions through the matron. The matron used to let us know when the doctors were coming.
1619. Were any of the patients sufficiently sensible to have made complaints to their friends concerning their treatment? I do not know.
1620. Did you ever hear any of them complain to their friends? No; the only patient I ever took into her friends was Case No. 11.
1621. Was anybody present at these meetings between these patients and their friends to hear what was said? Yes; always the matron and the nurse.
1622. Were the patients then ever left alone with their friends? No; they never were.
1623. *Mr. McGowan.*] Do you know that the evidence you are now giving is given on oath? Yes.
1624. And do you know all you are saying to be strictly true? Yes; it is strictly true.
1625. Have you ever been in service before? I was a dressmaker at one time, and worked in that capacity.
1626. Have you any references of good character? Yes; I have one, from a Colonel of the Permanent Artillery in Victoria.
1627. Have you any other references? I told Dr. Vause I would not take a reference from him.
1628. Why? Because it would have been no use to me, as I never intended to go into a lunatic asylum again. I had quite sufficient experience there.
1629. Were you asked to sign a book when you left the institution? Yes; I told him I would not sign. He refused to pay me my month's money.
1630. Why did he refuse? I don't know.
1631. Did he ever pay you? Well, I summoned him and got it.
1632. Summoned him where—in one of the Police Courts? Yes; I summoned him to appear at Newtown Court.
1633. Did he appear at that Court? No; he sent the money without appearing.
1634. Early in the month of January, 1894, was there a patient, Case No. 17, in No. 1 ward? Yes; she was never in No. 2 ward.
1635. Was she a private paying patient? Yes.
1636. How long was it before she was taken from the private paying patients and put among the Government paying patients? She never was exactly with the Government patients and put in the single rooms as they were.

1637. Was she an excitable woman? Yes; a very excitable woman.
1638. Was her ailment of such a character that you think she ought to have been put in one of those single rooms at night? No; not generally.
1639. Was she placed in one of the single rooms? Yes; she was in the institution before I went there, and she was put in one of the single rooms when I was there.
1640. When these patients were put in those rooms was the window or slip of a window, as you call it, at the back of the building, opposite the door, pulled up in the morning? The rule was that directly the patient was put in the cell the shutter was closed, and was never raised again till the patient came out again in the morning.
1641. Therefore would the room with the shutter closed be dark? Yes; it would be both dark and close.
1642. Was there another window in these single cells over the door, as well as opposite the door? No.
1643. Were windows being put in these rooms over the doors before you left? No.
1644. When case No. 17 was put in that room you refer to did she get any bedding? Yes, she had a straw mattress.
1645. Similar to the others you have described? Yes.
1646. Had she any other covering? No.
1647. Who put her in that room? Another nurse put her in there on the matron's order.
1648. Was she, as well as others, put in there between 5 and 6 at night? Yes; if any of the patients became at all noisy they were locked in these rooms.
1649. Were her clothes taken away from her? Yes.
1650. Did you put some patients in these rooms yourself? Yes.
1651. Did you take their clothes away from them in obedience to the orders of the person in charge for the night? Yes.
1652. Did you take your orders from the matron or the head attendant? The matron was always supposed to give us our orders.
1653. When you put patients in these rooms, were there any utensils left there for their convenience? No, I never saw any there at this time; but lately I believe some have been placed there.
1654. Do you mean that they have been placed there since Case No. 1 was brought before the public? Yes.
1655. But I am talking about January last; were there any there then? There was no utensil at all.
1656. Did you ever see an indiarubber utensil in these rooms? No, not up to the date you name.
1657. Are you satisfied that during your term of office you never saw any utensil of any kind in any of these rooms? No.
1658. Do you also mean to say that you never saw any covering for the convenience of the patient? No; I only saw the bags in which the straw was put.
1659. Did you never see any canvas coverings? No, it was coarse ticking. I think Case No. 1 was the first to have canvas.
1660. Did Case No. 17, object to go into these rooms? Yes.
1661. Was she left there without any clothing from the time she was put in at night until 7 o'clock in the morning? Yes.
1662. Do you say of your own knowledge that no attendant would go round to look at these patients at night-time? No, never.
1663. Did you ever hear tell of case No. 17 having a fit and causing a great noise? No.
1664. Was there any special occasion on which she made a great noise? No; she did not make a great noise; she was only saying her prayers.
1665. Did you ever have any occasion to take her out of this single room, put her near the fireplace, and then send for Dr. Vause? No; not at night-time that I remember.
1666. Did you hear of this woman badly hurting herself? Yes; she used to frequently until she made herself black and blue. When no one was looking after her at times she used to knock herself about terribly.
1667. In the night-time did this happen? Yes; and in the day-time too, if no one was looking after her.
1668. Do you know if any nurse complained to Dr. Vause about this woman injuring herself? Yes; I think there was some complaint, and some of the nurses were going to write to Dr. Manning about the case on the very night she died.
1669. Did she die there then? Yes.
1670. Who was going to write? I think Josephine Mackay and another nurse were about to sign a petition to Dr. Manning complaining how this woman was allowed to hurt herself.
1671. Do you know if they did so? I do not.
1672. Do you know why they did not? No; I don't.
1673. Are you aware that while you were at the institution there were certain gentlemen, officials of the Government, whose duty it was to visit and inspect, and see that the working of the place was properly carried out? Yes.
1674. Do you know who these visiting doctors were? Yes.
1675. Were there there any alterations made in the conditions of the patients when their friends came to visit them? Yes.
1676. Were similar alterations made when Dr. Manning or the visiting doctors came on official inspections? Yes; we always got twenty minutes or half-an-hour's warning, and always had everything prepared when they came.
1677. As soon as you received this warning, what did you do? We used to make up the beds, change the patients' clothing, and make the best of everything.
1678. Did you not make any complaint about this state of things? Yes; I complained to Mrs. Gilchrist about it. I did not approve of such proceedings.
1679. So that when these visiting doctors reached the institution, did you go to extra trouble to make things more presentable? Yes.
1680. Who told you to do so? The matron would give us instructions to make these preparations. She would say, "Go ahead, make haste and get things ready, the visiting doctors are here."
1681. Were these the instructions you received on these occasions? Yes.
1682. You have told us of case No. 17 being bruised and injured;—can you tell us of anyone else who was neglected? Yes; there was case No. 12, who was not looked after properly. There was also case No. 18, who died there.

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1683. Did Case No. 18 die there then? Yes.
1684. Was she in one of the single cells, and subsequently died? Yes; she was a sick patient, and she died in one of these cells.
1685. Was she very ill? Yes.
1686. Was anyone watching with her the night she died? Yes; the night she died Josephine Mackay was put in with her.
1687. When she died was Miss Mackay with her? I do not know; she was a patient who had been sick for some time.
1688. Do you think that the food was sufficiently nourishing? No; the milk was half water, and sometimes there was no such thing as fresh milk to be had. Condensed milk was used every day.
1689. Supposing a person in your charge were taken sick, would you report the circumstance to the matron? Yes; always.
1690. You would not report it to Dr. Vause then? No.
1691. In your experience did Dr. Vause come to see any of the patients on special occasions? No; he never came to see them except on his daily rounds. He just made his proper round, and these were the only times that he would see the patients.
1692. Did he make up the medicines for them? I never saw the patients get any medicine except sleeping draughts.
1693. Do you mean by that medicine made up for the purpose of sending people to sleep? Yes.
1694. If one of the patients under your charge, for instance, fell sick during the day with pains in her stomach, or sickness of any kind other than their mental malady, would you report the fact to the matron? Yes.
1695. Would she then report it to Dr. Vause, and get a prescription and have the necessary medicine made up? I have never seen any prescriptions made up.
1696. Concerning these sleeping draughts, have you given some of these to the patients yourself? Yes.
1697. Did you receive them from the matron or from Dr. Vause? From the matron.
1698. Did the patients like to take them? I do not think they did.
1699. Why? I believe they had an idea they did them no good, and I thought it was not the right thing that they should take them.
1700. Did any of these patients complain of feeling ill after having taken these draughts? Yes.
1701. Who did so complain? Case No. 18 used to be terribly bad the next morning after taking these draughts.
1702. Do you know whether Case No. 19 is at the asylum now? No; she is not there now.
1703. Was she there in your time? Yes; she was.
1704. Was she placed in one of these single rooms? No.
1705. Was the same kind of treatment meted out to her as to some of the other patients you have described? No; she used to get the best of everything there was to be had. She wrote to the doctors, and complained about the food. She abused the food that was given to her at first, and abused Dr. Vause about the food, and then she received better meals and more attention.
1706. Who did she complain to? She complained to the visiting doctors and to Mr. Robertson, one of the official visitors, but I do not know whether she made any complaint to Dr. Manning or not.
1707. Do I understand you to say that she is not in Bayview House now? Yes; she has been removed.
1708. Was she a Government patient? Yes.
1709. Did you hear her complain to Dr. Vause? Yes; she kept her dinner and showed it to the doctor, and told him it was not fit to eat, or something, and he told her she was a liar.
1710. Do you say that the patients were not properly dressed, except on special occasions? No; they were not.
1711. Did the Government patients wear stockings? No; they had none to put on. That is, the majority of them had not.
1712. Did some of them wear stockings without feet? Yes.
1713. Did the nurses sometimes attempt to repair these stockings to try to make them more comfortable? Yes.
1714. Do you say that they had stockings without feet in them? Yes, often; and then they would try to stick the tongue of their boots in the openings so as to hide their bare feet.
1715. Why did not you complain directly to Dr. Vause about these matters? I always complained to the matron; that was what I considered to be my duty. I did not complain to the doctor because he never spoke to us at all.
1716. Do you know of any other attendant having complained to Dr. Vause? Yes; I have heard of attendants complaining.
1717. And what has happened to these attendants when they have so complained? They were discharged from the institution.
1718. Do you think that if you had reported direct to Dr. Vause you might have been discharged too? No, that did not deter me, for I did not care whether I was discharged or not.
1719. About the 18th of August of last year did a female patient, Case No. 20, break her arm? Yes.
1720. Did she break her arm while she was confined in one of these single cells? Yes, she did.
1721. Was she put into this cell at 5 o'clock on the night on which her arm was broken? No, not on this night. She was not put in the cell till 10 o'clock at night. Up to that hour she was in No. 1 of the Government wards. Earlier in the evening she was noisy and was annoying other patients, and because of her troublesomeness I and another nurse put her in the cell. She was becoming such a nuisance that I asked this night-nurse what ought to be done with her. When I say night-nurse, I mean the nurse who was supposed to sleep in the room. I had to take her place, and as this patient was getting worse in her behaviour, I called to this night-nurse to know what was to be done with her. I got no answer, and ran out to No. 2 ward, and when I returned the woman was fighting with the other patients. We took her out and put her into the single room for safety's sake.
1722. And was that about 10 o'clock at night? Yes.
1723. Was her arm broken then? No.
1724. Did you leave her in that single cell all night? Yes.

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1725. When was she taken out of this room? About half-past 5 or 6 o'clock on the following morning.
1726. Was anybody in the room with her? No.
1727. What was her condition when she was removed from that room? The woman was all over blood. There was something the matter with her arm. I went to the room where she had been sleeping, and the piece of blanket used was covered with blood, and so was the bed.
1728. Might she not have broken her arm, as far as you know, half an hour after she was placed in the room on the previous night? Yes.
1729. Might she not have broken her arm half-an-hour before she was released in the morning? Yes, or at any time between the hours she was locked up and the time she was taken out. There was also blood on the walls as well as blood on the bedding in the room.
1730. From the time you put the woman in the cell at 10 o'clock the previous night until she was taken out the next morning did anyone see her? No, not as far as I know.
1731. Was there any inquiry held into this accident? Yes.
1732. Who were present? Dr. Manning, Dr. Huxtable, and Mr. Nugent Robertson.
1733. Were any of the nurses of the institution examined at this inquiry? Yes.
1734. Were you examined there? Yes.
1735. Did you give the same evidence then? In substance the same as I give to you now.
1736. Did this board of inquiry examine any of the patients also? Yes.
1737. Who were examined? Two patients, Case No. 21 and Case No. 16.
1738. Is it the custom to ask patients to give evidence? I do not know; I never heard or know of Dr. Vause asking patients about anything that occurred.
1739. Was it customary to put Case No. 12 in a single cell at night? Yes.
1740. Was she an excitable patient? No; she was always crying and moaning and groaning about her home. She was not violent in any way.
1741. Would you have been frightened to sleep in the same room with her? No; I should not.
1742. Did you ever hear of her making any attempt to injure herself or anyone else? No.
1743. Was she put in to sleep on the same kind of straw and mattress? Yes.
1744. Was she ever put in with the Government patients? Yes; she was down at the Government end for a few days.
1745. Did this woman ever take any drugs or sleeping draughts? Yes, always at night-time.
1746. Did she not sleep at night? I do not know. I never slept in the same room with her.
1747. Do you say that you always had to give her sleeping draughts, which had been made up by Dr. Vause? Yes.
1748. Did she ever refuse to take them? Yes.
1749. What did you do then;—would you force them down her throat? Yes.
1750. Was her father in the habit of coming to see her? Yes; I believe he came nearly every day.
1751. When her father came to see her did the interview take place in a better room than the one in which she slept? Yes.
1752. Did she wear the same clothes during the interview as she usually wore at other times? No.
1753. Would the clothes be changed then? Yes.
1754. In your opinion, would the father go away under the impression that he saw her in the room she slept in? Yes.
1755. After the Case No. 1 exposure was this particular patient put to sleep in a different room? I think that just after the last time that her father came to see her she was taken up to No. 1 ward, and slept there for two nights; then she was again sent to No. 2 ward, and a few days after that she went home.
1756. Did you sleep in the square room, which is now the box room? Yes.
1757. Before you left the asylum were there a lot of new sheets made? Yes.
1758. Were there new clothes made for the patients? Yes.
1759. And speaking generally, are things at the asylum altogether different now to what they were just before this time? Yes.
1760. Who was sleeping in that small square room? Four or five patients.
1761. Is there a small square room where the pans used in the water-closets are kept? I do not know.
1762. Do you know if there are any patients sleeping in such a room? I do not know; but I know that patients sleep in the room next to the closet.
1763. Do you mean to say that every night a patient is put into each of these single rooms without an attendant? Certainly.
1764. And how many of these single rooms are there? I think there are twelve single rooms.
1765. And every night are the same patients put in these rooms? Always.
1766. *President.*] Referring to this Case No. 20, do you remember the night-nurse taking her to the single room and putting her in there? Yes.
1767. Do you know by whose authority? I do not know.
1768. Do you think the night-nurse had seen the matron on the subject? She might have; I do not know.
1769. Do you think that the nurse put her in that room on her own authority? I think she would have asked the matron.
1770. Do you think the matron would then have consulted Dr. Vause? I cannot tell.
1771. Do you remember giving evidence at the departmental inquiry? Yes.
1772. Did you have an opportunity of speaking to the doctors then? Yes.
1773. Did you make any general complaint to them then and there? No.
1774. Why did you not do so? I do not know.
1775. On the occasion of the visiting officials attending the asylum was there any opportunity of speaking to them? No.
1776. Did the visitors ever speak to you at all? No.
1777. Did they simply go through the different wards without speaking to the nurses? Yes.
1778. Did they ever speak to the patients? No; they would shake hands, pat them on the shoulder, pass an ordinary compliment, and then walk on.
1779. Do you think that any of the patients were sensible enough to make complaints? Yes.
1780. In your hearing were any complaints ever made by the patients to the visiting doctors? Not that I can recollect.

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1781. Do you not know that the object of the official inspections is to see that all things are going on as they should go, and to find out if there are any complaints to be made? Yes.
1782. And do you know if that opportunity was ever availed of by the patients? No; I do not know.
1783. Would you not have liked to have spoken? Yes.
1784. Was it because you dare not speak that you remained silent? Yes; well not exactly dare not, but I did not like to.
1785. Had you a feeling of fear to do so? Yes; we were afraid to do it.
1786. In every case did you receive ample notice that the official visitors had come to the asylum? Yes.
1787. On every occasion that you remember? Yes, on every occasion.
1788. On no occasion while you were connected with the institution did the visiting doctors or Dr. Manning come straight into the wards and see the patients without being announced? No; I am quite certain and sure that they never did.
1789. In other words, then, do you mean to say that the place was fully prepared for them? Yes.
1790. Do you mean by that that the beds were put in order—that is, sheets were put on the beds and things were fixed up generally? Yes. As soon as it was known that the doctors had arrived the sheets were put on, and they were taken off again at about 4 o'clock in the afternoon, but they were not put on when the board of doctors did not come.
1791. Referring to Case No. 17, were you present when she had a fit? I never knew that she had a fit.
1792. Did she meet with some accident by striking her head against a fender? Yes.
1793. Was that in the room she was sleeping in? No; that happened in No. 2 ward. She fell and struck her head some time in the day.
1794. Did Dr. Vause come to see her on this occasion? No, not specially. He only saw her when he came on his usual rounds.
1795. Was he specially sent for? No.
1796. In the case of the broken arm, was Dr. Vause sent for then? Yes, at once.
1797. Did he come without delay? Yes.
1798. Was he always attentive in the case of an accident or when a patient was ill? I never saw him come to see the patients only on his usual rounds.
1799. Did you ever see him attend to any special case? No.
1800. Did you have any impression about Dr. Vause's sobriety or otherwise? No.
1801. Did you ever see him under the influence of spirits or intoxicants? No; I never saw him drunk in my life.
1802. As far as you know then, do you think Dr. Vause came to his patients as quickly as he could in cases of emergency and pay the necessary care and attention to them? Yes, as far as I know.
1803. Do you know a man named Henry Gearey? Yes.
1804. Have you had any communication at all with him? Yes: I think I have told him what I thought about the place.
1805. Did you know him before he went to the institution on a certain occasion? Yes.
1806. How did you come to know him? I had a letter from him.
1807. Have you that letter with you? Yes. It reads as follows:—

Miss Macleod,

Brisbane-street, Sydney, 18 July, 1894.

I should be glad if you will call upon me at your earliest convenience. I am always at home between 1 and 2, and will keep any appointment that you may make. My house is next door to Mark Foy's in Oxford-street.

Yours, &c.,

HENRY GEAREY.

1808. Did you receive this letter after you left the institution? No, before; but after the removal of Case No. 1.
1809. Did you tell Dr. Vause that you had received this letter? Yes.
1810. Did you see Gearey at his house afterwards? Yes; I went to see him and had a long conversation with him, and I told him everything that I knew, which amounted to much the same as I have told you to-day.
1811. *Dr. Carran.*] While you were at the institution did you give this information to Gearey? No; I did not do so while I was in Dr. Vause's service.
1812. How soon after you left was it when you saw Mr. Gearey? Two days afterwards.
1813. If you were so willing to give the information to Gearey, why did you not tell Dr. Vause of the things that came under your observation? Because I knew he would not listen to me, and, again, because I thought he did know all that was going on.
1814. Are you of opinion that he did know all that was going on? Yes; I believe he knew as much as I could tell him.
1815. Did you try to tell him of these things on the day that you left? No; I had no chance to tell him, and he knew it too.
1816. Was it a well known fact that he was perfectly well aware that the food was not what it should be, that the patients were imperfectly clothed, that the regulations and rules for the general good management were not obeyed, and that patients were placed in these dark cells; was he aware of all this? Yes.
1817. Do you think, then, that these irregularities were included in the scheme of management of the institution? Yes, certainly.
1818. *Dr. Manning.*] Did you go to Gearey's while you were in the service of Dr. Vause? Yes; I went there to tea one afternoon, but Mr. Gearey was not at home on that occasion.
1819. Did you see him on that occasion? No; and I took another nurse with me so that I should have a witness to all I should have said if I had seen him.
1820. Who was that other nurse? Jessie Urquhart was with me at the time.

[Witness withdrew.]

Rose MacMahon sworn and examined.

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1821. *President.*] Were you employed for some time at Bayview House? Yes.
1822. For how long? Between sixteen and eighteen months.
1823. When? From Eight-hour day in 1892 until the beginning of February in 1893.
1824. By whom were you engaged? I was engaged through Mrs. Blue's office in Sydney, and then I went to Bayview House and saw Dr. Vause.
1825. Did he show you a book containing printed forms which made known your duties? Yes.
1826. Did you sign the book? Yes.
1827. Did you ever receive a printed paper containing the general rules and instructions for attendants and others? Yes.
1828. Did you ever read that paper? Yes.
1829. Did you receive any instructions except those stated on that paper? No.
1830. Were all your duties stated there? Yes.
1831. Did you make yourself familiar with what that paper contained? Yes.
1832. When you left Bayview House did you sign a paper stating that the institution was well regulated and so on? Yes.
1833. Did you sign it? Yes, I did.
1834. Did you attend to the female patients on the Government side of the institution? Yes.
1835. Did you have every opportunity of seeing what kind of food they had or was provided for them? Yes: I was in charge of the dining-room.
1836. What was the character of that food? I always found that it was fairly good.
1837. Was there a regular change of food day after day, or did you have the same kind over and over again? We generally had a change.
1838. Do you think a sufficient change of food was given? Yes, I think it was.
1839. Did you have anything to do with ordering the food? Yes.
1840. Did you remove it from the kitchen and distribute it to the patients? Yes.
1841. Did they complain about the food? At times they did.
1842. Do you think they had any grounds for making complaint? No, I don't think so.
1843. Did you, as an attendant, have the same diet as the patients? Not exactly the same; sometimes we had it a little different.
1844. Could you have provided little extras for yourselves if you had wanted, such, for instance, as tea, or cocoa, or coffee, or any little delicacies? Yes, at times we did so. I have done it occasionally.
1845. Coming to the bathing of the patients;—how often did they have a bath? Once a week, on Saturdays.
1846. Were there any very dirty patients? Yes.
1847. How did you manage with them? If they required an extra bath during the week we used to bath them and keep them as clean as it was in our power to do.
1848. Was there always a sufficient supply of clothing for those patients? No, not always.
1849. In what were they deficient? In stockings, dresses, chemises, and so forth. There was nearly always something wrong with these articles.
1850. Did you ever complain to the matron of this insufficiency of clothing? Yes, I complained to Bridget Morrissey.
1851. Was the deficiency made good? She used to get us some clothes out of the store.
1852. Was there an adequate supply of clothing there: could you, for instance, always get a pair of stockings? No, not always.
1853. Supposing a patient was very destructive, and destroyed a good many clothes, could you always get that clothing replaced? Not always from the store, but we could get some sometimes from the laundry.
1854. Speaking generally, do you think there was a sufficient supply of clothing? I do not consider there was a sufficient supply.
1855. If you made a demand for extra clothing could you get it? No, not as much as was required.
1856. Supposing visitors came to see patients, did you make any change in the clothing of those patients? Yes, we always did.
1857. Where did you get the additional clothing then? From the store if there were any there. Sometimes some of the clothing would not be fit to use, and then we would have to do the best we could.
1858. Is your general opinion, then, that the food was sufficient, and the clothing inadequate? Yes.
1859. Did you know when visitors were coming to see a patient? Yes; we always had fully a quarter of an hour's notice that visitors would arrive.
1860. How was that notice given to you? Dr. Vause would send word.
1861. How would you know when the visiting doctors came? One of the nurses or the matron would inform us that the doctors had come.
1862. Suppose that the visiting doctors came very suddenly, would they walk direct to the wards as soon as they reached the ground;—might they not do this sometimes? They never came on us unawares while I was there.
1863. Do you remember a piece of paper being handed round from Dr. Vause giving you notice that the visiting doctors had arrived? I think a nurse told me that Dr. Vause gave a piece of paper to Josephine Mackay saying that the visitors had come.
1864. Was that a usual thing? We were always informed when the visitors came, but I think on this particular occasion the piece of paper was sent so that we could get the patients ready.
1865. Do you know the single rooms on the female side of the institution? Yes.
1866. When women were placed in these single rooms was their clothing taken off? Yes.
1867. And was some straw put into the room? Yes.
1868. Was bedding supplied? Only one patient had loose straw; the others had a straw mattress and a kind of canvas rug. These were put in all the single rooms on the Government side.
1869. Did the patients ever take the straw out of their mattress, and throw the canvas covering on one side? Perhaps so occasionally.
1870. Did you ever notice particularly if they did so? No; they nearly always laid themselves down on the mattress and kept themselves covered.
1871. Did you ever put the patients in these rooms? Yes.

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1872. Did you take the clothes entirely off the patients when they were put in these rooms? Yes; off the Government patients.
1873. Did they ever wear chemises or night-dresses? No; there were only one or two who had a night-dress. One was allowed a night-dress, and another a chemise.
1874. Were there any utensils in these rooms? Yes; in two of the rooms, but only two.
1875. How many rooms were there? Nine or ten, I think.
1876. And in only two were there any utensils? Yes, in only two.
1877. Were the patients put into these rooms at 7 or 8 o'clock? Yes.
1878. Who attended to them after that? No one at all, unless they made a noise.
1879. What happened then? A nurse would go to them to see what was the matter.
1880. Would she go there from the bedroom? Yes.
1881. Were the nurses sufficiently near them to hear a noise if one was made? Yes.
1882. Do you ever remember any particular disturbance amongst the patients in these rooms? No.
1883. Was there any provision for making a warm drink such as milk, or tea, or cocoa during the night? No, none.
1884. Suppose you wanted to get a cup of tea for yourself if you were on night duty, was there any place where you could obtain it? No; the kitchen was locked up, and we were not supposed to go near the kitchen.
1885. Suppose you wanted a warm drink or, say, a cordial in a case of emergency, how would you manage? Go and ask for the key of the kitchen and get it.
1886. Was there any actual provision for getting things at night? No.
1887. Were the patients in these dark rooms very troublesome? No; one was troublesome at times. That was Case No. 22.
1888. Was she in the habit of screaming at night? Yes.
1889. Did you ever get up to see what was the matter with her? Yes, frequently.
1890. Did you look through the observation hole to see what was the matter? Yes.
1891. Did anyone else look after her at night? Only the nurse who happened to be on night duty.
1892. Was there any special night duty nurse? No.
1893. Did you ever see Dr. Vause go round the buildings at night-time? On very few occasions; but this was not of frequent occurrence.
1894. Was a clean bed always put into these rooms for the use of these patients? Yes.
1895. Do you think there was always sufficient bed covering;—did they ever complain of feeling cold? They did not complain of the cold, but I do not consider the canvas rugs with which they were supplied sufficient covering for them.
1896. How were these canvas rugs made? Two pieces of canvas sewn together.
1897. Were there any blankets stitched to these canvas rugs? I think so on some, but they were never used in the single rooms. They were merely kept for show.
1898. Where were they kept for show? In the single rooms in the day-time. They were taken out at night in nearly every case.
1899. Have you seen Dr. Vause go about the institution a good deal? Yes; during his usual rounds.
1900. At what time does he generally make his rounds? About 12 o'clock in the day.
1901. Have you seen him before or after that, as a rule? Very seldom.
1902. Would he ask you about the conduct of the patients? He never asked any questions of the nurses.
1903. When making his rounds was he accompanied by anyone? Yes, by the matron.
1904. Did you ever see Dr. Vause examine the Government patients to see if they were going on all right? No, unless something was pointed out to him by the matron.
1905. Have you seen him do this occasionally? Yes.
1906. What was your general impression concerning the management of the institution;—were you satisfied with it? Yes, I was, on the whole.
1907. Have you had any other experience in this kind of work? No; never before nor since.
1908. Whenever the official visitors came was there timely notice given of their arrival? Yes; a quarter of an hour's notice, and then the patients were made tidy.
1909. Were the clothes taken off the patients again after the doctors had gone? Yes, at once.
1910. *Dr. Garran.*] Did you assist sometimes in bathing the patients? Yes.
1911. In the winter-time was the water made warm? Yes.
1912. Where did you warm the water used for bathing purposes? In the bath-room.
1913. Were the patients ever bathed in cold water? No.
1914. In the wards, not in the single rooms, did the patients sleep without sheets on the beds? No.
1915. Do you say that generally in the wards the patients had sheets? Yes.
1916. Government patients as well as private patients? Yes.
1917. Did they also have blankets? Yes.
1918. Always? Yes; but it was only in the dormitories that there were sheets and blankets. In the single rooms they had the canvas rugs.
1919. Did they ever complain about the rooms being cold? No.
1920. Were any of these canvas rugs lined with blanket? The majority had no lining. There was no lining in the blankets used in the single rooms.
1921. Did the patients who slept in these rooms have any other covering at all? No; there were two patients in the single rooms who had some kind of bed-clothes.
1922. Were these two then kept better than the others? Yes.
1923. When the visiting doctors came round, did they ever ask questions of the nurses relative to the condition of the patients or the working of the institution? Not that I know of.
1924. Were you ever asked any question by the visiting doctor? No; not unless I took the matron's place.
1925. Was it only on these occasions that you had any opportunity of speaking to the visiting doctor's? Yes.
1926. Did you ever call their attention to anything you thought was wrong? No.
1927. Do you mean to say that if you wanted hot water at night for making tea or any warm drink, or for any other purpose, that you could only get it by going to the kitchen? Yes.

1928. Was there no gas-ring? No; there was gas in No. 2 bath-room, but it was not lighted. There was some arrangement there for heating the water of the bath.

1929. Supposing there was an urgent case, and you were compelled to get warm water or to make a warm drink, such as a cup of tea, how could you do it? Only by lighting the fire in the kitchen.

1930. *Mr. McGowan.*] Had you any references before you went to Bayview House? No, not from Sydney.

1931. Was that the first place at which you went to work? Yes, in Sydney. I have been at work in the country, and I had references from country employers.

1932. Why did you leave Bayview House? I was discharged.

1933. Did you get a reference when you left? Yes; but it was of no use to me.

1934. Why was it of no use. Because it said almost nothing. It just merely said that I had been engaged in the institution, and that while there my conduct had been good.

1935. Who gave you that reference? It was given to me by Mrs. Gilchrist, but it was of no value.

1936. Did you sign a book saying that the treatment of the patients was satisfactory before you left the institution? Yes.

1937. Was the clothing of the patients changed when the visiting doctors came to the institution? Yes.

1938. Was the bedding in these single rooms altered? Yes; the canvas rugs were put there for show, but they were never used at night.

1939. Do you think that was satisfactory conduct? No, I do not.

1940. Did you ever hear any moans from these single rooms during the night time? Very seldom.

1941. Did anyone—I mean a nurse or attendant—go to the patients in these cells from the time they were put in at night until they were taken out in the morning? Well, we are not supposed to do so, but sometimes we would do it for our own free will.

1942. Do you know if any single cells were furnished? Yes; there was a mattress filled with straw, with a kind of canvas quilt.

1943. When you put these patients into these single rooms did not take their clothes out with you? Yes.

1944. Did you ever know of any utensil being left in these rooms? No, only in two rooms, and they were where there were double bedsteads and better bedding.

1945. What time were these patients put into the cells at night? About 6 o'clock, and they were taken out at about 6 o'clock in the morning.

1946. Did you always know when visitors were coming to see the patients? Yes, we always knew.

1947. Would you change their clothing then? Yes.

1948. And after the friends had gone away were the clothes changed back again? Yes.

1949. Were the patients bathed every Saturday? Yes.

1950. Do you remember the accident happening to Case No. 20? No; I left the institution in February before it happened.

1951. Do you say that you could not get a cup of tea or any other necessary nourishment at night-time without waking up and getting the key where these necessary articles were kept? I could not.

1952. Did any of the visiting doctors or Dr. Vause stay at the institution during meal-times? Yes; on two occasions they stayed to dinner.

1953. Did you notice any difference in the food then? Yes; there was a difference when the doctors remained.

1954. What was the difference? There was more meat and potatoes, and of better quality.

1955. Did you ever hear the patients make any remarks on the improvement of the food on these occasions? Yes; they used to say they wished the doctors would come oftener, as they then got a better dinner.

1956. *Dr. Manning.*] If we have been told that the patients in the dormitories never had either sheets or blankets on the beds, is that correct? No, not that I know of. There might be exceptions with very dirty patients.

1957. As a rule, have the patients both sheets and blankets? Yes.

[Witness withdrew.]

Lizzie Verity sworn and examined:—

1958. *President.*] Were you employed for some time at Bayview House? Yes.

1959. What position did you occupy there? I was an attendant.

1960. On what side of the institution were you employed? For five weeks I was in No. 1 ward. I was in another part of the institution for six or seven months.

1961. When did you join the institution? I went there in January, 1894, and remained until about the end of September.

1962. Why did you leave Bayview House? I was dismissed from there.

1963. Did you sign a book or a certain document when you were engaged? Yes; I was engaged by the lady superintendent, Mrs. Gilchrist; she asked me to sign a book or some paper.

1964. Did you sign it? Yes.

1965. When you left the institution, did you sign another document? No, I did not.

1966. When you were originally engaged, was there handed to you a printed copy of the general rules and instructions to be observed in the performance of your duties? Yes.

1967. Did you make yourself familiar with these rules and instructions? Yes.

1968. While you were at Bayview House, had you much to do with the sleeping arrangements of the patients? I used to sleep in a dormitory with some patients.

1969. Was your attention called to a number of separate cells in which patients were placed to sleep? Yes, I know them.

1970. Have you put patients in these rooms yourself? Yes.

1971. Have you locked them up for the night and left them there? Yes.

1972. Was there any night attendant to look after the requirements of these patients? No, not at that time.

1973. Has there been any change made lately;—since the complaints in connection with Case No. 1? No; I do not think there has been any night attendant appointed. When I went there first

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- Lizzie Verity first there were no night attendants at all, but I think there has been some change made since the affair to which you alluded.
- 14 Nov., 1894. 1974. What change has been made? One of the attendants was relieved from the day work and we that is, the other attendants—did her duties among ourselves. The one relieved had to do a certain amount of work in the morning, and then at night she would take duty. This change was made after the matter in regard to case No. 1 occurred. We took night duty in turns.
1975. When the patients were put in these single cells at night, was it the custom to take their clothing away from them? Yes.
1976. Were the patients all stripped? Yes.
1977. Were they supplied with night dresses? No.
1978. Were they supplied with chemises? No.
1979. What bedding was supplied to these patients? That depended on who the patient was, or what the patient was. In some cases a straw mattress was supplied, and in some cases straw.
1980. In the case where a straw mattress was supplied, would the patient use it? Sometimes. Sometimes they would tear the mattress up and cover themselves with the straw. In two cases that I know, they tore them up to ribbons.
1981. Was there any provision made when you first went to the institution for supplying the patients at night, when necessary, with hot coffee, tea, or milk, or any warm drink, or any other kind of refreshment, during the night-time? No; none at all.
1982. Had you any opportunity of making a cup of coffee, tea, or cocoa for yourself if you wanted one during the night-time? No, sir.
1983. What was your impression concerning the character of the food supplied to the Government patients? In regard to the Government patients, I do not think the food was sufficient in quantity, and the clothing was very bad.
1984. Was there a sufficient supply of clothing? No; not all the time I was there. When I went there, there was not a sufficient supply of clothing for the patients. Perhaps some would have a dress and no skirt, and perhaps some would have a skirt and no dress. If a patient was sick in bed her clothes would be taken and used for other patients who were up and about.
1985. Was that a common occurrence? It was when I went there first, and it continued to be so until the time when Case No. 1 was taken away.
1986. Is it your opinion, then, there was not a sufficient supply of clothing? There was not sufficient clothing.
1987. Were a good many of the patients of dirty habits? Yes; to keep them clean.
1988. To keep them clean would it require a frequent change of clothing? Yes.
1989. How often were the patients bathed? The rule was once a week, but some would be bathed at other times. I could give a patient a bath at any time if she wanted it.
1990. Was there any store in which the clothing was kept? Yes.
1991. Could you get clothes from there for destructive patients? Yes, when there were any to be had, and when we could not get any from the store we used to go the laundry and get them. There were times when there was no clothing in the store. There is a store now, and more clothing in it than there used to be.
1992. Are things much changed now, compared with the time of which you speak? Yes; there is a great deal of change. Blankets and rugs have been supplied, and new sheets and clothes have come in.
1993. Did this change come about immediately after the removal of Case No. 1 from Bayview House to Callan Park was made public? Yes, immediately after that. Before then, if I went to the matron and asked her for extra clothing or anything else, she used to tell me that I could not get it; but directly after the case No. 1 was taken away the matron told me to ask for anything in reason and I would get it.
1994. Has there been any change made in the buildings themselves since May last? Yes; they have been painted up, and the dormitories have been improved.
1995. Have you ever had any opportunity of seeing single cells in the morning after the patients have been taken out? Yes.
1996. In what condition were they;—where they wholesome and clean, or in a state of filth? Well, they were not very nice.
1997. Were any utensils in those rooms? Yes.
1998. Were there any beds? No; it would have been useless to have put them in.
1999. How many utensils were in these ten or eleven single cells? I am not sure, but I think there were five altogether. There were three of india-rubber and two of enamel.
2000. Were those patients ever visited by their friends? Yes, occasionally.
2001. When the patients were so visited were they taken in a disreputable condition to see their friends or relations? No; their clothes were changed always. A decent skirt would be put on a patient if she possessed one; and if she did not have one of her own, better clothing would be taken off one of the other patients and put on that patient who would be going to see her friends.
2002. Supposing the official visitors made an ordinary inspection of the asylum, did you always get a timely intimation of their arrival? Yes; a nurse or someone would come into the wards in a minute, and let us know that the doctors were there; then the attendants in the dormitories would come and assist in getting the patients ready and everything in order.
2003. So that immediately you heard the whisper that the doctors had come, did you all set to work to get the patients into better condition, and make things generally presentable? Yes.
2004. How long a time elapsed between the arrival of the doctors at the institution and when they made their inspection of the patients? About a quarter of an hour.
2005. Did you ever know of an official visitor proceeding direct to the ward without anyone being aware of his presence? No; I have known an official visitor come as far as the verandah without it being known that he was present.
2006. Who was that visitor? I do not know.
2007. When the official visitors came round did they ever speak to you or any of the nurses? No; they never spoke to any of the attendants.
2008. Did not any one of them ever speak to you about the state of the clothing, or anything else? No.
- 2009.

2009. Did the official visitors, when making their inspection, examine the clothing worn by the patients? Lizzie Verity. No; they would merely walk through the wards and along the verandah.
2010. When did you leave the institution? In September last. 14 Nov., 1894.
2011. Before you left did you see a complete revolution in the management of the place? Yes, I did. Immediately after Case No. 1 was removed there was a great change; everything was quite different.
2012. At what time did Dr. Vause make his daily visit of inspection? About noon.
2013. Have you seen Dr. Vause visit the patients on other occasion besides when on his daily rounds? Occasionally—very occasionally.
2014. Did Dr. Vause always seem attentive to the patients—to their requirements, and so forth? Yes, I think so; if his attention was called to the patients he would attend to them.
2015. Otherwise, did Dr. Vause not attend to them? He used to make his daily rounds and see the patients then.
2016. *Dr. Garran.*] Did any of the patients sleeping in these solitary rooms ever complain to you about being cold? No.
2017. In addition to this straw of which you speak, were coverlets used during the night-time? Yes; they had small coverlets.
2018. How many? Two.
2019. Of what material were they—blankets? No; we could not call them blankets. I think the straw they used would be warm enough.
2020. Do you think the patients used the coverlets during the night-time? I do not know.
2021. After shutting them in these rooms at night did the matron or you pay them any visits? Sometimes we would look in, one or the other of us. I have looked in myself.
2022. Did you find the patients, then, all right and covered up with straw? Sometimes, and sometimes they would lie on it. They would please themselves.
2023. Did they ever complain to you of feeling cold? No, sir.
2024. *Mr. McGowen.*] Did you get any reference when you left Bayview House? No. Dr. Vause offered me one, but I refused it.
2025. Why did you refuse it? Because I did not like it.
2026. Were you asked to sign a book or a printed document, saying that during the time you had been in Dr. Vause's employment every consideration was paid to the care, comfort, and recovery of the patients in the establishment to the best of your knowledge and belief? No, I was not asked to sign such a book, and I would not have signed it if I had been asked.
2027. Did you get a reference, then? No, not from Dr. Vause; but I have references from previous employers.
2028. Who were they? I have a reference from Mrs. Massey, from Mrs. Carter, and Mrs. Hollander.
2029. Have you had any previous experience in lunatic asylum work? No, sir.
2030. Do you remember a patient breaking her arm? Yes.
2031. Do you know anything about that occurrence? Nothing beyond the fact that her arm was broken.
2032. Was that arm broken whilst she was confined in a solitary cell? Yes.
2033. Do you know at what time she was put in that cell at night? Yes; about 10 o'clock.
2034. Do you know at what time she was taken out in the morning? About half-past 6.
2035. When she was taken out, was it found that her arm was broken, that her body was covered with blood, and that there was blood on her mattress and bedding? Yes.
2036. Are you sure her arm was not broken when she was put in that room at night? Yes.
2037. As a matter of fact, could she not have broken her arm half an hour after she was placed in the cell, and thus have remained there all night with this broken limb? Yes.
2038. Or could she have broken it half an hour before she was released in the morning? Yes.
2039. Do you know if there was a night attendant on duty then? I think there was.
2040. Do you know if she went to look at the patients? I do not think she looked in when on her rounds.
2041. Previous to May last was it customary for a night attendant to see patients between the time they were placed in these solitary cells at night and taken out the following morning? No. Attendants did not see the patients after 7 o'clock at night, unless they were making a great noise, and if they were doing so we would give them a sleeping draught if we could get one.
2042. Supposing some other witness says there are only two utensils in these rooms, is that statement true? No; there are five—three of indiarubber, and two of enamel.
2043. While you were at the institution was an extra window put in these single cells? They were not there when I went there.
2044. What means was there of admitting light to these rooms? There was only a folding shutter in the wall opposite the door.
2045. As a matter of fact, have considerable changes been made in the institution since the 20th May last? Yes.
2046. Has additional clothing been supplied, including dresses for the patients? Yes.
2047. Was it the usual thing when friends came to see patients that the clothing of the patients should be changed? Yes.
2048. And if one patient had not decent clothes to put on for these occasions would the best clothing available be taken of the other patients and put on the patient going to see her friends? Yes.
2049. Did you see the patients wearing stockings without feet? Yes. Numbers of them like that; but I do not take much notice of that, for you cannot get some patients to keep their stockings on.
2050. *Dr. Manning.*] It has been stated in evidence that the patients in the associated dormitories never sleep in sheets, that the blankets are taken off the beds, and that the patients complained of cold at night;—is that so? The sheets are taken off, and I have heard complaints that the patients in the dormitories are not warm enough.
2051. Were all the sheets taken off the beds at night? Yes.
2052. Invariably? Yes; my experience was that the sheets were taken off. They were supposed to be put on the beds, but there were not a sufficient number.

[Witness withdraw.]

Annie Marshall sworn and examined:—

- Annie Marshall.  
14 Nov., 1894.
2053. *President.*] Were you employed on one occasion at Bayview House? Yes.
2054. Do you remember the date on which you were engaged? Yes; on the 3rd of March, 1894.
2055. How long did you remain? About six months, but I was only six weeks amongst the patients. The remainder of the time I was in Dr. Vause's private residence.
2056. By whom were you engaged? By Dr. Vause.
2057. Did you sign a book at the time of your engagement? Yes.
2058. Do you remember reading over a printed paper informing you of the rules and regulations, and the duties you were expected to discharge? I was given such a paper.
2059. Did you read it afterwards? Yes.
2060. Under what circumstances did you leave the institution? I could not agree with Mrs. Gilchrist, the lady superintendent.
2061. Did you resign your position in consequence? Yes.
2062. Did you get a certificate of character on leaving? Yes.
2063. Was it satisfactory to you? Yes.
2064. Did you sign a book when you left, saying that everything was carried on satisfactorily? I wrote my name on some paper which Dr. Vause handed to me; he said, "Put your name down, and I did so without reading the paper; I thought it was just a statement to say I was leaving the place.
2065. During the six weeks you were with the patients, in which part of the institution were you employed? I was in the bottom ward.
2066. What number of patients was there—twenty-eight Government patients? Yes.
2067. What was your impression as to the nature of the food supplied? It was rather poor, and always the same over and over again.
2068. Have you anything to say about the cooking? I think the meat was good, but it was spoiled in the cooking.
2069. Did the patients complain about this? Some of them did not know any better, and would eat anything.
2070. What was your impression about the clothing? The institution was very bare of clothing.
2071. As a matter of fact, was the clothing changed about from one patient to another? Yes.
2072. How was that? Because there was not sufficient clothing, and I used to say to some of the attendants, "Why don't you ask Dr. Vause for more clothes?" but they did not like to do it.
2073. Did you ever speak to the matron about it? I spoke to Mrs. Gilchrist once or twice, but she did not take any notice of what I said.
2074. When friends came to see the patients, was there a change made in their dress? Yes.
2075. Did you require some little time to get them ready? Yes.
2076. How did you know when visitors came to the asylum? The matron would come round and tell us. We would then take the best dress and make the patient ready. There was a great deal of trouble with the clothes, as many of the patients would be always tearing them to pieces. They would tear anything, even canvas.
2077. When the clothes were torn up, would you get them replaced by others? Sometimes, but not always.
2078. Did the patients go naked then? Well, I cannot say they were exactly naked, but they were sometimes very indecent.
2079. Did you always receive intimation when friends came to see patients? Yes.
2080. When the Government visitors came to make their official inspection, did you always know when they had arrived? Yes. When they first arrived they called at the doctor's residence, and then I would run across and tell the others of their arrival.
2081. Was that so that they might get the patients and place in proper order? Yes.
2082. Did Dr. Vause or the matron ever ask you to let the nurses know that official visitors had come? No, sir; I did it on my own account.
2083. Why did you do that? I was told to do it once when I first arrived, and I always did it afterwards without being told.
2084. Who told you to do it on the first occasion? Dr. Vause told me to just let them know, so that the patients could be put all right.
2085. Did the official visitors always go to Dr. Vause's house before they saw the patients? Oh, yes; before they saw the patients.
2086. Have you ever known them to go to the patients first, and then to Dr. Vause's house? I cannot say.
2087. Have you ever seen the patients put into these solitary cells? Yes; but only the very worst of them.
2088. Were these patients very destructive? Yes, very.
2089. Are they always put into these cells in a naked condition? Yes; they would tear their clothes if they had any on to tear. When they were put into the rooms they would cover themselves up with the straw. They play with the straw, and never seem to want any other covering.
2090. Were these patients visited at night-time? The matron always went her rounds at 7 o'clock.
2091. But was there no night attendant? I think a night nurse has been on duty since Case No. 1 was removed.
2092. Before that event was there a night nurse on duty? No; but we used to be in a position in the wards to hear patients if they were unusually noisy.
2093. Were some of these patients of very dirty habits? Yes, very.
2094. Was any convenience provided for them in these rooms? Nothing; if they had had utensils, they might have killed themselves with them.
2095. Had they no gutta-percha utensils? No; they tore them up.
2096. Would not these rooms be in a frightful condition in the morning? Yes; they were in a very bad state indeed.
2097. *Dr. Garran.*] Supposing you wanted to get a cup of tea or coffee for yourself at night, could you get it? No, sir.
2098. Could you get any hot water, or warm drink of any kind? No, sir.
2099. *Mr. McGowen.*] Did you ever know a nurse cruel to a patient? No; I cannot say that much. I never saw a nurse strike a patient. There was one patient, Case No. 23, whom another patient scrubbed with a scrubbing brush while in her bath.

[Witness withdrew.]

THURSDAY,

THURSDAY, 15 NOVEMBER, 1894.

[The Commission met at 11 a.m. in the Board Room, Chief Secretary's Office.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
Esq., M.D., INSPECTOR-GENERAL OF THE  
INSANE.

ANDREW GARRAN, Esq., LL.D.  
JAMES SINCLAIR TAYLOR MCGOWEN,  
Esq., M.L.A.

Dr. Vause was also present to hear evidence and examine witnesses on his own behalf.

The Rev. E. D. Madgwick sworn and examined:—

2100. *President.*] This Commission was sitting for the purpose of making full and diligent inquiry into certain complaints and allegations made against the management of Bayview House Asylum. We, as the Commission, understand that you are one of the chaplains visiting the institution, and we should like to hear your evidence upon what you have seen there during your visits. Are you one of the chaplains at Bayview House? Yes; I am the Church of England Chaplain there.

Rev. E. D.  
Madgwick.  
15 Nov., 1894

2101. How long have you been there in that capacity? About two years.

2102. Do you visit the institution regularly? Yes; every Thursday afternoon at about 3 o'clock.

2103. Do you hold religious services there on these occasions? Yes; I hold a service, and then I spend the rest of the afternoon among the patients.

2104. Have you been called to visit the institution suddenly in cases of emergency? No.

2105. Have you ever visited the institution on days excepting those on which you pay your regular visit? Yes; occasionally I think I have, but I have taken no note of the dates.

2106. Did you always visit the institution at regular hours? Yes; my custom was to arrive there at 3 in the afternoon, conduct a service in the chapel first, and then I would go through the whole of the establishment.

2107. What was your general impression formed on what you saw on these occasions of the management of the institution? It was very favourable.

2108. Have you ever heard any complaints made by the patients concerning their treatment? Never; I never heard a single complaint, and I may say here that I was never more surprised in my life than when I read of these charges being brought forward in the Legislative Assembly.

2109. Did you ever have any conversation with the attendants or nurses while on your visits? Yes.

2110. Did they ever complain to you of the treatment of the patients? I never heard a complaint from either patient or attendant.

2111. In your general visitation, after conducting the service, did you inspect minutely the clothing worn by the patients? No; it never occurred to me to make such an inspection.

2112. Have you visited similar institutions elsewhere? Yes; I was chaplain at Callan Park for nearly seven years.

2113. Having visited the two institutions, and having had an opportunity of seeing the management and the patients in both, do you see any great difference between the treatment of patients at Bayview House and those at Callan Park Hospital for the Insane? No; I see no difference, except that the institution at Bayview is more homely and more like a private gentleman's residence. The treatment and discipline at both seems to me to be about the same.

2114. Over what hours of the day did your visits to Bayview House extend? I arrived there at 3 in the afternoon, and generally left at 5. The service occupied about three quarters of an hour, and the rest of the time I spent in going over the institution.

2115. Is it always known and understood at the institution that Thursday and 3 o'clock in the afternoon is your visiting time? Yes; that is the hour fixed by Dr. Vause and myself.

2116. Have you received any special calls to the institution? I think I have been asked to go once from the parsonage to see a certain patient, whose name I forget, but who was at that time sick in bed. Dr. Vause then asked me to go and see that patient, and I went.

2117. When you saw this patient sick in bed did you find him and his surroundings clean, and did you think he was properly attended to in every way? Most certainly I did. I never saw any indication of dirt or untidiness or neglect on any occasion I visited the asylum. The bed-clothing was scrupulously clean, and so were the clothes of the patients themselves.

2118. Did Dr. Vause always manifest a proper interest in his patients? Yes, I thought so. He has always personally taken me to see them.

2119. Did it always strike you that he took interest in these unfortunate people and in his work? It is quite evident to my mind that he did so. As far as my experience goes, I can safely say Dr. Vause always manifested a fatherly interest in the place and in the patients—just such an interest as I should expect from the head of an institution of that kind.

2120. *Dr. Garran.*] Do you think that the time of your visit being fixed everything could be prepared and put in proper order for your visit? I have never heard of it being done, and I do not think special preparation could be made, because I was at liberty to go into every part of the institution.

2121. Did you ever drop upon the place unexpectedly, so as to pay what may be termed a surprise visit? No; it never occurred to me to do so. I never saw anything on my ordinary visits which would lead me to think or suppose for one moment there was any necessity for such watchfulness.

2122. *President.*] When you were making those ordinary rounds, were you ever taken into an isolated building in the courtyard? Yes.

2123. Did you ever see anyone sick lying in this room? No; I saw the room itself—I may say rooms, for there are two.

2124. Did you see these rooms, or either of them, before the complaints were made concerning Case No. 1? I am not quite sure; I think I saw them before; but I know I saw them afterwards.

2125. Did you go, as a matter of curiosity, to see them after the particulars of Case No. 1 had been made public? Yes; I saw the room he occupied.

2126.

- Rev. E. D. Madgwick.  
15 Nov., 1894.
2126. Was it clean and tidy then? Yes.
2127. Had you seen that room before? I think so, but I have no distinct recollection of it.
2128. Were you ever called to administer religious consolation to a dying patient? No.
2129. Have you been called on any occasion to see a female patient in the single cells on the women's side? No; I never rendered any religious service to a sick patient in the isolated wards on the female side. I can speak with the greatest definiteness. I can say with certainty I never had any suspicion of anything being wrong in the management or treatment of the patients.
2130. Did you see Case No. 1 himself while he was there? Yes; I saw him on one of my visits to the institution, and he was then in Dr. Vause's reception-room.
2131. Did you see him in his private apartment? No; only in the reception-room.
2132. *Dr. Garran.*] When you saw him was he sufficiently tranquil to talk rationally? No; he was very excited, exceedingly irrational, and anything but physically strong. Dr. Williams had remarked to me that he thought his case was utterly hopeless, and I could only endorse that opinion after seeing him.
2133. *Mr. McGowen.*] Did you see these ten or eleven rooms, in which the women were kept isolated, before that patient's affair became prominent? I have been through all of these rooms.
2134. Did you examine these rooms before the 20th of last May? Yes; I have been through them frequently before the 20th of last May.
2135. On seeing those rooms before that date did you notice any window in the back wall opposite the door? Yes.
2136. Have you seen any alterations in those rooms since then? No; I have not noticed any alterations.
2137. Did you not notice that there are now two windows in these rooms instead of one? No; my observation of the rooms was not so particular as to enable me to notice whether there were two windows or not. I have a general recollection of the rooms.
2138. *President.*] When you went into the room and saw a window high in the wall opposite the door, do you think if another window had been put over the door you would have noticed the change? I did not notice the change, but I know there have been a good many alterations made in the institution of late.
2139. Do you mean that alterations and improvements are being made to provide additional comforts for the patients? Yes.
2140. Have all these alterations been made since the initiation of this inquiry? No; I do not think so.
2141. Do you infer then that alterations are made from time to time with the sole desire of making the place more comfortable and homely? Yes; ever since I have been chaplain of the institution I have seen workmen about the place making improvements, both in the garden and in the premises.
2142. If, then, you saw an additional window or door being put into any part of the building would it strike you as anything extraordinary? No.
2143. *Dr. Manning.*] Are a good many of the patients who attend the religious services fairly sensible? Yes.
2144. Are some of them quite rational when talking to you? Yes.
2145. Have these patients an opportunity of speaking to you in a quiet way without interference from attendants or any one else? Yes; they very often do speak to me, too.
2146. Do they ever complain to you of their treatment? I have never had a single complaint, and I may add that on the other hand at the time this matter was broached in the Legislative Assembly some of the patients were rational enough to talk the subject over with me, and to ask me to defend Dr. Vause by writing to the newspapers.
2147. Were those Government or private patients? Private patients.
2148. Were there some, then, intelligent enough to be fully acquainted with the facts of the case? Yes; they discussed it with me, as I say, and suggested that I should write a letter to the newspapers defending Dr. Vause. I subsequently did write to the Editor of the *Sydney Morning Herald*, but the letter was not published.
2149. Do you receive any consideration from Dr. Vause for your services as chaplain? Oh, yes; I get £20 a year, and I had more than at Callan Park.
2150. Will you say there was every opportunity for patients to make a complaint to you if they chose to do so? Certainly. Sometimes they would complain in a general way by asking such questions as "Why am I here?" "Why am I not allowed to go home?" These are but natural questions from an insane patient, and I used to try to pacify them by giving some soothing answers. I did not, however, regard these as any complaint against their treatment.
2151. *Mr. McGowen.*] Do you not say that these improvements were going on continually, and yet you did not see that an extra window had been in each of these single rooms? I said I did not take any particular notice.
2152. Did it ever strike you that one window covered with a shutter was a sufficient means of admitting light into these rooms? I do not remember any window being covered with a shutter. In speaking of general improvements, I may say that they are so numerous, or have been so numerous of late, that it was my custom to see work going on in connection with the new dwelling which is being greatly enlarged and improved, and other improvements going on in the old premises. It has never struck me for one moment that any improvement was being made or designed to defeat in any way the present investigation.
- [Witness withdrew.]

The Rev. Edward M. O'Callaghan sworn and examined:—

2153. *President.*] Are you in attendance on the Roman Catholic patients at Bayview House? Yes, it coming within the boundaries of my district.
2154. Are you a paid chaplain? Yes; I get 10s. per visit.
2155. How long have you been in attendance on the patients at Bayview House? Since July, 1889, I think.
2156. During your attendance there to minister to these patients, have you had every possible opportunity of conversing with them and of observing the general management of the institution? I have.
2157. What is your impression, formed from this experience? Very satisfactory; I have never noticed anything I thought to be unsatisfactory, improper, or in any way undesirable. I have been there a good many

- many times late at night, on special occasions, and I have never known anything happen of which I could complain.
2158. Have you paid special visits to sick patients at night as well as your ordinary visitations during the day? Yes.
2159. Have you ever made a general inspection of the institution by going about the grounds, and over the whole of the house? Yes.
2160. Have you been through the wards? Yes.
2161. Can you recollect any occasion on which any attendant has specially complained to you of the neglect or bad treatment of any patient? No; I do not know of any such occasion.
2162. On the whole, then, is it your impression that Bayview House is a well-managed institution? Yes.
2163. Have you had any experience in similar institutions? I have not had exactly the same experience, but I have seen two or three institutions of this nature.
2164. Having been so long associated with this institution do you say you have never been unfavourably impressed with its management? Certainly not; on the contrary, I have always been most favourably impressed—so much so, indeed, that I should be glad to be put there myself if such circumstances were to arise as would force me to seek the aid of my fellow men, as these unfortunates do.
2165. Did you ever have your attention called to a separate cell across the courtyard, away from the main building, in which Case No. 1 was placed? Yes; I know the room you mean. I believe Dr. Hetherington showed it to me on one of my rounds.
2166. Did you ever see a patient in this cell? Yes, I did; I attended one poor old Italian who died there.
2167. Have you ever visited the female patients in the single cells and in the dormitories on the Government side? Yes; I have been in several dormitories.
2168. Do you remember the eleven or twelve separate cells opening on to the verandah? Yes.
2169. Did you ever visit any patients there? I do not remember having visited patients in them.
2170. Did you ever visit patients in them? No; those patients I have visited specially were generally in a dying state.
2171. Were some of these patients fairly intelligent? Yes; some of them.
2172. Did you ever have an opportunity of conversing with them? Yes.
2173. From the information they have given to you did it ever strike you there were any cases which required investigation? No; I never heard anything like a complaint which could form the basis for investigation. I have seen several of the patients separately, spoken with them confidentially, but have never received any complaint.
2174. Were you ever at the institution during meal times? No; I was generally there before meal times.
2175. Did you ever notice anything peculiar about the dress of the patients, or as regards their cleanliness? I saw nothing beyond the fact that they appeared to be dressed comfortably, and they were clean.
2176. Were your visits made to Government or private patients? There was no distinction made in that way. I visited both.
2177. Did you visit under ordinary circumstances at a regular hour—for instance, for the celebration of mass? Yes; generally in the forenoon, at 11 o'clock.
2178. Did you go for that duty once a week? Sometimes; and sometimes once a fortnight.
2179. *Mr. McGowen.*] Did you ever receive any complaints from the attendants or from any particular attendant regarding the treatment of patients? No.
2180. Did an attendant named Josephine MacKay write you a letter? No.
2181. Do you know anything about Case No. 19? I cannot recollect the patients by name.
2182. Was it known at the institution when you would regularly visit the asylum? I think so, for I only went there at stated times.
2183. Was it your usual practice to come for the performance of religious duties once a fortnight? Yes.
2184. On the special occasions when you were sent for to see sick or dying persons, would you go to the establishment in the night-time? Yes.
2185. Did you go straight to see the patient for whom you were sent? Yes.
2186. Have you any knowledge of the room in which Case No. 1 was kept? I may know the room; but I did not know that that particular patient was there, until his removal became public.
2187. Have you specially examined that room since? No.
2188. When you visited the institution on special occasions were you taken direct to the place where the sick patient was? Yes.
2189. *President.*] Are you satisfied with the general management and cleanliness of the institution? Yes.
2190. Was there ever any special complaint made to you about the treatment of the patients? No.
2191. It has been stated to us that when official visitors and clergymen arrived at the institution patients were specially prepared, and the place put in good order for these occasions;—what is your opinion of a rumour or statement of that kind? I think it is utterly valueless.
2192. Did you have every opportunity of making full observation of, and holding free conversations with the patients? Yes.
2193. Have you administered the sacrament to the patients? Yes.
2194. Have you been with patients at confession? Yes.
2195. Do you say that no serious infringement of the rules could occur, and that a patient could not be neglected in any way without the fact being brought fully to your notice? Yes, I do. I know, too, that several have left the institution, and are now living outside in my district, and whenever any allusion is made to Bayview House they always speak most favourably of the institution.
2196. Do you remember administering the last rites of your church to Case No. 17, in December, 1893? I do remember some such case.
2197. Did you administer the last rites to that patient? Yes; in the third bedroom from the end.
2198. Was she on the point of death before you left? Yes; we thought she had already died.
2199. *Dr. Vause.*] Do you know if there has ever been any special preparation made for your visits? I do not know that there has.
2200. Do you sign the visitor's book when you attend the institution? Yes.

[Witness withdraw.]

TUESDAY, 20 NOVEMBER, 1894.

[The Commission met at 11 a.m. in the Board Room, Chief Secretary's Office.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
ESQ., M.D., INSPECTOR-GENERAL  
OF THE INSANE.ANDREW GARRAN, Esq., LL.D.  
JAMES SINCLAIR TAYLOR MCGOWEN,  
Esq., M.L.A.

Dr. Vause was also present to hear evidence and examine witnesses in his own behalf.

Josephine Mackay sworn and examined:—

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2201. *President.*] Were you at one time an attendant at Bayview House? Yes; I was employed there for a year and three months.
2202. At about what time were you employed there? I went in April of last year, and left in May or June of this year.
2203. By whom were you engaged when you joined that institution? By Dr. Vause.
2204. Do you remember signing the book when you were engaged? No; I do not remember that. As far as my memory serves me, I merely received a copy of the rules and regulations of the establishment.
2205. Did you pay particular attention to those printed rules and regulations? Yes.
2206. Did you read them over carefully, and thereby understand the nature of your duties? Yes.
2207. What was your special duty in connection with the institution? I was engaged as an assistant nurse, or under nurse.
2208. What was the nature of the duties devolving upon you in that position? I was engaged in domestic duties, and in looking after some of the patients.
2209. Had you an opportunity of seeing the general management of the institution? Yes.
2210. Did you have an opportunity of seeing what clothing was provided for the patients? Yes.
2211. Was that clothing ample and satisfactory? It was not ample.
2212. Which of the patients were in your charge? I had charge, at different times, of patients on both sides. The first part I was engaged on the Government side of the institution—some five or six months, I think.
2213. Where were you employed during the remainder of your stay? I was employed in the private patients' part of the institution for four or five months before I left.
2214. Did you ever remark that the clothing of the patients was scanty? Yes; I saw that for the Government patients it was scanty, especially in the winter-time. I do not think this was Dr. Vause's fault—I think it was the matron's fault.
2215. Was there an ample stock of clothing in the storeroom? I do not know, but if there was an ample stock in the storeroom we did not see it.
2216. Did you observe that the patients were not properly clothed? The supply of clothing was scanty, especially for the winter climate.
2217. We have been told that some of the clothing was of a poor description—an inferior quality;—was that so? It was of very poor quality.
2218. For instance, the stockings the women had on, what quality were they? A very poor quality.
2219. In what way? They were of the poorest quality, and very often in a ragged state.
2220. Was the amount of food supplied sufficient in quantity and of good quality? The animal portion of the food was sufficient.
2221. Was there a sufficient supply of bread? The bread was not often sufficient.
2222. Do you think the patients had enough to eat? Yes; I consider they did; but I do not recollect all details in connection with the food.
2223. Did they get sufficient to eat at all times? Yes; I think so. Their appetites varied, and some ate considerably more than others.
2224. Was your attention called at any time to the ten or eleven cells on the Government side of the institution? Yes.
2225. Have you seen patients put in those cells at night? Yes.
2226. What state were they put in? They were undressed, and a kind of mattress made of straw was put in the room with them.
2227. Did they have any underclothing put on them at night? No.
2228. Were they always put in these cells naked? Yes; for fear they might injure themselves if they had clothing on.
2229. Were they always put in naked as far as you know? Yes.
2230. Do you know any exception to this rule? Yes; there was one patient, a Case No. 24, who was allowed to wear a nightdress and underlinen.
2231. Was she put in with night-clothes on, and the other patients put in these rooms naked? Yes.
2232. Do you remember seeing a room in a detached building where Case No. 1 was put to sleep at night? Yes.
2233. Have you frequently seen him put into that room? Yes.
2234. Was he undressed and put in in the same way as the female patients? I do not know. I never saw him undressed. It was the duty of the male attendants to look after him.
2235. Did you ever hear any conversation about his treatment? No; all I heard was, however, they used to take away his clothes. They used to undress him inside the room and bring his clothes away.
2236. Were there any night attendants to look after the patients kept in these separate cells? No; if the patients were noisy or very excited an attendant would go down to the cell and give the patient a sleeping draught of some kind.
2237. But did any one attendant go round at night to see that the patients were all right? No; unless we were disturbed by patients being exceptionally noisy, and then a nurse would get up and see what was the matter.

2238. What time did you go to bed generally? We were supposed to retire at 10 o'clock, but very often we were up later than that. All lights were out at 10 o'clock.

2239. Supposing you wanted to get a cup of tea, cocoa, or other refreshment, during the night, was there any provision for obtaining it? No.

2240. Did you ever see any provision for obtaining refreshment of this kind? No.

2241. With regard to the bathing of the patients was that done systematically at stated times? Yes; they were bathed every Saturday afternoon as a general rule, but whenever dirty patients required a bath they got it.

2242. Were the patients then always kept as clean as possible? Yes, certainly, for our health's sake as well as their own.

2243. Were you satisfied, on the whole, with the institution and its management, or have you any complaint to make concerning any irregularity which came under your observation? It is such a long time since I was there that I have forgotten a good deal; I do not remember.

2244. What was the reason of your leaving the institution? A patient chanced to escape. It was the custom for me to keep my keys under my pillow. This patient slept in my ward, but she had a habit of constantly wandering about the room at night. On one night I slept unusually sound, and the string of my keys came from under the end of the pillow. This patient, in wandering about, saw the string and took the keys. When I woke up I missed the keys. We searched all over the place, but could not find the keys. Some time afterwards she made her escape, but I do not know how she escaped.

2245. Were you dismissed for that? Yes. She delivered up my key the day I was leaving. In the meantime she went home for a week. She came back to the institution, and brought a key with her which looked like my pass-key.

2246. Did you report the loss of those keys to Dr. Vause? Yes; I did.

2247. What did he say? He called me to account. I told him I suspected that Case No. 24 had the keys.

2248. Were you dismissed because of these circumstances? Yes; I was dismissed on account of the patient escaping while I was in charge.

2249. Have you seen Dr. Vause passing in and out of the institution? Yes; he always made his daily visits, except when he was ill from his accident.

2250. Before that accident happened did you see him regularly attending to the patients? Yes; he came through the institution every day at dinner-time, and on any other occasion when he was wanted.

2251. Did any accident occur to any of the patients while you were there? Yes; there was one poisoning accident.

2252. Was there any other accident? Case No. 17 used to knock herself about very much.

2253. Did you see anything of a serious character in the way of accidents while you were there? I do not remember anything now.

2254. It would be as well for you to tell us all you know; you need not be afraid; all we desire to know is the truth and the whole truth;—do you remember any other accident? I do not remember any other case. I may remember it later on; I do not remember it just now. I know Case No. 17 was ill for a week or a fortnight.

2255. Were any of the rooms much troubled with rats? No; but there were rats about the yards and in the sheds. The rooms were not troubled with rats; they were troubled with bugs more than anything else. The patients' heads were very much troubled with vermin. They were very much neglected in this way.

2256. *Mr. McGowen.*] Do you know that in the evidence you are now giving you are on your oath? Yes, I do; and I know I am speaking the truth.

2257. Do you say that the patients, in your opinion, were treated properly? It may have been the kind of treatment suitable for the insane, but I should not like to be subjected to it, nor to see any of my friends treated in the same way.

2258. Did you ever make any complaints to anyone about the treatment of these patients? Yes.

2259. Did you ever complain to Dr. Vause about it? No; but I complained to the matron several times.

2260. Did you complain about the food supplied to the patients? Yes.

2261. And about the clothes? Yes.

2262. About the bedding? Yes; I complained that the bed-clothes were not sufficient for winter climate, and they were of a very poor quality.

2263. Did you ever complain to the Rev. Father O'Callaghan by letter? I simply commented on his letter which had appeared in one of the newspapers.

2264. After you left the institution did Father O'Callaghan write a letter to one of the newspapers? Yes.

2265. Did you write to him subsequent to that? Yes.

2266. What did you say in your letter? Just a few words, telling Father O'Callaghan that he had little or no experience of the management of the place. I told him he only came there to celebrate the rites of the church, and that he had little opportunity of seeing anything of the institution and its working.

2267. Did you say in your letter that things were altogether different while he was at the institution on his religious duties to what they were on ordinary occasions? I said something to that effect, but I cannot recollect the exact words I used.

2268. Did you ever write to Mr. Nugent Robertson, one of the official visitors, on the same subject? Yes.

2269. Complaining about the treatment of the patients? Yes.

2270. Did you ever complain to Dr. Manning? No.

2271. Do you say that the women were put in these cells naked? Yes; and with very little covering in the winter time; all they had for covering was a kind of an old rug. The mattresses and rugs put into these rooms in the day-time were taken out at night. Dr. Vause did not know of this at all.

2272. At what time were these patients put in the rooms at night? At about half-past 5, and never later than 6 o'clock.

2273. Did each of these rooms contain a window in the wall facing the door? There was a kind of a shutter.

2274. Did you put the patients in that room? No.

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2275. Did you see other nurses do so? Yes.
2276. Did they pull this shutter down when they did that? Yes; to stifle the noise. There was also a little observation hole in the door.
2277. Were these patients put in between the hours of 5 and 7 at night, and did all the nurses go to bed at 10? Yes.
2278. As far as you know, were nurses in the habit of looking through these observation holes unless the patients made a noise? No; they only looked through if there was an unusual noise, and patients were heard knocking themselves about.
2279. How many of these single rooms are there? Six or seven, I think, with a bath-room at the end.
2280. Were patients put in each of these rooms every night? Yes.
2281. Was there a mattress in all of these rooms? There were bags of straw. The mattresses put in in the day-time were taken out in the evening. Some of the patients would not sleep on a mattress. One, Case No. 15, would not sleep in a bed.
2282. Do you say that the mattresses were put in the rooms in the day-time and taken out at night? Yes.
2283. Is it not at night-time that the patients would want to use these mattresses? Yes.
2284. Did the nurse have instructions to take these mattresses away? I do not know. She may have had instructions from the matron.
2285. Did you ever take them out? No; I had nothing to do with them.
2286. Did you ever see any rooms containing nothing but loose straw—no mattress at all? Yes; Case No. 15 would not sleep on a mattress.
2287. Have you been in these rooms in the morning immediately after the patients have come out? Yes.
2288. Did you ever see any utensil in that room at these times? Yes; I saw an indiarubber one in the room of Case No. 24.
2289. Did you see one in any other room? No; not in the rooms occupied by Government patients.
2290. Did Case No. 17, whom you spoke about a minute ago, die at the institution? Yes.
2291. Did you hear that she had her thigh broken? No; but when she was dead I know that her stomach was very much inflamed and discoloured.
2292. Was Case No. 17 very ill before her death? Yes.
2293. For how long? She was ailing for some time. She had a total loss of appetite for from seven to ten days before her death.
2294. Did you give her any medicine? No; I know she had no food during the time I mention. We used to try to force her to eat, but she would not take food.
2295. Did you complain to the matron about this? Yes; the matron knew of it.
2296. Did you give the patient any medicine from Dr. Vause? No; I was not in charge of the woman, except that I was with her three days before she died.
2297. Did you give her any medicine during those three days? No; I was not entitled to give her any.
2298. Did you see anyone else give her medicine? No; I heard she got no medicine.
2299. Do you know a woman named Case No. 23? No.
2300. Did you ever see any nurse in the institution behave cruelly to a patient? I saw Nellie M'Bride hit a patient on the back with a boot.
2301. Did you ever hear or see a scrubbing-brush used on a patient? No; I think I heard something about one patient scrubbing another.
2302. When the visiting doctors come to the institution, do you get any intimation of their arrival? Oh, yes; we always know when they have arrived.
2303. How do you know? We hear from the nurse who admitted them, or from the matron. We then prepare the patients. We undress them, then dress them again in more suitable clothes.
2304. Is it the custom to make the patient ready on these occasions? Yes.
2305. To change their clothes and generally make the appearance of the institution different? Yes.
2306. Was it customary at all times that you should know of the arrival of the visiting doctors at Dr. Vause's residence? Yes.
2307. Did you ever tell the other nurses of their arrival? Yes; sometimes I did.
2308. Did you ever let them know when Dr. Cox came, or did you ever go with Dr. Cox when he came? I saw him there several times.
2309. Did you ever get a piece of paper passed on to you saying that the doctors had arrived, and to make haste and get the patients ready? I do not remember. I think it must have been Jessie Fuller who received this piece of paper.
2310. Did you know Case No. 12? Yes.
2311. Was she ever in the single cells at night? Yes.
2312. Did any of her friends ever come to see her? Yes; her father.
2313. Was he ever shown the room in which his daughter slept? He was not shown the cell.
2314. Was he shown a different bedroom altogether? Yes, by Mrs. Gilchrist, who on that occasion asked me which was the best bedroom, and I told her the one near the door.
2315. Did she show Mr. \* \* \* this bedroom? Yes; I suppose so. I was not in the room at the time.
2316. Did you take Mrs. Gilchrist to account for showing the father this room as if it were his daughter's bedroom? Yes.
2317. While, as a matter of fact, the daughter was sleeping in one of the single cells at the time? Yes.
2318. Did you ever know Case No. 12 to sleep in that room which was shown to her father? No. She was so noisy at night that she was put in one of the single cells as a refractory patient.
2319. Did you ever see any sleeping draughts given at night to noisy patients? Yes; we used to give them bromide of potassium.
2320. Did Case No. 12 get any draughts at all? Yes; she got several.
2321. On one occasion while you were there did Dr. Manning express a wish to see the dinner that was given to the patients? Yes; somebody complained about the food, and Dr. Manning, when on one of his official visits, remained to dinner.
2322. Was there any difference between that dinner and the dinner usually served to the patients? Yes; it was a better dinner on that day.
2323. Much better? Oh, yes.

2324. When the friends of patients came to see them were the patients prepared for the visit by having different clothes put on them? The patients were always made tidy and presentable on these occasions, because they very often disarrange their clothes and became in a state unfit to see anyone sometimes.

2325. *President.*] Did you ever see the clothing taken from one patient and put on another patient to make her presentable when her friends came to see her? I saw this done once but I really forget the name of the patient.

2326. Do you say that you have seen it done? I saw one nurse use the clothes of another patient once.

2327. Did you ever hear any orders given to the effect that no one should see patients until they had been made ready for the interview? Yes, I have heard it. Patients' friends might come at an inconvenient time.

2328. How long after the visiting doctors arrived would it be before you could get the patients ready? I should think about 10 minutes or a quarter of an hour. The visiting doctors generally remain in the office a little while. In the meantime we get the patients ready, and then the doctors would come through the wards and inspect.

2329. Do you say you do not remember any accident occurring to a patient;—do you know Case No. 25? Yes.

2330. Did she get her head cut? Not that I know of. There was a patient, Case No. 15, who had a boil or some eruption on her head, and there was another patient, Case No. 26, who fell while in a fit and cut her head.

2331. In your experience did any patient have her head cut owing to the cruelty of any attendant? I do not know.

2332. Is what you say that the patients should have food and better clothing, that they are not properly clothed, and that they should have sufficient bedding? Yes, the food is better in the private part of the institution, but, speaking generally in regard to the food, I think the cooking is a lot responsible.

2333. Are you sure that you complained to Mr. Nugent Robertson? Yes, and what I said was true.

2334. How did you complain to him—personally? No; I wrote him a letter.

2335. Did you also write a letter to the Rev. Father O'Callaghan? Yes.

2336. What did you say in that letter? I said in effect, that Father O'Callaghan did not know how the institution was managed—that when he came on visits everything was prepared. All he did was to celebrate the rites of the church, and speak a few words to the patients.

2337. Did Father O'Callaghan make any special visits? Yes, and visited patients who were sick and dying. I went for him on one special visit to see Case No. 17; she was just dead when we arrived.

2338. Was she dead when Father O'Callaghan saw her? Yes, she was dead when he came; when we saw that she was about to die I went for him, and when I came back with the priest the patient was dead.

2339. *Dr. Garran.*] When you went to Bayview House had you had any previous experience in asylum work? No.

2340. Were you quite unacquainted with the way insane patients are managed? Yes.

2341. Whatever you had to do in the nature of duties, had you to be taught how to do it by the other attendants or by the matron? Yes, I had to be told; but I had very little to learn.

2342. Had you been a nurse previous to your engagement at Bayview House? No; I had been accustomed to domestic duties.

2343. Did you, as an attendant, have to sleep with the patients in one of the large dormitories? Yes, latterly, but not at first.

2344. Were they quiet patients? I slept in the refractory ward, and the patients there at times were very troublesome.

2345. After you had gained some experience with these women did you think it would have been safe to allow the women who were put in the single rooms to have remained in the large dormitory? Not always, for there were times when the patients were better away from all others.

2346. Do you think it was necessary to put a patient in each of the ten or eleven single rooms every night, or could some of those patients have slept with safety in the large dormitory? Not at all.

2347. What harm would they have done? I dare say, some of them, like Case No. 23, for instance, might not have done any harm.

2348. Would most of them have done harm in the large dormitory? Case No. 15 would have, for she had to wear mits in the day-time.

2349. After you had gained some experience, and had seen what was necessary to be done—supposing you had been in sole charge, would you have felt it necessary to put these women in separate cells at night? Yes.

2350. Do you think, then, that putting them in these single rooms is really necessary? Yes, in some cases.

2351. Do you think women are put in those cells unnecessarily during your time? Some are dirty patients, and are better put in cells by themselves, and some are much more mischievous than others, and would tear up bedding and their clothes.

2352. Did the patients ever tear up the sheets or blankets in the ward? No; I did not see that they did.

2353. What bedclothes did the patients have in your ward? In the summer-time they had a straw mattress—I used to call it a bag made of canvas filled with straw—a pair of sheets, a kind of under blanket, a pair of other blankets, and a counterpane.

2354. Do you say that they had a pair of sheets? Yes.

2355. We have been told by another witness that it was the custom to fold up the sheets about 4 o'clock every afternoon and put them away;—was that the practice in your ward? It was not the practice; but there were a few dirty patients, and their sheets were folded up and put away, but it was not the general custom to remove the sheets from the beds.

2356. Were women of cleanly habits allowed to have sheets at night? Yes, and in the winter-time there were extra blankets. There were twelve extra blankets given out at the Government end. The matron ordered me to take these off the beds in the day-time, to fold them up, but to put them on again at night-time.

2357. Did the patients have the benefit of these extra blankets at night-time? Yes.

2358. Were there any sheets or blankets put upon the beds in the day-time merely for show purposes and taken away at night? I do not think so; but still there were some patients whose sheets were removed because of their dirty habits.

2359.

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2359. Do you think that in the winter-time the patients were warm enough during the night? No, not all of them, for some patients would have more clothing than others. Those patients able to complain would get more clothing. There were some so insane as not to know the difference between warmth and cold.
2360. So then the patients who were well enough to know the difference got more bed clothing, and would those not well enough to know have to go short? Yes. I saw them very often cold. I had a double blanket myself, and was warm enough with that supply, but I should have been cold if I had only had a single blanket.
2361. Did the patients seem to be cold in the morning? Yes, some of them were very cold.
2362. Did they complain? Yes, and we could see they were cold.
2363. Do you think they were cold because they had not sufficient clothing at night? Yes, they were shivering.
2364. Are you sure about the patients being allowed to sleep in the sheets at night? Yes, excepting the two or three patients who were dirty.
2365. Did any of the other nurses talk to you about the deficiency in clothing? Yes; Jessie Fuller was always speaking about it.
2366. In the winter-time were the patients allowed to wear warm flannel petticoats? Yes, some of them—those who had them or could get them.
2367. Was there any difference in the clothing then? Yes, in this way: some were well enough to know they were not sufficiently clothed, they would become noisy and get additional clothing, while those who were not well enough to look after their own interests were put upon.
2368. You were speaking about the food—do you think that the fault of the food was in the cooking? Yes, very often; but beyond that there was not sufficient of vegetable diet.
2369. Did you notice while you were there that patients fell away in condition? Very often they fell away, but that may have been due to their complaint.
2370. Regarding these women who were put in the single cells, do you think if the nurses had put on them night-dresses that they would have been torn? Case No. 15 would have torn her night-dress; but I do not think Case No. 23 would have done so.
2371. So far as you observed were any women put into these cells without night-dresses who would have been quiet in their night-dresses? I really forget the patients.
2372. Supposing you had charge of these women and you found that they tore their clothing during the night-time, would you put on fresh clothes? Yes; I certainly should renew the clothing.
2373. If they tore their clothing every night would you renew it? Yes, if necessary; the patient must be clad.
2374. In your sleeping-room was it usual for the patients to throw off the clothing during the night? Some of them would; one patient, Case No. 27, would never get into bed. She had a delusion that the devil was in her bed. She would sit on the floor and take her clothes off—and I have very often lifted her into bed after she had taken her clothes off.
2375. Was it a common thing for patients in your room to take their clothes off? No; nobody would become quite nude.
2376. Was it usual for patients in your ward to tear their clothes? Sometimes they would shred them.
2377. Who was the matron in your time? Bridget Morrissey and Miss Fuller.
2378. In that paper which you signed and read over so carefully at the time of your engagement, does not the first rule say that you personally must complain to the Medical Superintendent of the Institution if anything improper is done in your presence or to your knowledge? Yes, I suppose so.
2379. Did you ever complain personally to Dr. Vause? No.
2380. Notwithstanding the obligations you incurred when you signed that paper? No, I did not.
2381. *President.*] Did you write two letters making complaints? Yes; one to Mr. Nugent Robertson and one to Father O'Callaghan.
2382. Had you an opportunity of speaking to the official visitors? Yes; but the official visitors never gave us any encouragement to speak.
2383. What do you mean by encouragement—did they not speak about the patients? No.
2384. Did they never ask whether the patients were noisy or whether they were improving in health? Never to me.
2385. Were you not in charge, and did you not accompany official visitors on their rounds of inspection? Yes; but I never opened my lips to the official visitors. I thought their visit was only a matter of form, if I may be allowed to express an opinion.
2386. Was it not the common practice for the official visitors to ask the nurses questions about the patients? No; I never heard them.
2387. When friends came to visit patients did it ever fall to your duty to take these patients to their friends? Yes; several times.
2388. Were you present during the interview between the patients and their friends? Yes.
2389. Had you an opportunity then of speaking of the patients to their friends? I never spoke.
2390. Was anyone else present at these interviews? Not very often.
2391. Did you ever make any complaints to the friends of the patients concerning the matters you have referred to to-day while you were in the institution? No; I remained neutral in the matter.
2392. Did you ever report any of these irregularities to Dr. Vause personally? No.
2393. Did you sign any book when leaving? No.
2394. Did you sign the book of obligations, general rules, and instructions? Yes.
2395. Did you read over, or were those obligations ever read over to you? No; I regarded it just as a matter of form.
2396. When you went to the institution did you not read over the rules? At first, when the rules were given to me, I did, and I endeavoured to carry them out to the best of my ability.
2397. Were you ever on night-duty with sick patients? Yes.
2398. How often? Only a few times with Case No. 18, who died there.
2399. On these occasions was provision made for you to obtain during the night the necessary comforts for the sick patient, such as hot coffee, tea or cocoa, or warm milk or water? No.
2400. Was there any gas-stove or fire by which you could warm these things? No. There was no gas in the establishment, except a heater for making water warm in the bath-room.

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2401. Could you get into the kitchen? No; it was locked.
2402. If you could not get these necessary comforts if they were wanted, what was the use of sitting up with a sick patient? We sat up in case she died in the night.
2403. Had you any provision made for her comfort? No; there was nothing given to me.
2404. Were there any stimulants in case they were wanted? No; I am quite sure there were none.
2405. Any hot cocoa, coffee, or milk? No.
2406. Was there any stove of any kind for making hot water? No.
2407. Did you ever hear of any other nurse having been on night duty? Yes; Jessie Fuller.
2408. What was the reason of that duty? A patient was sick, and somebody was required to sit up with her in case she died. Dr. Sinclair remarked that it would be advisable to stay up with the patient.
2409. Was Dr. Sinclair in attendance at Bayview House then? Yes.
2410. Did he prescribe any medicine for patients? Yes. Ever since the accident to Case No. 26 the matron always administered medicines; the nurses were not allowed to do so.
2411. What was the nature of that accident? The patient got an overdose of bromide of potassium, and was poisoned.
2412. After this accident, was more care taken in the administering of medicine? Yes; medicine was administered by the matron, and in her absence by the sub-matron. I have received medicine from the matron and administered it according to directions.
2413. Do you know if the patients objected to or preferred sleeping in these single rooms? It was no use objecting; they had to go, like or dislike.
2414. Was it a regulation of the institution that these patients should sleep in a single room? Yes; and very often they were not fit to sleep in a room with other patients.
2415. Did they in the day-time ever say they did not like to go into these rooms, or did they appear to go in willingly and quietly? Oh, no, nothing of the kind; but they had to go in.
2416. Do you know a Mr. Henry Gearey? Yes; I have seen him once; he called on me. He found out my address. He wrote to me, and I called on him by appointment afterwards.
2417. Did you make to him any report about the state of things in the institution? Yes.
2418. While you were a servant at the institution? No; but about a month ago, and I have not seen him since until about half an hour ago.
2419. Have you made any report to any other person except the two letters you wrote while you were in the institution? I spoke to her husband about Case No. 24, saying that I thought it advisable to take her home.
2420. Did you complain to any other person whilst you were in the employment of the institution other than making the complaints you mention? No. I have been often asked questions about the place, but I have said nothing one way or the other.
2421. Did you say anything to anybody about witnesses being paid so much per day for giving evidence in this inquiry? No.
2422. Did you mention to anybody the amount that would be paid to witnesses for giving evidence? No; but I always understood that if a witness were called to give evidence he or she would be paid according to the salary being received in ordinary employment, together with the expenses for the day.
2423. *Dr. Manning.*] What gave you the idea of speaking to Mr. \* \* \* about his wife? I did not have any particular idea; I was not asked to speak.
2424. Had you any idea of taking charge of the woman if she were released from the asylum? No.
2425. *Dr. Vause.*] Did you suggest that she should be removed? Yes.
2426. Did you sign the usual form of obligation. [*Book produced with signature attached*]? Yes; that is my signature.
2427. Did you not by signing that promise as a condition of employment that you would report to the Superintendent anything improper which came under your notice? Yes, and I kept that promise to the best of my ability.
2428. Did you not promise to tell the Medical Superintendent of anything improper that came within your presence or knowledge? Yes.
2429. If you made such a promise, and say that irregularities took place, why didn't you report to me? Because I was repulsed. I reported to the matron instead, thinking that was the proper course. When I went there first I often felt inclined to speak, and should have spoken if I had not known that it was considered my duty to mention these matters to the matron.
2430. Who was the matron at this time? Bridget Morrissey.
2431. If you saw anything wrong taking place, and you did not report it to the Medical Superintendent, would you blame the Superintendent for this occurrence? Certainly not.
2432. Did not a lady patient escape from the institution three days before you left? Yes.
2433. Was she in possession of a pass-key that had previously belonged to you? Yes, it belonged to me.
2434. Did you not have to leave the institution because of this matter? Yes.
2435. Did you not leave the door of the dormitory unlocked on several occasions? No, not that I know of.
2436. Is it not a fact that in consequence of leaving that door unlocked that the patient escaped? I do not know. The patient says so. I did not leave the door of the dormitory unlocked, and my pass-key was gone several months before the patient escaped.
2437. Was there not a padlock on the side of the door for additional security? There may have been, but I never had any instructions to lock that door or use that lock.
2438. When did you first make Gearey's acquaintance? About five weeks ago. He called on me and I visited him by appointment. I understood from him that I could be compelled by Government to give evidence, and that I had better tell him all I knew about this matter.
2439. Before this inquiry began did you learn from any source the rate of payment of witnesses? No.
2440. Did you ever mention to any of your friends or to any person that witnesses would be paid at the rate of 6s. per day and all expenses? No; I did not know the inquiry was going on until I received a summons to give evidence before it. I had no communication with anyone, except Mr. Gearey, up to that time. I have not had any intercourse with anybody since then.
2441. Before this inquiry was instituted, was your intended evidence and that of other witnesses printed or typewritten? I have not seen it printed or typewritten. It could not have been. I only called on Gearey once, and then had about an hour's conversation with him.

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2442. Did you give the names and addresses of any persons or person prepared to give evidence adverse to Bayview House and its management? I gave the name and address of Rachel Kelly, a former attendant at the asylum, whose opinion about its management is the same as my own. I have not met her since Case No. 1 became prominent, nor have I heard from her.
2443. Did you visit Mr. Gearey's residence before this inquiry began? Yes; once.
2444. On what date? About two or three weeks ago.
2445. Did you visit Mr. Gearey at his house? Yes; he called on me, gave me his card, and told me to call on him, which I did. His address then was No. 9, Brisbane-street, Surry Hills.
2446. Did you visit Mr. Gearey on the afternoon of Monday, the 29th of October, or thereabouts? I do not think it was on a Monday. I only visited him once, two or three weeks ago.
2447. Did you then see the intended evidence in print or typewritten? No; I have seen Dr. Vause's report, but no evidence of any other kind.
2448. Did you ever urge anyone to go to Gearey who would give evidence against the management of Bayview House? I was under the impression that Gearey was one of the Commissioners to be appointed to investigate these matters. He did not tell me that, but I had an idea he was one of those making an inquiry, or else he was a detective or something of that sort.
2449. Were you informed before this inquiry began that efforts were being made to prevent Dr. Manning from sitting on this Commission? Yes; I was.
2450. Who informed you of this circumstance? Margaret Macleod.
2451. Did you expect a billet or any other reward as a result of your giving evidence before this inquiry? No.
2452. *President.*] Has anyone spoken to you about any position likely to be given you after this inquiry? Yes; Margaret Macleod.
2453. What did she do or say? She said something about the influence of gentlemen engaged on this Commission being sufficient to get me some situation of importance. This was said in the course of conversation.
2454. Did Margaret Macleod say this much to you? Yes; she said there was a possibility of that kind, not so much for me, but for herself.
2455. Did Gearey ever say anything to the effect that, by giving evidence, there was some possibility of your getting a situation? No.
2456. Was it then only loose talk between yourself and Miss Macleod? Yes.
2457. *Dr. Vause.*] Did you ever hold out to anyone a prospect of a billet on account of giving evidence before this Commission? No.
2458. Did you mention such a thing to a person named Rachel Kelley? Yes; I may have said something to her.
2459. Was she formerly an employee at Bayview House? Yes.
2460. Is she now employed by somebody residing at Gladsville? I do not know. She was at Hunter's Hill when I got her address.
2461. Did you ever urge Rachel Kelley to give to Mr. Gearey any information against the institution? She is of the same opinion as myself. I did not give any information because I did not think of that.
2462. Did you ever tell her it would be greatly to her advantage to do so? I believe I did; not so much to give information against the institution, but I said if she would come and give evidence as a witness it might be to her advantage.
2463. Did you ever take her to Gearey with this purpose in view? Yes.
2464. Did you tell her that all her expenses would be paid and that she would be able to secure one of the best billets afterwards? Yes.
2465. Is this your handwriting? Yes. [*Letter handed in as follows*]:--
- My dear Rae, Paddington, 2 Zulu Terrace, Thorne-street.
- I would have written long ago but I lost your address. There is a Royal Committee formed to inquire into the Bayview House, composed of the most influential men in Sydney, and we are all giving information against it. I hope you are still in sympathy with the patients, if so it will be greatly to your advantage, but you must be quick, as the inquiry commences on Saturday or Monday. You will meet us all again, Jessie Fuller, Margaret M'Leod, Bridget, Rose, Alice, and Lizzie Verity. The only friends that Dr. has is Kitty and Nelly. Go at once and see Mr. Gearey, the clerk, or if you come out to me I will take you; do not delay, I am going to-night and our evidence is printed in type. If you come out to me take the tram to Waverley right to the terminus, cross through the Council Chambers gate just at the terminus, and anyone will show the house right opposite the Council Chambers--a little cottage. All our expenses will be well paid, and we will be able to secure the best billets afterwards through the interests of the Committee. They are knocking Dr. Manning off the list; they think he is in favour of Bayview.
- Ever your loving friend,  
JOSEPHINE.
- Wire when you come out. If you do not come they can compel you; there is no court-house business; just appear in the Town Hall before the Committee privately; 6s. a day expenses paid. Call at Gearey's at once.--JOSEY.
2466. How long after writing that letter did you see Gearey? To the best of my knowledge, three or four days.
2467. Did he tell you that he would be able to secure you the best billets? Maggie Macleod told me. When I wrote that letter I was encouraged by what I heard from Maggie Macleod.
2468. Did you enclose in your letter Mr. Gearey's card? Yes.
2469. Is this the card [*produced*]: "Henry Geary, at the side of Mark Foy's, 1 door, 9 Brisbane-street, Surry Hills"? Yes; that is the card.
2470. Did you read the letter Gearey wrote? No.
2471. Did he read the letter you sent to Rachel Kelley? I don't know.
2472. *President.*] When you wrote this letter did you submit it to Gearey? No; as far as I know he never saw it, and knows nothing about it.
2473. With regard to the mattresses taken out of the single rooms, do you know how many mattresses were in each room? There were two in each room every day, but one was taken out at night and one was left in.
2474. *Dr. Vause.*] Were there not two special horsehair mattresses made for quiet patients? Yes.
2475. Did every other patient have an ordinary straw mattress in her room? Yes.
2476. Were these two horsehair mattresses regarded as special mattresses? Yes.
2477. What did you do during the ten months you were there in the way of preparing patients when official visitors or their friends visited the institution? I helped to change the dresses. Sometimes we did not take off the old clothes, but slipped other dresses over the old ones.
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2478. Did you have a double supply of clothing for that? Some things were quite new, and we put them over the old.
2479. Was not case No. 12 of an excitable disposition? Yes.
2480. Did she have as many as three straw mattresses in her room? I think she had as many as four to the best of my belief. I know the floor was covered with mattresses to prevent her knocking herself about.
2481. Did not this patient occupy the hospital when she was quiet, and was she not removed on account of her excitement? I do not know.
2482. Did not she return to the hospital after she became quieter in her conduct? No, not in my time.
2483. Did you ever write Mr. Nugent Robertson an anonymous letter? [No answer.]
2484. Was it an anonymous letter that you wrote to Father O'Callaghan? No.
2485. Did you write any other anonymous letters? No.
2486. Was your letter to the husband of Case No. 24 an anonymous letter? No, I do not think it was.
2487. Did you sign your name to it? I do not know; I forget.
2488. *President.*] Did you sign your name, or some *nom de plume*? I cannot recollect. I cannot say whether I signed my name or no.
2489. *Dr. Vause.*] Have you written any anonymous letters to me? No.
2490. Is Case 23 a particularly dirty patient? Yes.
- [Witness withdrew.]

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Rachel Kelly sworn and examined:—

2491. *President.*] Where are you employed at present? With Miss Betts at Gladesville.
2492. How long had you been there? I was with her about five weeks, and then I went to Mrs. Makinson, and I am now back with Miss Betts.
2493. Were you ever employed at Bayview House Asylum? Yes; I left there on the 28th of January last.
2494. How long had you been there? Eleven months. I went there on the 28th of February in 1893.
2495. Did you make your original engagement at Bayview House with Dr. Vause? Yes.
2496. Did you sign the usual obligation? Yes.
2497. Did you see a printed paper containing the rules and regulations and instructions to attendants? Yes.
2498. Why did you leave the institution—did you leave of your own accord? Yes.
2499. Did you get a certificate of character from Dr. Vause when you left? Mrs. Gilchrist gave me one for Dr. Vause.
2500. What were your duties while you were at the asylum? I was in charge of the Government patients while I was there.
2501. What is your impression as to the nature of the food and clothing supplied to the Government patients—was it sound and of good quality? Yes.
2502. Was the food well cooked? Yes.
2503. Was the clothing always sufficient? Yes.
2504. Was it always clean? Yes.
2505. Was it ever in a ragged condition? No; the clothing was never ragged, unless it was torn by destructive patients.
2506. Do you know whether the friends of patients came to see them? Yes.
2507. Was any special provision made in regard to patients on these occasions? No, only to make them tidy.
2508. Were any clean dresses put upon the patients? Yes.
2509. Was the clothing taken off some patients and put on other patients about to be visited by their friends? No.
2510. During all the time you were there were you an attendant upon Government patients? Yes.
2511. Have you seen the official visitors come to inspect these patients? Yes.
2512. Did you ever speak to them? No.
2513. Did they ever ask you any questions in reference to the patients, as to how they were cared for and so on? No.
2514. When official visitors came to the institution, were you notified of their presence by Dr. Vause? No. Dr. Vause usually came round with them. The matron used to say generally when visitors had come. She would send word so that we could get the patients together, as sometimes they were scattered about.
2515. Remember now you are on your oath, and we want to know what time elapsed between the matron letting you know the official visitors had arrived and the time they came through the ward? I can hardly tell. Sometimes it was longer than other times.
2516. Speaking generally, what do you think was the length of the interval? I should say about a quarter of an hour or 20 minutes.
2517. Could you get the patients tidied and ready and all together in that time? Yes.
2518. Do you remember the cells in which the patients were put at night? Yes.
2519. Had you anything to do with putting the patients in them? No; I never put them in unless I had instructions.
2520. Was it part of your ordinary duty to put the female patients in those cells at night? No.
2521. Did you have any opportunity of observing the condition of the patients put to sleep in those single rooms? Yes.
2522. Were they as a rule dirty, troublesome, and destructive? Yes.
2523. Were the majority of them of this description? Yes.
2524. Were there any clean and quiet patients at all put in these rooms? Yes, one or two.
2525. What articles of bedding were placed in these rooms with the patients? A straw mattress and canvas rugs lined with blanket.
2526. Were these articles always given to them? Yes, in the main.

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2527. Were any patients ever put in the room naked? Yes, I think one or two were.
2528. But as a rule these rugs were given to them to keep them warm and comfortable while they were in the cell? Yes.
2529. On the whole, were you satisfied with the arrangements of the institution? Yes.
2530. Have you any complaint to make about any irregularity while you were there? No.
2531. Did any accidents occur to any of the patients during your time at the institution? Yes; there was the one poisoning case, but I do not remember any other accident.
2532. Were the Government patients, as a rule, quiet patients? Yes. At times some of them might be a little excited. I never found any trouble in managing them.
2533. Do you say that Dr. Vause visited his patients regularly? Yes; daily.
2534. Did you ever send for him hurriedly on account of sickness? No.
2535. When the clergymen came to the institution did they always come at stated times? Yes.
2536. Was everything prepared for their visits—such, for instance, as making the patients clean and tidy? Yes; they were got ready to go to church.
2537. Was there always an adequate supply of clothing for this purpose? Yes; I always got sufficient clothes for them.
2538. With regard to night work;—what time did you go to bed? About 10 o'clock as a rule.
2539. Were you ever on sick duty? Yes; there was a sick patient in the ward I was sleeping in, and I used to get up in the night to give her a drink.
2540. A drink of water? Yes.
2541. Not a drink of tea, coffee, cocoa, or milk? No; not on the Government side.
2542. Was there any provision made for supplying a warm drink at night if it were wanted? No; there was a fire, or the means of making a fire, in the dining-room, but you would have to light it.
2543. Then there was no actual provision for anything of this kind? No.
2544. *Mr. McGowan.*] Do you say that there was a fire laid in the dining-room? Yes.
2545. Could you get a cup of cocoa or coffee if you wanted it? The materials were kept in a cupboard in the dining-room.
2546. Had you a key of that cupboard or the dining-room? No; the girl in charge of the dining-room had that.
2547. Would you have to knock that girl up to get the key, supposing you wanted to get a cup of cocoa or tea? Yes.
2548. Did you ever do that—that is, knock the girl up for this purpose? No; I never had any occasion.
2549. How many Government patients were in your ward? Fifty-two.
2550. Had you any private patients there? No; the private patients were in another part of the building.
2551. Had you any previous experience in lunacy work before you went to Bayview House? No.
2552. Are there not eleven of these single cells used by female patients? Yes.
2553. Was a patient put in each of these rooms every night? Not always. Sometimes a patient would be better, and able to sleep in the large ward. When this was so she was put in there for a change. That might happen occasionally.
2554. Generally speaking, however, were these cells occupied at night? Yes.
2555. Was there much light in these cells? No, not a great deal.
2556. Was the room very dark when the door was shut? Yes.
2557. Would you consider it a dark room in the daytime when the door was shut? Yes; it was dark when the door was closed.
2558. How many windows were in these rooms? One in each, high in the wall opposite the door.
2559. Generally speaking, was there a patient in each of these cells every night, and in nearly all the cases were the clothes taken away? Yes.
2560. Did you ever see any utensils in these rooms? Yes; there were two made of india-rubber.
2561. Were there not more than two? No.
2562. At what time were the patients put into these rooms? Usually a little before 7 o'clock at night.
2563. What time were they taken out in the morning? Between 6 and 7 o'clock.
2564. Did the rooms occupied by dirty patients smell strong in the morning when the patients were taken out? Yes; some of them.
2565. Did you make it a practice to look through the observation holes in the doors of these room before you went to bed at night? No; that was not part of my duty.
2566. Do you know if anybody else did? I think the matron did.
2567. Did you ever see her do it? No.
2568. Do you know any night attendant whose duty it was to go round and see these patients? No.
2569. Were you at Bayview House while Case No. 17 was a patient? Yes; she was a private patient there.
2570. Was she ever an inmate of your ward? No.
2571. Was she ever put in the single cells? I believe she was put in for one night.
2572. When was that? I cannot exactly remember. She may have been put in oftener. I was called on one occasion to assist to put her in.
2573. Were these cells kept for the use of Government patients? It was Government patients who used them as a rule.
2574. Were you at Bayview House when Case No. 17 died? Yes.
2575. Have you any knowledge of the time she died? I cannot say exactly; it was sometime in the evening.
2576. Were you in the room when she died? Not exactly.
2577. Did they send for a clergyman when she was getting near the point of death? Yes.
2578. Was she dead before the clergyman came? I cannot tell you, but the matron said she breathed after the clergyman came. I was not in the room at the time.
2579. Was she very sick before she died? Yes; she seemed to be ailing for a long time.
2580. Would she take her food? I have seen her refuse to take her food.
2581. Do you know whether she got any medicine while she was sick? No.
2582. Do you know a patient named Case No. 12? No, sir.

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2583. Did you ever put her in a single cell? No, I do not remember.
2584. Do you say that Dr. Vause passed through the institution on a tour of inspection every day? Yes.
2585. At what time? About dinner-time.
2586. Did you ever hear any complaints made to Dr. Vause about patients being treated cruelly? No.
2587. Did you ever hear any complaint in regard to their general treatment? No.
2588. Do you know if any of the patients were treated cruelly? No.
2589. Have you heard any talk amongst the attendants to the effect that case No. 23 had been cruelly treated? No.
2590. Do you consider that placing these patients in these single cells—dark cells according to your own statement—and leaving them there without anyone seeing them for nine or ten hours, is fit and proper treatment? I cannot say.
2591. Did you sign a paper when you left Bayview House affirming that everything was carried on properly at the institution? Yes; and so it was as far as I know.
1592. Do you think it was proper treatment to leave patients in these dark cells all night without anyone seeing them? I cannot say. I do not know why they were not seen. Seeing them was not part of my duty.
2593. As a rule, did all the attendants go to bed about 10 o'clock at night? Yes.
2594. Do you know if there was any night attendant? No.
2595. Had you any idea that anyone went to see these patients in the single cells after 10 o'clock at night? I do not know of anyone having done so.
2596. Do you think that the institution was managed fairly well? Yes.
2597. Was everything satisfactory? Yes.
2598. *Dr. Garrison.*] How many patients were in the dormitory where you slept? I think there were thirteen.
2599. As a rule, were they quiet in behaviour? Yes.
2600. If a patient became particularly noisy or destructive, what did you do with her? When a patient became very bad we would put them in a single room. I never had any occasion to put one of mine there; I generally managed them by speaking to them.
2601. So far as you are concerned, during the time you were there did you have to send a patient from the dormitory to a private cell? No; never.
2602. Had you every opportunity of judging, and do you know, that patients put in single cells were really too noisy or destructive to remain in the general dormitory? Yes.
2603. Were any patients kept in those rooms without there being necessity for such treatment? No.
2604. Do you think there was reasonable cause for them to be put in? Yes.
2605. Do you think there was any cruelty in putting the patients there? No.
2606. Were there any sheets on the beds at night in the dormitories? Yes.
2607. Were you ever instructed to fold up these sheets and put them away so that they could not be used at night? I had nothing to do with the sheets whatever.
2608. Do you know if it was the custom to take the sheets off the beds about 4 o'clock every afternoon, to fold them up and put them away? No. I think there might have been two exceptions where this was done. That was on account of the patients being destructive and dirty.
2609. Were the sheets taken away for that reason only? Yes.
2610. As far as you know, did all the other patients use the sheets at night? Always, in my experience.
2611. While you were at the institution do you know if good mattresses and bed-clothing were displayed merely for show purposes in the day-time and not used at night? No.
2612. So, then, if visitors were to go to the institution in the middle of the day, would they see precisely the same things as were used at night? Yes.
2613. Are you quite sure that the articles visible in the day-time are used at night? Yes.
2614. Did Dr. Vause ever drop upon you unexpectedly—I mean irrespective of his usual daily rounds of the institution? Yes.
2615. Were you never sure that he would not come through the institution at any moment? No; he would turn up at any time.
2616. Would you be sure for three or four hours together that Dr. Vause would not unexpectedly drop upon you? No, sir.
2617. Did any of the nurses, when talking with you, ever say that the women patients were badly treated? No.
2618. Did a nurse named Josephine Mackey ever say to you that the women on the Government side were treated scandalously? No.
2619. Did she ever speak to you about the treatment of the patients? No.
2620. Did she ever say a word to you on this subject? No.
2621. Did she ever complain that the clothing was insufficient in quantity? No.
2622. Or that they had no bed-clothes at night? No.
2623. Or that the food was insufficient or of bad quality? No, she did not make any complaint to me on these matters.
2624. Did she complain about anything else? Several times she remarked that she was dissatisfied with the place.
2625. Do you think that it was merely that she did not like the place? Yes.
2626. Have you ever seen a nurse or nurses cruelly treat the patients? No, sir.
2627. Has anyone spoken to you about the management of the asylum since you left the employment of Dr. Vause, and asked you to give evidence at this inquiry? No, sir.
2628. Have you ever seen a man named Henry Gearey? No, sir.
2629. During the whole of the time you were at the asylum did you see anything sufficiently wrong or mismanaged to justify you in making a complaint to Dr. Vause? No.
2630. As far as you had any opportunity of noticing the matron's conduct was she kind to the patients? Yes.
2631. Was she attentive to their wants? Yes.
2632. *President.*] Do you remember receiving a letter from Miss Mackay? I do.
2633. Did it strike you as being a peculiar letter or peculiar conduct on her part? Yes; it surprised me when I saw it.

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2634. I suppose it was because of many of the remarks made therein being altogether the reverse to what you now say in evidence? Yes.
2635. I suppose you were quite astonished at the statements made? Yes.
2636. Was your experience at the institution quite the reverse? Yes.
2637. Have you received any letter from Henry Gearey? Yes; I received one the day before I received the one from Josephine Mackay, and I was quite surprised to get it.
2638. What did Mr. Gearey ask in his letter? He told me he would be glad if I would call on him in reference to Bayview Asylum. I think he told me that there was to be an enquiry, and it might be to my advantage to call on him.
2639. What did you say in regard to that letter? I did not reply to it.
2640. Have you ever seen Gearey? No.
2641. Do you know him? No.
2642. *Dr. Vause.*] Had you charge of the Government patients on the verandah? Yes.
2643. Would it be your duty to make any changes in the condition of the patients when the official visitors came if any change had to be made? Yes.
2644. Did you ever put a clean dress on a patient over a dirty one? No.
2645. Did you ever do more than arrange the patients together so that they might be easily seen by the visitors, and while doing this straighten their hoods and put their clothes in general good order? Yes; we always put the bonnets straight and make them as presentable as we could. There would not be any dirty patients, for as soon as a patient was found in a dirty condition she was at once changed.
2646. When the patients were not destructive in their habits, were they not provided with night shirts and chemises? Yes, they always had night clothing left on them if they were not destructive.
2647. Do you know if Case No. 14 was a private patient? I believe the matron told me she was.
2648. Do you think that the patients who had no night utensils would have destroyed them if they had been put in the room? They might have, and they certainly would not have used them.
2649. Was not Case No. 17 very excited when she was placed in the single room? Yes.
2650. Would it have been dangerous not to have put her there? Yes.
2651. Was Case No. 23 a very dirty patient? Yes. She was a helpless patient and exceedingly dirty.
2652. Were there nurses sleeping at both ends of the single rooms, near enough to hear any disturbance that might occur during the night? Yes.
2653. If a patient was sick was she provided with a night nurse? Yes.
2654. *President.*] Some of the evidence you are giving is very different from that which we have heard from other persons—do you mean to say whenever a patient was sick a night nurse was provided? Yes; but there was not a night nurse usually on duty while I was there, except a patient was ill.
2655. Where was the clothing kept? In cupboards in the dining room.
2656. Was it in charge of the matron? The matron had charge of the clothing there, and I had charge of other clothing in the laundry.
2657. Was there any difficulty in getting extra clothes when they were wanted? No. If I could not get the clothing I required from the cupboard I would be able to obtain it from the laundry.
2658. Was there always an ample stock of clothing? I always had sufficient, and the patients were well clothed.
2659. *Mr. McGowan.*] Did you leave the institution on the 29th of January? Yes.
2660. Do you still say there was plenty of clothes there? Yes.
2661. Do you think there would have been any necessity to purchase a large quantity of new clothing in May or June, several months after you left? I cannot say, but I think not; but at the same time I had no idea of what clothing remained in the store.
2662. Can you say whether there would be any necessity to purchase a large supply of clothing three months after you left? I cannot say.
2663. Do you think the patients may have been very destructive with the clothing? Yes; some of them were very destructive at times.
2664. Do you say they always had night clothes on? Yes, except those who would destroy them, and in cases of that kind they were taken off.
2665. How many patients out of the eleven occupants of those eleven rooms would have underclothing on? Four would be the most to have underclothing on.
2666. Would the others be naked? It is so long since, I really cannot tell.
2667. Do you not say that the whole of these rooms were nearly always full;—there are eleven of these rooms, and do you not say that only four of the occupants had underclothing? Yes; four, as near as I can remember.
2668. Did you ever see any indiarubber utensils in these rooms? Yes.
2669. How many? I think about four or five—two in two of the rooms.
2670. Do you also state that you received a letter from Gearey? Yes.
2671. Have you got that letter now? No; I showed it to Mr. Makinson, my employer, and he told me after I had received my subpoena that I must attend and give evidence. He gave Gearey's letter to Dr. Manning. That was the letter Gearey wrote to me, and the one I received from Miss Mackay.
2672. *Dr Vause.*] Would not the ordinary requirements of Bayview House necessitate the frequent purchase of stocks of drapery and dress material? Yes.

[Witness withdrew.]

WEDNESDAY, 21 NOVEMBER, 1894.

[The Commission met in the Board Room, Chief Secretary's Office, at 11 a.m.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
Esq., M.D., INSPECTOR-GENERAL OF THE  
INSANE.ANDREW GARRAN, Esq., LL.D.  
JAMES SINCLAIR TAYLOR MCGOWEN,  
Esq., M.L.A.

Dr. Vause was in attendance to hear evidence and examine witnesses in his own behalf.

John Doherty sworn and examined:—

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2673. *President.*] Are you at present employed at Bayview House? Yes.
2674. In what capacity? As an attendant.
2675. How long have you been there? Since the 30th June, 1893.
2676. Are you senior attendant? Yes.
2677. Have you had every opportunity of seeing the nature of the management of the institution, and are you in a position to say whether the patients in your experience have been well or badly treated? Yes.
2678. How were you originally engaged? By Dr. Vause.
2679. Did you, at the time of your engagement, sign the usual agreement in a book stating that you would report all particulars coming under your observation to the Medical Superintendent? Yes.
2680. Do you remember Case No. 1? Yes.
2681. Were you one of the attendants who waited on the patient? Yes.
2682. With any other attendant? Yes.
2683. Whom? We generally took him in turns—all the attendants who were there did so.
2684. Was there not a special attendant allotted to him in order that he might be properly looked after? There was always a special attendant with Case No. 1, but not always the same person. I was not always constantly with him, neither was anyone else.
2685. Was there not a regular fixed attendant whose sole duty it was to look after this patient? He constantly had an attendant, but not always the same person.
2686. Do you remember a visit being made on the 20th May last by the Medical Adviser to the Government, Professor Anderson Stuart, Mr. Sager (the Secretary to the Board of Health), and other persons? Yes.
2687. Was this visit made on a Sunday morning? Yes.
2688. Did you see these visitors when they first arrived? I saw them in the yard shortly after their arrival.
2689. Will you state to the Commission the circumstances in connection with their arrival, the conversation that took place, and what happened generally? I remember going out to see what the business of these visitors was, and I think Professor Anderson Stuart said he wanted to see a certain patient. I invited him or them to go from the yard to the office, and I would send for the Medical Superintendent.
2690. Was that what you always did when visitors arrived? Yes. Professor Anderson Stuart and Mr. Sager went round to the office, but there were two other men who stayed behind in the yard. I rang the bell and took the other two round to the office. I saw one of the girls employed at the establishment, and she went to inform the Medical Superintendent of the presence of the visitors.
2691. Did you then go back towards the courtyard? Yes.
2692. What happened then? I went to the other two men and asked them if they wanted to see anybody. I think they made some reply in the affirmative, and I told them that if they wanted to see any patients they must first come round to the office. They, however, would not move from the courtyard.
2693. Did you ask them the reason why they were staying in the yard? I did not exactly ask them that, but one of them said words to the effect that he knew his duty.
2694. What did you do next? I left them.
2695. Did you shortly afterwards come back for the purpose of moving Case No. 1 from the room in which he had slept? Yes.
2696. Who was with you when you returned? Another attendant named O'Brien.
2697. When you came back to the courtyard with the second attendant did you find the two men standing there still? Yes; they were still waiting.
2698. Was the object of your return to remove case No. 1 for his bath in the usual course? Yes.
2699. Did you do so under any special instructions, or did you do it as a mere matter of routine? Just as a mere matter of routine.
2700. Did you bring with you the patient's clothes? Yes; we brought with us a suit of clothes.
2701. Can you tell us how long he had worn that suit of clothes you took with you that morning? He had not worn it for long. It was a new suit or nearly new—perhaps he had it a week or two, but certainly not a month.
2702. Was the suit soiled—dirty and disreputable looking? No; it was a clean suit.
2703. Do you know who brought that suit to the institution for this patient? I am not sure, but I think his wife brought it herself.
2704. Was it a bad looking suit of clothes? No; it was a good suit.
2705. Did you put the patient into that room on the previous evening? No; I saw him immediately after he was put in though.
2706. But did you put him in yourself? No; and I was not present when he was put in.
2707. Who was present? I do not remember now.
2708. Have you been present and put him in that room under similar circumstances? Yes.
2709. What was the process you generally went through on these occasions? We would take him to the room, take off his clothes, and put on his pyjamas and a singlet, and make his bed comfortably.
2710. What sort of bed did he use? He had a straw mattress, the covering of which was of strong canvas, because the ordinary bedding was of no use to him.
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2711. Why was that? At the time he was very destructive; he was in the habit of tearing everything up.
2712. When you put him in the cell in this way, did you supply him with blankets? There were strong rugs used, lined with blanket, and he also had a mattress, pillows, and an india-rubber utensil.
2713. Are you sure he was supplied with the utensil? Yes.
2714. Now, remember you are on your oath, and are you perfectly certain that a utensil was supplied? Yes; he always had that.
2715. When you took him out on the occasion of the visit of Professor Anderson Stuart and others, was he supplied with the same clothing as you describe now? The rugs may have been without a blanket lining because I think he stripped the blanket off during the previous night.
2716. Do you think he did that in the night-time? Yes; it must have been done the night before.
2717. Do you think the same practice might have been followed at any previous time? Yes.
2718. Was there any blanket left on the rugs on the morning of that visit? No; not on that morning.
2719. Were these rugs large enough to cover a man? I think they were. They were rugs large enough to cover any man.
2720. What size were these rugs? The rugs were about 6 feet in length by 4 feet 6 inches in width.
2721. Were all the rugs about that size—that is, the three of them? Yes; each rug was large enough to cover an ordinary man.
2722. Did you notice when you took him out on the morning of the 20th of May whether he had on his pyjamas? Yes; they were on him on that morning.
2723. Was the singlet on him too? Yes.
2724. Are you quite certain about that? Yes.
2725. Referring to the suit of clothes you took into the room that morning, did you put a pair of trousers over the pyjamas before you took him to his bath? Yes.
2726. Are you quite satisfied upon that point? Yes; I am quite certain.
2727. Did you detect any great smell about the room from which you took the patient? Yes; there was some smell.
2728. Was there any unusual smell, such as a stale urinous smell? There was nothing beyond the ordinary smell. The room always smells stale in the morning. It was, as soon as the patient left it, scrubbed out every morning, and no smell remained after that.
2729. Whose duty was it to scrub out that room? Some one of the attendants.
2730. Was it always scrubbed out after it had been used by the patient? Yes.
2731. Did you ever notice that the floor of this particular room took a long time to dry after it had been scrubbed? No; it would be dry by between 10 and 11 o'clock in the morning.
2732. Would it always be dry by that time? Yes.
2733. Was there a window in the room? Yes.
2734. Was that window high up in the wall opposite the door? Yes.
2735. Was it the usual custom to put down the shutter when you put a patient in that room? It would be according to circumstances. It depended upon the weather; if it was a cold night the shutter would be put down, if it was a warm night the shutter would be left up.
2736. When Case No. 1 was brought out of that room was he shivering much from cold or from any other cause? He was not shivering at all.
2737. Did you not notice that he was shivering on this occasion? No; he was shaky on the warmest day. He was not shivering from cold when he was taken out on this morning.
2738. Did you notice that the smell of the room on that morning was any different from any other morning on which he had been removed? No.
2739. It has been stated that on this particular morning that there was a distinct smell of stale urine—did it strike you as being so? No; but at the same time I must say that this particular smell might be a little stronger as soon as the door was opened. The patient was in a comparatively speaking small room. He did not use a utensil, and therefore the room might have smelled.
2740. Why did you put a utensil in the room if he did not use it? Because it is the custom.
2741. Did the patient ever object to go into that room? No.
2742. Did you ever hear him say that he did not want to go into a stable at night? He might have said that he was sleeping in a stable.
2743. But did he ever object to go into this place? No.
2744. How long, according to your recollection, was Case No. 1 placed in that room—was he ever sleeping in any other part of the building? Yes, he was.
2745. When was he brought over from the dormitory and placed in that separate cell? I am not quite certain of the date.
2746. Do you think it was eight or nine months before the time he was removed? No, not so long as that.
2747. Was it six months before that time? I think it was between six and seven months.
2748. Was Case No. 1 during this time, a dirty, destructive, noisy, and excited patient? Yes.
2749. Did what I have said embrace his general characteristics as a patient? Yes.
2750. Before he arrived at this stage, what room did he occupy? He occupied a room downstairs, opposite the reception room. Following that, he occupied a room upstairs.
2751. Before the patient was removed into the place he called a stable, did you sleep with him? Yes; I slept with him for a time until he became cross at night, very noisy and destructive. He would put his mattress on the floor and would attempt to get the contents of the mattress out, and then we saw that his was a case for solitary confinement.
2752. Did he ever use violence towards you? Yes, he did; he was often violent.
2753. Did you think that when he arrived at this stage he ought to be put under restraint? Yes.
2754. What form of restraint would you use? We never used any form of restraint while he was in that room.
2755. Is there any doubt about that? No.
2756. Under orders of the Medical Superintendent was the patient removed to a separate cell? Yes; that was an order given within my own knowledge.

2757. Did the Medical Superintendent give that order to you? I heard him give the order.
2758. To whom did you hear him give that order? Dr. Vause told me he was going to remove the patient.
2759. Did Dr. Vause give any particular reason for making the change in regard to Case No 1? Yes; he said he considered that he would be better sleeping by himself, as he was at that time in a very noisy, restless, and excitable condition.
2760. Do you remember his having a black eye? Yes.
2761. How was that caused; was it an accident? One of the attendants took him to the water-closet one evening. After he was there, he got up from the seat and attempted to put his hand down into the pan. When the attendant tried to stop him he became restive, and he bumped his head against the edge of the seat.
2762. When the official visitors came to the institution were the patients on the male side taken into a room away from the main body of the building? Yes.
2763. Did you accompany them? Yes.
2764. Always? Yes.
2765. When friends came to see patients, were the patients made clean and tidy before they were taken from the ward? Yes; we used to wash their faces and brush their hair.
2766. Were fresh clothes put on them? No; except when patients were unable to look after themselves. Nothing was done to the ordinary patients.
2767. Not when official visitors came to the institution? No.
2768. Not on occasions when Dr. Manning, Dr. Cox, Mr. Nugent Robertson, and other gentlemen came? No; it was always the same.
2769. When these official visitors arrived at the institution had you any notice of their coming, between the time that they arrived at the office and when they were present in the main building? Yes.
2770. Did you ever get any notice that the visitors were there in the office while you were in the ward? Yes; sometimes. Word would be sent round that the visitors had arrived.
2771. Did you then put the patients in order. No.
2772. Did you not put the patients right? No.
2773. Did you ever have to do anything like that? I am quite certain we never did anything like that.
2774. When the official visitors came round the institution did they ever ask you how the patients were progressing, or did they enter into conversation of that kind? No, not much.
2775. Did they ever do or say anything of that kind at all,—did they ask you any questions about the patients, or go into the matter of routine as to the manner in which the institution was managed;—were the official visitors accompanied on these occasions by Dr. Vause? They were always accompanied by Dr. Vause, and questions were asked of Dr. Vause, and if the doctor could not answer he would refer to me.
2776. What kind of food was supplied to the patients before this investigation took place, and what is the kind of food supplied since;—has it always been satisfactory according to your idea? Yes, it was always very good food.
2777. Was it well cooked? Yes.
2778. Were you always satisfied in this matter yourself? Yes, quite satisfied.
2779. Do you, as an attendant, receive the same food as the patients? Yes, just the same; except that some of the patients might have a little better.
2780. How does that come about? Perhaps some of the patients would have more variety of food than I would get myself. That is what I mean when I say that patients might have better.
2781. What did the patients generally get for breakfast? They would have chops three or four mornings a week, steak, bread and butter, and jam.
2782. Did they get a plentiful supply of eggs? Not very often. Some of the patients would get bacon and eggs on a Sunday morning. We would not, and that is why I say that some of the patients had more variety of food than we did.
2783. What, as a rule, did you have for dinner? Roast mutton, boiled mutton, roast beef, and boiled beef, alternately.
2784. Was the diet changed about from day to day? Yes. We always had two kinds of vegetables besides the change in meat, as well as soup and pudding every day.
2785. What did you have for supper or tea, whichever you may call it? Sometimes cold meat, and sometimes stew.
2786. Did you have meat three times a day? Always, and there was also a supply of bread, butter and jam.
2787. In your experience was the cooking satisfactory? Certainly.
2788. Did you ever get beef-tea at, say, 11 o'clock in the day? There were two or three patients who got it always.
2789. Do you mean that patients who required it got it? Yes.
2790. Was Case No. 1 specially treated in regard to diet? He always got everything he wanted, no matter the hour; he had cocoa, milk, beef-tea, or anything else.
2791. At what time did you go to bed at night? Generally at about 10 o'clock; that is the rule of the institution, except when I am on night-duty.
2792. Have you ever been on night-duty? Yes.
2793. How often? Latterly on every alternate night.
2794. Does that mean always since you were first engaged at Bayview House? No, only since Case No. 1 was removed.
2795. Does that mean that you have been on night-duty after Case No. 1 was removed to that isolated cell—since then have you been on night-duty regularly? Yes.
2796. Were you on night-duty during the period that Case No. 1 was in that cell? Yes.
2797. How often did you visit him? Every two hours.
2798. Did you do so regularly? I had certain instructions to the effect that if I thought he was asleep I was not to disturb him, but on no occasion was I to leave him for a longer period than three hours, whether he was asleep or no.
2799. Did anybody take this duty on alternate nights with you? Yes, an attendant named O'Brien and other attendants.

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2800. Were you provided with medical comforts for this patient, supposing he required them during the night? Yes.
2801. Where did you keep these things? In the cupboard in the dining-room.
2802. What were the means for making a cup of tea, cocoa, coffee, or any other warm drink, if such were required? There were every means to do so at a fire in the kitchen.
2803. Was not the kitchen door locked every night? I never found it locked.
2804. Are you quite sure on this point? I always found it open. I am quite certain about that.
2805. During the whole of your experience do you mean to say the kitchen was never locked at night? No.
2806. Was the dining-room locked at night? No.
2807. Were there cupboards open and available to male attendants? Yes.
2808. Was that fact generally known to the attendants? I think so; at all events they ought to know.
2809. Supposing we have had evidence from other witnesses to the effect that there was no such provision for obtaining these things—what would you say? That these witnesses must have been mistaken.
2810. Do you know, as a matter of fact, that attendants on the male side could obtain these things? Yes. There has been always available a supply of tea, cocoa, sugar, and other things which could be procured during the night.
2811. Was anyone in the dining-room looking after these things in the event of any case of sickness? We could always find them in the cupboard.
2812. Was there always a fire in the dining-room by which an attendant required to sit up all night could remain? Yes; there was always a fire in the winter-time, and whenever one was required.
2813. But in the summer-time was a fire required in the dining-room? No; but there was always a fire if we wanted to prepare tea, or coffee, or a warm drink in the kitchen.
2814. Had you always a store of these things ready? Yes; we could always get anything we wanted like that.
2815. Did you ever hear of any cases of accidents in the institution;—do you know of anything in this direction that happened to a patient named the Case No. 4? Yes; I heard something of that.
2816. Do you remember whether this accident resulted in a small wound in his head? Yes.
2817. Was he a poor miserable old gentleman who was unable to look after himself? Yes. He had to be put to bed at night.
2818. Who was his attendant? I think it was a warder named Mackenzie.
2819. Did Mackenzie ever tell you that the patient's head, or a wound in it, had been eaten by rats during the night? Yes; I think he said that rats had been at it.
2820. Did you ever see the wound in his head? Yes, I saw the wound.
2821. Did you notice any difference between the size of the wound on the night the wound was made and the next morning so that you would be able to say if it was likely that rats would have made that wound larger? As far as I am able to judge I can safely say that I saw nothing in the difference in the size of the wound that might not have occurred through the patient rubbing the dressing off.
2822. What was the size of the wound? I think it was about half-an-inch long.
2823. Latterly, after the man Mackenzie told you about the rats being in the building, was the wound any larger than it was at first, and ragged about the edges? No.
2824. Was it a clean cut? Yes.
2825. Was this fact brought specially under your notice? Yes, it was.
2826. Supposing we have evidence to say that a rat was seen to jump from under his pillow; that blood was seen under the pillow;—could that possibly be true, and you know nothing at all about it, if you had charge of this man? I never heard anything at all about it.
2827. Did you ever hear about a rat eating at this wound? No.
2828. Did you ever hear about rats infesting the bedroom at all? No, except that Mackenzie said that he thought a rat had done it. I saw no grounds for such a belief. I simply thought that Case No. 4 had rubbed the dressing off the wound. The wound was dressed again, and it was all right in a very short time afterwards.
2829. Reverting to these single rooms, were they cleaned every morning? Yes, they were.
2830. After they had been properly cleaned, did they smell at all offensive? No, not after they had been cleaned out.
2831. Did Dr. Vause make a round of the institution regularly? Yes.
2832. At what time of the day did he do so? He came round at dinner-time every day.
2833. Besides coming round every day at dinner-time, did he ever drop into the wards unexpectedly? Yes, he would come in two or three times besides.
2834. On these occasions did he walk through to see the institution and ascertain generally how the patients were getting on? Yes.
2835. Has any change been made or has there been any addition to the single rooms since you joined the establishment? No; the single rooms were always the same. There has been no change at all as far as I can see.
2836. Are the shutters in the single rooms drawn up every day? Always.
2837. Supposing we have it in evidence that a witness saw cobwebs on the joints of the shutter or window, indicating that it could not have been pulled up between the time that must elapse before the cobwebs could be made by spiders, do you think that is true? No; it would not be true.
2838. If it has been stated to us on oath that unbroken cobwebs were seen on that shutter, would that be true? No; it could not be true.
2839. Did you ever see any muffs used on patients? No.
2840. Did you ever see any patient put in a chair and fastened down? Never.
2841. Did you ever see a sheet or strap used for any patient of extraordinary violence, or was there any such rule observed in reference to dirty patients? No; I think not. In fact I am quite certain there was not.
2842. How many attendants are there on the male side of Bayview Asylum? There are five.
2843. How many patients are there on that side? The number varies, it is not the same always. On an average there must be fourteen or fifteen.
2844. Besides these five attendants, are there two additional men in the grounds, who can be called upon for assistance at any time? Yes.
2845. Do you remember Case No. 6? Yes, he is there now.

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2846. Does he receive every necessary attention? Yes.
2847. Is he dirty in his habits? Not so very dirty.
2848. Do you have to take him to the closet regularly, and bring him back, and help him in this way? Yes, he is an invalid. He is taken out of his chair whenever necessary. He is taken to the closet at 10 o'clock in the morning, and 2 in the afternoon, later on in the day, and put on the commode at night. Besides this we have instructions to put on him clean trousers every morning and whenever he wants them; he receives every possible attention.
2849. Have you every opportunity of seeing everything that goes on in the male section of the institution? Yes.
2850. Taking it as a whole, do you know of any reason for raising any objection against the course of treatment adopted generally? No, I have no reason whatever.
2851. *Dr. Garran.* Did you, as an attendant, wait upon Case No. 1 for many months? Yes.
2852. Whilst you were in attendance on that patient did he talk freely to you? Yes, very.
2853. Did you ever hear him describe the room in which he slept as a stable? Yes, he would talk in that manner.
2854. Was he ever put to sleep in what he himself termed the satin-room? Yes, at first he was placed there, but he became so noisy and destructive that he had to be removed.
2855. When he was first removed from what he called the satin-room to the single room did he complain about his removal? I don't know, he may have complained.
2856. Do you distinctly remember whether he complained or whether he did not? I do not remember.
2857. Did you ever hear him say that as long as he was placed in what he called the stable he would tear his clothes? No, I never did, and he was just as bad in tearing his clothes when he was put to bed in what he called the satin-room.
2858. Do you not say that when he slept in the satin-room he was noisy, and that he disturbed the other patients? Yes.
2859. Did he disturb the patients there or only the attendants? He disturbed the other patients.
2860. Was it for the sake of the patients, for his own sake, or for the sake of the attendants, that it became necessary to remove him from the satin-room to the single cell? It was as much for his own sake as anything.
2861. Did he tear his clothes then? Yes.
2862. Did he tear the sheets? Yes.
2863. The blankets? Yes.
2864. The counterpanes? Yes.
2865. Did he pull the mattress to pieces? Yes.
2866. Did he have a hair mattress or a straw mattress? He had a hair mattress and a fibre mattress.
2867. Did you ever sleep in the room with him? Yes.
2868. Was he restless during the night? Yes, very.
2869. Did you have to get up to him often? Yes; he would throw everything about, shout and make a noise, tear up his mattress, and throw the fibre about the room.
2870. Would you on these occasions try to persuade him to lie down again? Yes; and sometimes he would lie down, but not always.
2871. Was it possible for you to get a night's rest while you were with him in that room? No; I did not have much rest on these occasions.
2872. Do you think that being in the room with him was conducive to further excitement and sleeplessness? I think my presence excited him at this time. He could not bear anyone with him at night. In the day-time he did not mind company so much.
2873. Do you feel sure that anyone being in the room with him at night was an irritating influence? Yes, it made him very much worse.
2874. Do you think that it would have been better for him to have been without any attendant? Yes, much better.
2875. Do you remember the occasion on which Professor Anderson Stuart visited the institution? Yes.
2876. Are you absolutely certain that when the door of the room occupied by Case No. 1 was opened on that Sunday morning the patient was wearing his pyjama trousers and a singlet? Yes.
2877. Are you quite certain on that point? Yes.
2878. When he was first put in that single room used he to tear his night-clothes off? Yes; he would throw off everything and refuse to wear anything.
2879. Would he tear his pyjamas to pieces as well? Sometimes he would and sometimes he would not.
2880. During the whole of the time which covered your experience was he supplied with pyjama trousers and a singlet while in the room at night? Yes, as far as I know.
2881. Do you know a man named Mackenzie, who was formerly employed at Bayview House? Yes.
2882. Did Mackenzie put Case No. 1 in that single room at night? Occasionally.
2883. When he put him in did Mackenzie also put a singlet and pyjama trousers on the patient? If he did not he ought to have done so.
2884. Well then, if he did not, did Mackenzie neglect his duty? Yes; it was his duty to leave the patient with sufficient night-clothes.
2885. Did you give him instructions to this effect? I think I did.
2886. Do you ever recollect having given Mackenzie such instructions? It was the custom for Mackenzie to bring the patient his pyjamas.
2887. Do you remember telling him positively to give the patient the pyjamas and singlet? I cannot say positively whether I did so, but it was the rule that the pyjamas and singlet should be supplied.
2888. Do you know whether the patient was left naked in the room at night? I know it was the rule that his pyjamas and singlet should be left there with him whether he wore them or not.
2889. Did the attendant put these articles of clothing on the patient before they left him in that room? They would try to induce him to wear his clothes.
2890. Supposing there was any trouble in putting his clothing on;—would they leave the articles in the room? Yes.
2891. Therefore, would the clothing be there for the use of the patient if he liked to put it on himself? Yes.

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2892. Was he very destructive in his habits? Yes.
2893. So destructive that it became necessary to supply him often with new pyjamas? Yes.
2894. Was he ever left without them, as far as you know? No, he was not.
2895. This is an important point, because of conflicting evidence, and are you certain of the truth of this statement? Yes; as far as I know, Case No. 1 always had night clothing.
2896. That is when he was put in the single room at night? Yes.
2897. Would he, as a rule, have the clothing on in the morning when he was brought out of the room? Yes; I am certain of it.
2898. Were his night clothes soiled in the morning? No.
2899. Was the floor of the room soiled as a rule? Yes.
2900. Well, then, if the floor of the room was soiled, and his pyjamas remained clean, must he not have had his pyjamas off during the night? I cannot say about that, but I don't think they were very much soiled.
2901. Who supplied him with pyjamas? I do not know, but I think it was his wife.
2902. That being so, would there be any economy, as far as Dr. Vause is concerned, in leaving him without clothing at night? There was no necessity whatever, as far as Dr. Vause was concerned.
2903. Did you take Case No. 1 to the bath that morning? Yes.
2904. Did he while on the way to the bath say, "I don't want to go to the bath, I'm cold"? No; if he had said so I should have heard him.
2905. Did the patient take his bath kindly on that morning? Yes.
2906. Was it a cold or warm bath? It was a warm bath.
2907. Did you obtain the hot water for that bath? Yes.
2908. Are you certain upon this point? I am. Case No. 1 never had a cold bath while I was there.
2909. If other people say that the patient was cold when he was walking across the court-yard, and that he said, "I do not want a cold bath," is such a statement true? He never said that.
2910. Are you sure he never said that? Yes, I am.
2911. Was at Mackenzie's duty, when he first arrived at the institution, to clean up the floor of the room in which Case No. 1 slept? Yes.
2912. Did you ever complain that he had not done it thoroughly, and had left a smell in the room? No; I do not recollect that I did.
2913. Was it usual for you to go into the room during the day-time? Yes.
2914. Have you ever noticed in that room a smell of stale urine on the floor? No.
2915. Did you put the patient in the room the night before the Sunday morning on which he was removed—I mean on the occasion of Professor Anderson Stuart's visit? I saw him directly he was put in.
2916. Was there a smell of urine in the room then? No.
2917. Did the smell go off from day to day, and did it only remain offensive early in the morning? There was no smell after the room had been scrubbed.
2918. Do you think any smell arose from the ground immediately beneath the floor? There was no smell.
2919. Does this floor dry better on a warm sunny day than it does on a damp misty day? Yes.
2920. Have you ever seen it damp when the patient was put in? No.
2921. Was it always dry and free from smell when he was put there to sleep? Yes.
2922. On that particular morning—I ask you again to be particular—was there a utensil in that room? There was a utensil in it.
2923. Do you remember noticing it then? Yes, I do.
2924. We have had it in evidence that there was not a utensil there;—therefore I want you to charge your memory, and I ask you again, have you a distinct recollection of seeing one? I say there was one there, and it is of no use saying there was not, because I saw it there.
2925. Was there only one in the two rooms? Yes; there was only an indiarubber utensil in the room occupied by Case No. 1.
2926. Was there a patient in the other room adjoining that of Case No. 1 on that Saturday night? No.
2927. Did you unlock the two doors of these rooms? No.
2928. Did you interfere with the other room at all? Yes, I interfered with it; but I did not unlock the door; I merely pulled the door open and looked in.
2929. If there was no one in that room at night, did you lock the door? No.
2930. Then could there have been a patient in that room? No.
2931. Was there one utensil available for Case No. 1? Yes.
2932. Are you perfectly certain it was put in his room for his use if he liked to use it? Yes.
2933. If the patient on any occasion had said that he did not like the stable, would he have been sufficiently intelligent to know that he had been changed from what he had called the satin-room to what he designated the stable? Yes, I think so.
2934. Did he ever say to you that if you put him back in the old room he would be quiet and cease to tear his clothes? Never.
2935. Did he ever ask to go back to that room? He may have done so.
2936. During his quiet days did you ever try to put him back into the satin-room to see if it would improve his condition? No.
2937. Am I to infer, then, that if once a patient is put into a single room he always has to sleep there? Yes, till he gets better.
2938. To the best of your knowledge, as an attendant, and from the experience you have gained in that capacity, did you think, in this patient's case, that the change from the satin-room to the single room was necessary and advisable? I believe it was; he rested better in the single room.
2939. Do you think he slept better in the single room? Yes, I am sure he did.
2940. Do you think he was any better in the day-time? I think so; but I know that at night he slept better.
2941. Were your orders from the Medical Superintendent to always be kind and considerate to the patients? Yes.
2942. So far as you are concerned, did you always behave as kindly as you could to Case No. 1? Yes, I was as kind as I could be. 2943.

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2943. Was he once or twice extremely violent? Not much.
2944. Did his violence take the form of attacking the attendants? No; he might be a little rough sometimes.
2945. Would you have been afraid to sleep with him in the single room? I would not have cared to have slept with him.
2946. Did you sleep in the satin-room, or the room where there were three beds, one of which was occupied by the patient? Yes; I slept in one of those three beds; but the patient used to sleep in the little room adjoining the larger one containing the three beds.
2947. Did you sleep in the same room in which the patient was? No; there was a window and an opening in the door through which I could look and see him.
2948. Do you say that the rugs found in the single room on the morning of the 20th of May had blanket stitched on the inside? Yes.
2949. Did you ever see Case No. 1 in the act of picking the blanket off the inside? Yes.
2950. Would it be possible for the rugs to lose a good deal of their power to give warmth, owing to this blanket being picked off? Yes; they would lose some of their power.
2951. Do you remember noticing whether such was the case with the canvas rugs seen on this Sunday morning? No; the patient always tore the blanket out; he preferred the canvas rugs without the blanket.
2952. Do you think he knew what he was doing when he was picking off the blanket while he was in this single cell? I cannot say.
2953. Do you think the rugs might have been originally warmer than they were on that Sunday morning? Perhaps so; they were not quite new then, and he might have picked the blanketing off.
2954. When you visited that room in the morning did it smell very close, as if it was badly ventilated? No; it did not.
2955. Did it strike you as feeling very cold on winter mornings? No; I never felt it so after coming out of a warm room.
2956. Was there a shutter in the room? Yes.
2957. When you pulled that shutter up did it let more air into the room? Yes.
2958. Was there any clasp on the window? No; it was open frame work.
2959. Did you put the shutter up and down to regulate the quantity of warmth in the room? Yes.
2960. In other words, you would pull the shutter down to prevent the room becoming too cold, and pull it up when the room became too warm? Yes.
2961. Do you not say that when on night-duty you looked in on the patient every two or three hours? Yes.
2962. In what state did you usually find him when you saw him on these occasions? He was generally restless.
2963. Was he wearing his night-clothes? Yes.
2964. Did you ever see him lying down with the coverlets over him? Yes. Sometimes he would be lying down, and sometimes sitting up. If he was sitting up when I made my call, I would try to make him more comfortable. I would try and induce him to lie down and cover himself with his clothes.
2965. Did he ever complain to you of being cold during the night? Yes.
2966. Did he ever ask you for anything to drink during the night? Yes.
2967. What did you give him to drink? Whatever he preferred or asked for.
2968. What did he generally ask for? Cocoa.
2969. Have you ever given him a cup of cocoa during the night? Yes, repeatedly, and tea, too.
2970. Did you ever have to light the kitchen fire to do so? No; it was always lighted.
2971. Was it your custom to go to the cupboard and get the cocoa required? Yes; we always had a supply of cocoa inside.
2972. We have had it in evidence that the tea, cocoa, and stock of groceries was always exhausted, and that there could not be any of these things obtained from that cupboard at night;—is that so? That is not true. We draw our stores between 8 and 9 o'clock every morning, and those have to last until between 8 and 9 o'clock on the next morning, after breakfast. So that there were bound to be stores left during the night.
2973. But might not these stores have been used up during the day-time and nothing be left for the night? No.
2974. Was it anybody's business to see that a proper supply of stores was kept for night use? No; we were never short, for, as I explained, we always draw enough to last from one breakfast-time to another.
2975. Did it ever happen to you, when you wanted a cup of tea or cocoa, that you were ever unable to obtain the necessary materials? Never.
2976. How often would you make Case No. 1 a cup of hot cocoa during the night-time? I have done so as often as two or three times a night.
2977. Have you done so twenty times altogether? More than that.
2978. Did you prepare it yourself? Yes.
2979. At the fire in the kitchen? Yes.
2980. When you looked in upon the patient every two or three hours, was it your custom to disturb him at all—for instance, did you open the door? I always opened the door if he was awake or restless.
2981. How did you know whether he was awake or not? Sometimes he was noisy, and at other times I would look through the observation hole and it was then easy to tell. If he was quiet I would leave him alone.
2982. If, on the other hand, he was up and walking about, would you open the door and go in? Yes.
2983. Would you carry a lantern on these occasions? Yes, always.
2984. Did the patient ever attempt to burst out when you opened the door? No, never.
2985. When taking him out in the morning, did it often rain—I mean, did you take him through the rain when crossing to his bath? No; he was never taken out in the rain.
2986. How did you keep him out of the rain while crossing the yard to his bath, supposing it was a wet morning? If it was raining incessantly we would not take him out; he was kept under cover. If the rain was slight he would not get wet in crossing from the single room to the bath-room.

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2987. Was it a regular practice for the patient to make a mess in his room, or did he do it occasionally? He certainly was not a clean patient.
2988. Did you ever find the room clean in the morning when you removed him? Sometimes he would not make a mess.
2989. Do you say that he was taken to the closet three times in the day-time? Yes.
2990. Successfully? Yes.
2991. Did he very often wet the floor of his room, and did you find fæces about? Yes.
2992. Did the patient tear his clothes in the day-time? Yes; very much.
2993. Was it his custom to fiddle about his trousers, and especially the front buttons? Yes.
2994. If a lady came to see him would it be necessary in common decency to change these trousers? Certainly. She never came into the institution to see him. When she arrived at the institution his trousers were changed, and he was taken to her in the sitting-room.
2995. Has it ever been your duty to change his trousers before taking him into the sitting-room? I do not think so.
2996. We have been told that the garments had to be changed because he would be in a dirty suit. We are told that the patient was made presentable, and that he was put into better clothes before he saw his visitors;—is that so? No; I never changed him specially to see his wife.
2997. Did he go straight in to see her wearing the clothes he wore whilst walking about the place? Yes; except that we might put a collar on him, or something like that.
2998. But did you not change his trousers, waistcoat, and coat? No.
2999. Would you take him in in the suit of clothes he had on while in the grounds? Yes; I am quite certain about that.
3000. *Dr. Manning.*] Do you remember my visiting the institution a day or two after Case No. 1 was removed? Yes.
3001. Was I shown the room where he had slept? Yes.
3002. Did I see in that room several rugs? Yes.
3003. Were they the same rugs the patient had in that room during the night before he was removed? Some of them were.
3004. How many were there? There were three.
3005. Was not I told that they were the identical rugs used by the patient on that night? I do not know.
3006. Do you know how many of the three were there? Two of the three were there.
3007. Who dressed the wound on the head of case No. 4? Dr. Vause did so.
3008. Did he do so when the wound was first caused? Yes; I went specially for him and he came at once and dressed it.
3009. Who dressed the wound after some irritation had set in, caused by rats or something else? I did, and I got dressing from Dr. Vause.
3010. Did Dr. Vause see the wound again? Yes.
3011. How often did he see it? Every day.
3012. Did you tell Dr. Vause, at the time of the rumour, to the effect that the wound had been enlarged by rats? Yes.
3013. At that particular time? Yes; I think that I told him Mackenzie had said the wound had been made bigger by rats.
3014. Where did you usually sit when you were up on night-duty? In the patients' day-room.
3015. In the winter-time did you have a fire there? Yes.
3016. Did you ever do any cooking at that fire? We have cooked there.
3017. Have you not said, in the course of your evidence, that Dr. Vause came round at dinner-time, every day unfailingly? Yes.
3018. Does he come round earlier in the day than that? Yes. His regular daily round is made at dinner-time, but he might come in at 7 in the morning and sometimes he would drop in about 7 in the evening.
3019. At what time does Dr. Vause make his evening visit? He does not make any special evening visit, still he is liable to come it at any moment, and more than that he will always come when sent for.
3020. Were you employed at Cook's River on any previous occasion? Yes.
3021. This then is not your first engagement at Bayview House? No.
3022. How long were you there the first time? For two years and nine months.
3023. How long ago is that? I left in March, 1888.
3024. When you came back the second time for employment, was Case No. 1 a patient before your arrival? Yes.
3025. That being so, did you see him in the earlier stages of his case? No.
3026. How long had he been there when you came back? I cannot say.
3027. Were both of these single rooms, one of which was occupied by Case No. 1, ever occupied together? Yes.
3028. How often did this occur? Not often, but still Case No. 5 occupied one on one occasion.
3029. How long did he occupy one of those rooms? I cannot say.
3030. Did he occupy it for two or three days at a time, and then be removed to one of the other rooms? Yes.
3031. What was the longest time, as far you know, that Case No. 5 occupied one of those rooms? I cannot say the exact length of time, but I think the longest time he was in it was after he attempted to attack Dr. Vause with a knife. He was then removed because the other patients objected to sleep in the same room with him.
3032. Was he there for several weeks? Yes; he remained in the single room until he was removed from the institution.
3033. We have heard something about carpets being taken up and fresh carpets being laid down when official visitors have come to the institution;—is that so? I know nothing at all about that. I have never seen carpets put down or taken up when official visitors have come. There has never been anything done in regard to carpets beyond what is done every morning.
3034. *President.*] Has not your experience always been on the male side of the institution, and amongst private patients? Yes.

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3035. Have you ever heard from the female attendants that changes were made in the bedding and in the arrangement of the dormitories when the official visitors came? No; I never heard any such report.
3036. *Mr. McGowen.*] Had you any previous experience in lunatic asylum work before you went to Bayview House? What is that to do with this enquiry?
3037. *President (addressing witness).*] It is your duty at this inquiry to answer questions put to you by any member of the Commission, therefore you must answer the question asked by Mr. McGowen; that question is: "Had you any previous asylum work before you went to Dr. Vause?" Yes.
3038. *Mr. McGowen.*] Where did you gain your previous experience? In New South Wales.
3039. At what institution? Gladesville. I worked for Dr. Vause first, and then went on to Gladesville.
3040. Why did you leave Gladesville? Because I believe the chief attendant had a "down" on me.
3041. Were you dismissed from Gladesville? Certainly. When he said he had a "down" on me and would make it hot for me I left.
3042. As a matter of fact, were you dismissed, and what is the reason assigned for your dismissal? I cannot say.
3043. How long is it since you were dismissed? It must have been in 1888 or 1889.
3044. Were you not informed at the time of your dismissal why you were dismissed? No.
3045. Did you get any reference when you left Gladesville? [*No answer.*]
3046. Who was the Medical Superintendent when you were dismissed? Dr. Sinclair.
3047. Did he give you any reason why you were dismissed, or do you think it was because the head attendant had some personal spite against you? I might surmise that.
3048. Did you ever try to find out why you were dismissed? No.
3049. Were you ever in the police force here or anywhere else? Yes.
3050. Were you dismissed from that? No.
3051. Were you dismissed as a warder from some gaol? No.
3052. Did you not say in the course of your evidence in chief than Case No. 1 was kept in that single cell for six or seven months, and that previous to that he had slept in another room? Yes.
3053. When sleeping in the other room was it the patient's custom to tear his pyjamas and singlets? Occasionally.
3054. If he tore his night-clothes early in the night would you put fresh clothes on him, or did you ever know him to tear two separate pyjamas in one night? I cannot say that I have; he might and he might not.
3055. Did you ever know him to do it? I cannot say he did.
3056. Was it the invariable custom that if the patient did tear his suit you would put a fresh one on him? Yes; we tried to make him as comfortable as we possibly could.
3057. Supposing we have it in evidence that, shortly after he was taken away from Bayview, he would frequently tear two suits or night-shirts in one night, do you still say you never saw him do so while at Bayview? He might be worse after he left Bayview House.
3058. Did you ever see him tear his clothes the second time in one night? No.
3059. How many suits did he tear during your experience of him at Bayview House while he occupied the single room? I cannot say.
3060. Do you think he tore during those six or seven months half a dozen suits of pyjamas? Yes, he did.
3061. More than that? Yes.
3062. How many more? I don't know how many he tore.
3063. Do you think it was as many as a dozen suits? Yes, it might be.
3064. Do you think he tore more than a dozen suits? I don't know how many he tore.
3065. Was it Mrs. \*\*\*'s place to get fresh pyjamas in the event of Case No. 1 tearing up his supply? Yes.
3066. Do you say that on the morning of the 20th of May when you and O'Brien moved the patient from the single cell he had on his pyjamas and singlet? Yes.
3067. Are you positive on that point? Yes.
3068. Did the singlet come high up the neck or chest? It would not come up very far.
3069. But any distance up the neck? No: it would not come up very high.
3070. When you took the clothing into the patient did you put his trousers and coat over his pyjamas and singlet? Yes.
3071. Supposing we have had it in evidence from other witnesses that they could see no singlet, that his neck and chest were bare, when you and O'Brien were bringing him out of the cell:—is that correct? No. Nobody could see his chest or neck; they were covered up. He had something round his neck.
3072. What did he have round his neck? A necktie.
3073. Was it an ordinary necktie or a handkerchief? It was an ordinary necktie. Besides he had on a woollen shirt also, so that his chest could not be exposed.
3074. Are you also firm in your opinion that there was an indiarubber utensil in that room? Yes.
3075. Was it left in the room when you and two attendants took the patient out? Yes.
3076. Was it still in the room when Dr. Vause, Professor Anderson Stuart, and others went into the room? Yes.
3077. Are you positive it was not taken out of that room? Yes.
3078. Do you say that alternately you and O'Brien were on night-duty watching Case No. 1 in his room, while he was in his cell? Yes.
3079. Did you do so for the six or seven months prior to his being removed from Bayview House? Yes.
3080. Was it your custom, when on duty, to get up at half-past 5 in the morning and work till 10 o'clock at night? Yes.
3081. When you were on night-duty did you work the whole of the next day? No.
3082. When would you go on duty? We need not go on at all, if we didn't like. We would be about the place. We were always there if we were wanted.
3083. After you had been up, say, for every second night on this night duty, would it be your custom to have a sleep the next day? No.
3084. Not after having been on night duty every second night? No.
3085. Who was on duty the night previous to Case No. 1 being taken away? I was.

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3086. How often did you look in on the Case No. 1 through the night of the 19th May? About every two or three hours.
3087. Was this custom only followed as far as that patient was concerned, or was it followed with every other patient placed in these secluded cells? It was followed whenever a patient was sleeping in a single room.
3088. Do you mean to say, that if a patient was put into a single room, someone was always on night-duty and saw this patient or patients, as the case might be, every two or three hours? Yes.
3089. Are you positive about that? Yes.
3090. Could you get cocoa or a warm drink for this patient if it were necessary? Yes.
3091. Was there a fire in the kitchen where you could make it, and was that fire kept alight all night through? Yes.
3092. Both summer and winter? Yes; when there was any occasion for it. In fact there was always a fire in the kitchen summer and winter all night long.
3093. Is there any book kept at the asylum in which an entry is made showing the date on which Case No. 1 was first put into that room? Not that I am aware of.
3094. Did you and Farquharson examine any book to see when the patient was put there? No.
3095. Have you had any talk with Farquharson about the evidence he gave before this inquiry? No; I have had no talk at all.
3096. Did you ever mention it? No.
3097. Have you had any talk with Peet, the painter, on this subject? No.
3098. If you and Peet agree exactly to the month the Case No. 1 was put into that room, and Farquharson gives different evidence as to the time, has he made a mistake? I do not know; I have had no talk with either.
3099. Have you had any talk with Dr. Vause in regard to the evidence you are giving here to-day? No.
3100. Not at all? None.
3101. Did Dr. Vause tell you anything about evidence that had been given here? No.
3102. Are you sure upon that point? I am.
3103. In answer to Dr. Manning have you not said that a day or two after the 20th of May Dr. Manning was shown the rugs which covered Case No. 1 on the night of the 19th of May? Yes.
3104. Do you not say that two out of the three were used on that night? Yes.
3105. Are you positive on that score? Yes.
3106. If it has been sworn that there were no rugs in the cell on the morning of the 20th but only pieces of canvas would that be incorrect? Yes.
3107. What do you take to be the difference between a rug and a piece of canvas? There are specially strong rugs made for destructive patients. They are made with canvas and lined with blanket.
3108. Does that make it a rug, or if it was without blanket would it be a piece of canvas pure and simple? Yes.
3109. Are you sure that there was blanketing fastened to these pieces of canvas? Yes; and Case No. 1 has always been in the habit of having such.
3110. Why did you tell those two men to go away from that room on the morning of the 20th of May? It is the usual thing when a stranger comes about the place for him to go direct to the office, and I thought they should go to the office instead of remaining in the yard.
3111. Did you not say to them roughly you didn't want loiterers there? No; I never said that.
3112. Did you not put your hand on the men's shoulders and tell them to go away? No, I did not.
3113. Did you not do that, knowing who they were, after ascertaining the names of Professor Anderson Stuart and Mr. Sager? I did not know any one of them.
3114. Did you not take Professor Anderson Stuart and Mr. Sager round to the office? Yes, I took them round.
3115. Did you not then come back to the courtyard and order these other two men away, telling them they were trespassers? I volunteered to take them round to the office.
3116. Was it not because you wished to take the patient out of the room that you tried to get them away? No.
3117. Do you think that Dr. Manning, the Inspector-General of the Insane, knew that Case No. 1 was put into this room by himself at night? I do not know.
3118. Do you think the visiting doctors knew of it? I do not know.
3119. Do you think the patient's family knew of it? I do not know.
3120. Did you ever go with the patient when he was visited by his wife or members of family? Yes.
3121. Did you take him into a nice room in the house? We used to take him into the reception room.
3122. Did you endeavour to make the family think he slept in a room where there was a bed, counterpane, sheets, and blankets? During the time the patient occupied the room upstairs I saw his son seeing him in that room, but after he was removed downstairs I don't think the visitors were taken to the room in which he slept. His visitors saw him in the reception-room where all the patients were taken.
3123. Did you ever hear the patient say to his friends, "I don't sleep in this room, I sleep in the stable"? He never said that to his friends.
3124. Do you think his friends knew he slept in this isolated room? I do not know.
3125. *Dr. Manning.*] How long were you at Gladesville? About four or five months.
3126. *Dr. Vause.*] When friends were visiting patients, did you frequently leave them alone together and sit outside the room, so that there should be every opportunity of friends and patients speaking in private? Yes; that is the rule.
3127. If you did sit in the room during the interview, would it be at Mrs. \* \* \*'s request? Yes.
3128. On account of the patient's tendency to expose himself? Yes.
3129. Have not the official visitors gone round the institution without being accompanied by the Medical Superintendent? Yes; I have seen them go.
3130. Has Dr. Manning ever gone round without me? Yes.

[Witness withdrew.]

Mr. James O'Brien sworn and examined :—

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3131. *President.*] Are you at present an attendant engaged at Bayview House? Yes.
3132. How long have you been there? About eighteen months.
3133. Was your engagement there your first experience in lunacy work? Yes.
3134. How were you engaged? By Dr. Vause, at the institution.
3135. Did you sign the ordinary book containing your obligations, duties, regulations, and so on? Yes.
3136. Are you still an attendant at Bayview House? Yes.
3137. Are your duties those of an ordinary attendant? Yes.
3138. Do you remember Case No. 1? Yes.
3139. Was he latterly placed in one of the two rooms detached from the main building? Yes.
3140. How long did he remain in that room? About six months, I think.
3141. Do you remember him sleeping in what he used to call the "satin room"? Yes.
3142. Did you ever take care of him then? Not at night. I used to look after him in the daytime mainly.
3143. After the patient had been removed from the satin room to the cell, did you often put him in at night and take him out in the morning? I took that duty in turn with other attendants—Doherty, Mackenzie, and Copley.
3144. When you placed him in that cell at night did he object to go? Sometimes he might object and at other times he would ask to be put in.
3145. When he objected to go to that room, what reason did he urge? He gave no reason.
3146. Was he an excitable sort of patient? Yes.
3147. Was he ever unmanageable? Yes.
3148. Was he sometimes violent? Yes.
3149. Did you ever see him in a violent fit? Yes.
3150. Did he ever try to knock you down? Yes, often.
3151. What was the process you followed when putting him in the single room;—did you take his day clothes off and put his pyjamas and night clothes on? Yes, always.
3152. Did you make a bed for him? Yes.
3153. What sort of a bed? It would be a sort of canvas ticking filled with straw.
3154. What kind of covering did he get for his bed? Canvas sheets lined with blanket.
3155. Do you usually call these rugs? Yes.
3156. Did you always supply him with pyjamas? Yes.
3157. And a singlet too? Yes; but sometimes we had to leave him without a singlet, because he would not wear it.
3158. Was he ever put into that room naked? No, never; not all the time I have been there.
3159. Was there a utensil in his room? Yes.
3160. Always? Yes.
3161. What sort of a utensil was it? An indiarubber one.
3162. Was the room adjoining the one occupied by this patient ever occupied by some other patient? Yes.
3163. Did he have a utensil too? No.
3164. How did you manage, then, with one utensil between two rooms? The other was a clean patient, and we used to give him a commode.
3165. Did Case No. 1 destroy his pyjamas? Yes.
3166. Did you give him fresh ones after he had torn others to pieces? Yes.
3167. At what time, as a rule, do you go to bed? At the usual hour, 10 o'clock.
3168. Did you ever have to go on night-duty on alternate nights for the purpose of watching Case No. 1? Yes.
3169. Did you take it in turns with Doherty? Yes.
3170. Did you ever go into the patient's room after 10 o'clock at night.
3171. Did you do so for the purpose of supplying him with required refreshment, such as anything to eat or drink? Yes.
3172. Did you ever give him warm milk or hot cocoa? Yes.
3173. Did you ever have to cook the cocoa? Yes.
3174. Where did you cook it? At the kitchen fire.
3175. Was there always a fire there? Yes, every night.
3176. Was there any place in the dining-room where you kept stores? Yes; we used to keep milk, bread, cocoa, and so on, in the cupboard in the dining-room.
3177. We have been told in evidence that this cupboard was always locked up;—is that true or not? It is perfectly untrue.
3178. Could people on the female side get the same materials if they tried to? I believe they had a supply of their own.
3179. Did you ever know any female nurse come over to the male side to get supplies of cocoa, milk, and so on, from the place where you kept your provisions? I think I have seen them come, but very seldom.
3180. Were provisions available if wanted? Yes, certainly.
3181. When it was your duty to watch Case No. 1 during the night how often did you see him? Every two hours.
3182. Regularly? Yes, if he was not sleeping.
3183. If he were sleeping did you disturb him? No.
3184. At night-time when you put the patient in that room did you always pull down the shutter in the in the wall opposite the door? That depended upon the state of the weather; I would pull it down on a cold night and pull it up if the weather was warm.
3185. Do you know if the patient shivered much when cold? I do not think so; he was always very shaky on the warmest day.
3186. Did you have to clean out the room after it had been used by him? Yes.
3187. Usually, did the floor take long to dry? As a rule, about two or three hours.
3188. Was the room always sweet when you put the patient in it at night? Yes; I am perfectly sure about that.

- Mr.  
J. O'Brien.  
21 Nov., 1894.
3189. Under whose order was he put in that room? That of the medical superintendent.  
3190. Did you hear the medical superintendent give that order? No.  
3191. Have you any knowledge as to how he was put into that room? No; I saw him put there on the first occasion.  
3192. Have you ever heard either any of the patients or the attendants say it was a great shame that Case No. 1 was placed in a room of that kind? No; I never heard that.  
3193. Have you heard any grumbling at all? No.  
3194. On the morning Professor Anderson Stuart and Mr. Sager went out to the patient, and when you took him out of the room, was he wearing his pyjamas, and did you put his ordinary clothes over his pyjamas and singlet? Yes.  
3195. Are you certain about that? Yes.  
3196. Did you put his ordinary day clothes over the others before you took him to his bath? Yes.  
3197. Was he in a very dirty condition then? No; he was not so dirty that morning.  
3198. How about the smell of the room;—was not that bad? Not so very, for it was not as dirty as usual. I think he had some dirt on his head.  
3199. What were the clothes you took across to the room? A dark tweed suit.  
3200. How long had he been wearing these clothes? A month or two, I think.  
3201. Did Mrs. \* \* \* buy them for him? I cannot say.  
3202. Had he been using this suit until it had become dirty? I do not think so. He had three or four suits to wear.  
3203. Do you know a former attendant named Mackenzie? Yes.  
3204. Do you remember Case No. 4 at Bayview House? Yes.  
3205. Do you remember that he met with an accident, by which his head was cut? Yes.  
3206. Did the attendant, Mackenzie, ever tell you anything of a curious nature concerning this wound? No.  
3207. Did he ever say anything about rats having attacked it? No, sir.  
3208. Was anything said about rats being in the beds? No.  
3209. Did he ever say anything at all to you about rats? Yes; he said there were a few rats in the old building.  
3210. Did you see his head three or four days after he met with the accident? Yes.  
3211. In what condition was the wound? It had been dressed with lint, and he tore the dressing off, it was then dressed again.  
3212. Did you ever hear that rats had gnawed the wound? No; I never heard that mentioned.  
3213. Do you mean to say that you have never heard such a rumour before I put to you this present question? No, sir.  
3214. How often does Dr. Vause see his patients? I have seen him go through the institution as many as three or four times a day; but his regular time is about noon.  
3215. Does he always appear to take a kindly interest in all of them? Yes.  
3216. Have you always been employed in the private part of the institution? Yes.  
3217. Have you ever seen the beds altered on the occasion of the arrival of the official visitors at the institution? No.  
3218. Have you ever seen the patients better dressed on such occasion? No; there was never anything done to them, except to make them clean.  
3219. Did you ever go with the patients when they were taken to see their visiting friends? Yes.  
3220. Did you sit beside them during the interview? Yes.  
3221. Did you ever hear them complain about their treatment at the asylum? No.  
3222. Was it not the general practice for the attendants to sit in the drawing-room during the interview between patients and friends? No; it was not usual. We always sat together, and the attendants heard everything that took place between them.  
3223. Have you ever seen any restraint used amongst the patients—I mean physical restraint? No, sir.  
3224. Did you ever see muffs used, or patients tied down? No; I have never seen muffs, or a straight jacket in the place.  
3225. If it happened at an odd time that a patient became very noisy—I am speaking of when you were on alternate night duty with Doherty—did you administer sleeping draughts? No; they were administered by Doherty.  
3226. Did you notice if good effects followed this custom;—did the patients sleep afterwards? Sometimes they slept afterwards.  
3227. Is the evidence you have given the general result of your experience at the institution? Yes.  
3228. Is this the only experience you have had in connection with such an institution? Yes.  
3229. *Dr. Garran.*] Did you give the Case No. 1 his pyjama trousers and singlet when he was put into that cell? Yes; sometimes he would not wear the singlet.  
3230. Was he occasionally more restless than at other times? Yes, and then he became more destructive.  
3231. Have you known him tear more than one suit of pyjamas at night? Yes; I have known him to tear two.  
3232. When you have found him naked through these destructive habits, would you go inside the room and put on him a fresh suit of night clothes? Sometimes I would when he would let me. I used to use every effort to get him into a more pacified state of mind, and then try to put fresh clothes on him.  
3233. It has been stated in evidence that when he was removed from this single room on the morning of the 20th of May, cobwebs were seen unbroken over the shutter in that room—of course, indicating that the shutter could not have been lifted for some little time;—is that so? There were no cobwebs there.  
3234. Did you pull that shutter up and down at least once or twice a day? It was certainly pulled up once a day, therefore there could not have been any cobwebs there.  
3235. Did that room ever smell very badly when you put the patient in at night? No.  
3236. Was there a smell of stale urine about the place? No.  
3237. If there had been such a smell would you have detected it? Yes; but I have never smelled it in the daytime after the room was properly scrubbed.

3238. How often have you given cocoa or warm milk to this patient during the night? I have done it on two or three occasions, and on one I remember giving him warm cocoa three times in a night.
3239. Did he use to ask for it on his own accord? No; I used to suggest it to him, thinking it might soothe him to sleep.
3240. Did it soothe him at all? Sometimes he would rest after it, and at other times he would not.
3241. While you were on night-duty did you look in upon the patient every two hours? Yes.
3242. Under whose instructions? Those of Dr. Vause.
3243. Did you carry out those instructions faithfully, and never neglect your duties? I am quite sure I did not neglect them.
3244. Did you ever go to sleep yourself all night and leave him alone? Never.
3245. Used you to open the door when you made calls on him during the night? If he was noisy I would, but if he was asleep I would look through the observation hole and refrain from disturbing him.
3246. Did Mackenzie ever tell you that he considered Case No. 1 was shamefully treated while at the institution? No, not while he was there.
3247. *Mr. McGowen.*] Have you had any talk with anybody with regard to the evidence you are giving here to-day? No.
3248. Not with Farquharson? No.
3249. Nor Peet? No.
3250. Nor Dr. Vause? No.
3251. Nor Mackenzie? No.
3252. Have you seen Mackenzie since he left the institution? I have, but I did not say anything to him about the evidence.
3253. Are you sure that on the morning Case No. 1 was moved out of that cell there was a utensil in the room? On that morning I could not say whether it was there or not; I was not in the room.
3254. Do you know whether one had been placed in the room over night? Yes.
3255. Did you ever take it out yourself? Yes, very often.
3256. Did you ever see the patient do anything with it? Yes; when I have been to take him out I have seen him sling it out.
3257. Did you ever give him his breakfast in that room? No; not his breakfast, but I have given him cocoa, or something of that kind before taking him out.
3258. Do you know who gave the order to put him in this single cell? I do not for certain, but I think it must have been the Medical Superintendent. I was not there when he was first put in.
3259. Are you positive the patient was in that room for six months? Yes; for about six months while I was there.
3260. During that period were you on night-duty every second night? Yes; for the six or seven months I speak of.
3261. When you had been up all one night, when did you go to sleep? Oh, generally about 1 o'clock, and sleep through the day until about 10 o'clock at night. I would then get up and go to bed again.
3262. What am I to understand; if you had been up all Monday night, would you go to bed on Tuesday about 1 o'clock and sleep till 9 or 10 at night? Yes.
3263. Would you then go on duty again? No.
3264. Would you go to bed again? Yes.
3265. Were you outside on the morning that this patient was taken out of that room? Yes.
3266. Did you see him come out? Yes.
3267. Had he on pyjamas and a singlet under the coat, trousers, and jacket Doherty had put on him? Yes; I took these things off when we gave him his bath.
3268. Are you sure Doherty ordered the men who were waiting outside off the premises? He did not.
3269. Did you order them away? No.
3270. Supposing we have had it in evidence that when you and Doherty were taking Case No. 1 across the yard that his neck and a portion of his chest were exposed;—is that true? It was impossible.
3271. Was his coat buttoned up then? Yes.
3272. Had he a handkerchief on his neck? I am not quite sure about that. If he had one he tied it round his neck himself.
3273. Are you positive that during the whole time he was in that room either you or Doherty put him there every night? Yes.
3274. Do you know that other patients slept in the single cell? Yes.
3275. Was there always a night attendant on duty when a patient was in a single room? Yes.
3276. Was it the duty of the night attendant to see that patient every two hours to ascertain how he was going on? Yes.
3277. *Dr. Garran.*] On the morning of the 20th May did you hear Case No. 1, as he was going across the yard, say "I don't want to go to my bath; I am cold"? No.
3278. Had you hold of him while he was crossing from the single room to the bathroom? Yes.
3279. Did he resist you while walking across? No, he simply leaned on me.
3280. Did he not say, "I don't want to go"? Not to me, or not that I heard him.
3281. Did he seem specially cold on that morning? No.
3282. Was he more shaky than usual? Yes.
3283. Do you think he was trembling from cold? I do not know.
3284. Did you bath him? Yes.
3285. Was the water warm? Yes.
3286. Who obtained the warm water? I did, from the pantry.
3287. Did the patient ever have a cold bath while there? No, sir; never while I was there.

[Witness withdrew.]

Mr.  
J. O'Brien.  
21 Nov., 1894.

FRIDAY, 23 NOVEMBER, 1894.

[The Commission met at 11 a.m. in the Board Room, the Chief Secretary's Office.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
ESQ., M.D., INSPECTOR-GENERAL OF THE  
INSANE.ANDREW GARRAN, Esq., LL.D.  
JAMES SINCLAIR TAYLOR MCGOWEN,  
Esq., M.L.A.

Dr. Vause was also in attendance to hear evidence and examine witnesses.

Bridget Morrissey sworn and examined:—

Bridget  
Morrissey.  
23 Nov., 1894.

3288. *President.*] Were you engaged at Bayview Asylum for a considerable time? Yes.
3289. What position did you occupy while there? I was nurse for some time, and matron for a long time.
3290. How long were you at that institution altogether? Very nearly five years.
3291. Do you remember the date on which you first went there? Not exactly, but I remember I left in November, 1893, or perhaps it was about a fortnight before Christmas.
3292. Why did you leave the institution? I left after that poisoning case.
3293. Had you anything to do with that case? I was matron at the time, and in that position was to a certain extent responsible for it.
3294. In consequence of that case did you voluntarily resign or did Dr. Vause ask you to go? After the event to which I have referred I did not like the place. Everything seemed to have become so uncomfortable; therefore I asked Dr. Vause to let me go, and he did.
3295. Did Dr. Vause give you a certificate of character when you left? Yes, a good character.
3296. Did you sign a book to the effect that during your experience of the institution everything that should have been done for the comfort of the patients was done? Yes.
3297. When you were originally engaged did you sign the obligation to obey all the rules and regulations of the institution? Yes.
3298. Was a copy of those rules and regulations given you for your perusal and guidance? Yes.
3299. Did all the nurses get this when they joined the institution? Yes.
3300. While you were matron of the institution had you different female attendants under you? Yes.
3301. If any irregularity occurred in the institution did these female attendants report them to you or to Dr. Vause? As a rule they reported them to me, and I would report to the doctor if necessary; but at the same time they could report direct to the doctor if they wished to.
3302. Are you quite sure on this point, for we have had it in evidence that instructions were issued to the effect that all complaints must be reported to you? All I can say is I never stopped anyone going direct to the Medical Superintendent.
3303. Do not some of the women on the Government side require to be placed in separate cells on some occasions? Yes.
3304. Had you any special provision as to the dressing of these patients, or how did you put them into these cells? That depended on the sort of patient. Some of them would have clothes on; but if the patients were violent or suicidal, we would leave nothing on them.
3305. Who gave you instructions to this effect? I did not receive any instructions; that is the general rule.
3306. At what time did you usually get up in the morning? About 6 or 6.30.
3307. What time did you go to bed at night? While I was matron I would generally do my last round the last thing, and report to the doctor, before I went to bed at 10 o'clock or about 10.30. Sometimes I might be up a little later waiting for some of the girls who had been out to spend the evening at the play or anywhere else.
3308. Was there any provision made for supplying nourishment to patients, supposing it was required during the night? There was always a supply of tea, and milk, and cocoa, and such things.
3309. Was there a night nurse to administer these things? If a patient was sick there was always a night nurse, and when in the dormitories a nurse used to sleep with the patients.
3310. But did a nurse sleep in the single rooms? No.
3311. Were the patients put in these single rooms at night and left there until the morning? Yes.
3312. Did these patients have every comfort suitable for their condition, such as night-dresses and good bedding? Yes; the Government patients had beds and rugs, and private patients took their own clothes in with them from the dormitory.
3313. Supposing one of the patients took ill during the night, how would you become aware of it, and what provisions were made for dealing with emergencies of this kind? We should hear of it very quickly. I know there was always cocoa, tea, milk, and bread and butter.
3314. Was there a fire at which to prepare these things? There generally was a fire in No. 2 dining-room all through the winter-time.
3315. Was there a fire there during the summer-time? No.
3316. How did you manage to attend to these patients when there was no fire in No. 2 dining-room? The nurse would go to the kitchen fire to make the warm drinks.
3317. Was not the kitchen door locked on the female side? It was at one time, but it is not so now.
3318. Could the male attendants all get access to the kitchen? Yes; so could the female until the cross-lock was put on the door.
3319. To get that cross-lock open had you to get a key? Yes; the cook's room was quite close. We could waken the cook and get the key.
3320. Where were these provisions kept? They used to be kept in a place in the old kitchen.
3321. Where is that in regard to the present kitchen? In the yard, just opposite to where the new kitchen is now.
3322. Do you mean to say that you can always get medical comforts, such as milk, or a cup of tea, bread and butter, sugar, and so on, if you want it? Yes.
- 3323.

Bridget  
Morristy.

23 Nov., 1894.

3323. Do you get them from the stores? Yes; the stores are given out every morning in sufficient quantity for the next twenty-four hours.
3324. We have had it in evidence from other nurses that there was no provision of tea or sugar and so on, either for the nurses themselves or for the patients, and in any sudden cases of sickness which might occur during the night-time;—is that so? No; not unless there has been a great change made since I left; there was always plenty of tea and so on when I was there. I know we used to have tea during the night.
3325. Well, supposing one of the female patients became ill during the night, and it was necessary to supply her with certain nourishment, how would you get this nourishment? From our supplies, and if there was no particular nourishment there that we required we would awaken the cook.
3326. Was there any separate supply of stores for these patients? No; unless there was something specially ordered.
3327. Was there any special visitation made to patients in the single rooms during the night—say, for instance, every two or three hours? No, sir.
3328. Did nurses sleep in the vicinity of single rooms? Yes; there was a nurse sleeping at each end.
3329. Was there anyone in control, or were there only the two nurses at the ends of the single room? The two nurses used to sleep there; then the next nearest nurse was the one in charge of the patients in the long dormitory.
3330. How far is that long dormitory away from the patients in a single room? 30 or 40 feet, I should think; fully that.
3331. Supposing a patient in one of the cells kicked up a row during the night, would the nurses sleeping where you say be able to hear it? Yes, they would always hear any outbreak.
3332. Were not these patients noisy at times? Yes, and sometimes they were very quiet.
3333. Supposing five or six of these patients were making a noise together would you go and see what was the matter? We should if we thought it was anything unusual. We always understand and know the nature of the noise coming from these patients, and if it was anything out of the ordinary the nurses would get up.
3334. Do you think the nurses at Bayview House were overworked? Well, they had plenty of work to do.
3335. Had you a good number of dirty patients? Yes.
3336. Did you give them a bath once a week, on Saturdays? Yes; and oftener if they required it.
3337. Did patients get a hot-water bath at any time? Yes.
3338. Did some of the patients prefer sleeping naked in loose straw? Yes; there was one, Case No. 15, in particular. She always tore up the bed-tick and everything else.
3339. Did she appear to be quite comfortable in that, or did she make any complaint? No; she did not complain.
3340. Did any of the others complain? Well, only in this way: A new patient might complain on the first occasion, then she would get used to it, and did not seem to mind.
3341. What utensils were provided for these eleven or twelve single rooms? There were four or five india-rubber ones in my time.
3342. Why was not one supplied for every room? Well, I can only say that they did not generally all have them. They did not get them if they did not ask for them.
3343. What was the general character of the food supplied on the female side—for instance, what kind of meat? I never had any fault to find with the meat.
3344. Was it well cooked? Yes, fairly well.
3345. Had you any fault to find with the meals generally? Occasionally there would be some fault found, perhaps with the dinner, which would be taken back.
3346. Did you usually have the same kind of food as the patients? Yes.
3347. Was it always sufficient in quantity? Yes.
3348. Did the patients always get sufficient? Yes.
3349. Was there always an ample supply of clothing? Well, yes; but sometimes we might run short for a few days, but not very often.
3350. We have heard it in evidence that the Government patients were insufficiently clad;—is that so? Sometimes there might not be much underclothing to spare.
3351. But was there always a sufficient supply of underclothing? Sometimes they might run a little short.
3352. Had you a store of these things? Yes.
3353. Do you mean that the store itself would run short? Yes; perhaps it would for a day or two.
3354. It has been stated in evidence that some of the patients on the Government side would not have stockings on, and that altogether they were scantily clothed? It was this way; It is nothing to find the patients without stockings, for sometimes they pull them off and tear them up. The quieter patients would be better dressed than the destructive ones.
3355. Supposing friends of a patient came on a visit, would the patients be taken from the ward and a change be made in her attire? We would always change them and put them in clean clothes.
3356. Would you take the clothes off one patient and put them on another—that is on the patient going to see her friends? No; perhaps on some occasions, in a hurry, if the stock was low, we might use another patient's dress.
3357. Could you always be certain about the fit? We are not so particular about that so long as the patient is clean and presentable.
3358. Did you have a large number of dresses made in a general way, and use them for these purposes when necessary? Yes.
3359. When the Government visitors came to the institution did you always get a message notifying their arrival, and a request to put the patients in proper order? Yes; we would always know when official visitors came.
3360. Would you get notice sufficiently early to enable you to get the patients ready? Well, not very early; we would have a few minutes to get them ready.
3361. You must have been very clever—how did you manage? We would all help one another.
3362. As a matter of fact in making these changes would you put on the patients nice clean clothes when visitors came? Yes; on the very bad patients we would put on fresh dresses.

- Bridget  
Morrisey.  
23 Nov., 1894.
3363. Did the official visitors ever examine the dresses of the patients? No, I think not; unless Dr. Manning did.
3364. Were the official visitors usually accompanied by Dr. Vause? Sometimes.
3365. When it was not the case, did you report to the visitors about these patients? No.
3366. Did they ever ask you personally about the patients? Not usually. I think Sir Alfred Roberts spoke to me on one occasion.
3367. Do you think the official visitors ever noticed the dresses on dirty patients? They never examined the dresses, or anything at all, that I am aware of.
3368. Do you not know if they took any report from the official in charge in regard to matters of this kind? I do not know anything about that.
3369. Were you on particularly good terms with Dr. Vause? Yes, always, until about the time I left.
3370. In giving your evidence to-day, are you prompted by a desire to speak the truth and not to favour Dr. Vause? Yes; I have never seen Dr. Vause until this morning since I left Bayview House.
3371. It has been said by previous witnesses that some of the patients on the female side possess only one gown;—is that so? I cut the material up for making gowns. We make a lot together at one time, but we make no special suits. As long as these gowns remain in the store they are available for the patients when they are wanted. There are some patients, too, who have fancy dresses, and are fond of dressing themselves up in this way.
3372. Did you ever know of a private patient's clothing being put on Government patients? I think this was done once, as far as I know.
3373. In whose case was this done? That of Case No. 28, who used to be a private patient, but was subsequently a Government patient, and sent to the Parramatta Asylum later on.
3374. Do you remember any other case than that? No.
3375. Did you ever hear of patients being without clothes, and allowed to remain dirty for days? No.
3376. Do you remember Case No. 11? I know she was there.
3377. Do you know whether she was allowed to lie out in the rain in front of the separate cells? I have never seen her do so in my time.
3378. But did you hear of it? Yes; it was talked about by one of the girls outside.
3379. Who was the girl? I think it was Maggie Macleod.
3380. Were you ever aware of your own knowledge of anything of the kind? No.
3381. Do you think it possibly could have occurred without your knowledge? No.
3382. Was that patient's body ever covered with vermin? No.
3383. Did you ever see other patients covered with vermin? No, not covered. Sometimes they would have vermin in their heads; indeed, it was very difficult to keep them clean. There were a few cases very hard to keep clean. I had a lotion specially prepared for use on their heads.
3384. Were there many bugs in the place? We tried to keep them down. We used to kerosene the walls every week during my time as a precaution against these and other vermin.
3385. Did you see many rats knocking about the place? I never saw any in the bedrooms, but I heard them running about on the roof.
3386. Was there always a good supply of disinfectants? Yes.
3387. Was there always an ample supply of mosquito nets on the beds? Yes; they never went to bed without them.
3388. Were these always kept in good repair? Yes.
3389. Was Case No. 11 a very peculiar patient? Yes.
3390. Was one of her peculiarities that she did not like to sleep with anyone else? Yes; and she always used to break the utensils in the associated dormitory. She would also drag other patients out of bed. She was a woman who had delusions.
3391. We have had it in evidence that this woman was allowed to roll about in her own dirt;—is that so? As far as I know, it is not. I have never seen her.
3392. If it occurred would you have known? Yes. As a rule, she was a clean patient; and unless she got bad in her habits—I mean worse than usual—she would not be classed with the dirty patients.
3393. What were her other peculiarities? She was always wanting to kick and fight.
3394. Have you ever known private patients to be placed on the Government side? Yes; if a private patient became very noisy and unmanageable she would be sent down to the Government end.
3395. Do you remember Case No. 13? Yes; she was there in my time.
3396. Where did she sleep? For a long time in the hospital, then after that in the long dormitory. She was not sleeping in the single rooms at all.
3397. Did some accident happen to this patient? No; not in my time.
3398. What is your idea concerning patients being placed in the single cells;—do you think it resulted in economy to the proprietor, such as saving additional nurses and so on? No; I don't think that is the case. It was when patients were very dirty, and became destructive, that they were placed in single cells.
3399. Had you the power to order patients to be placed in these cells? I put them in first and asked the doctor afterwards. This is what I mean: Supposing a patient became suddenly violent and unmanageable, I would order her removal to the single cell, and then immediately report to the doctor.
3400. Supposing there was an outbreak in the night and the patient became violent, would you at once put them in the separate cells? Yes.
3401. And would you report the circumstance to Dr. Vause the next morning? Yes.
3402. Is it the custom for friends of the patients to visit them? Yes.
3403. Are not some of the patients sufficiently intelligent on many points to discuss them with their friends on the occasion of these visits? Yes.
3404. Could they have made a complaint to their friends if they wished to? Yes.
3405. Could they have done so in private without an attendant hearing them? Yes; when nurses took patients from the wards to see their friends in the reception-room they always left the patient if they did not like the attendant to be present.
3406. Was there, then, any impediment whatever placed in the way of a patient making a complaint to her friends if she desired so to do? No; not to my knowledge.
3407. Have you ever heard it said that if patients made a complaint to their friends the nurses used to laugh, and say that what the patient was complaining about was only a delusion? Very likely the nurses would laugh when the patients would tell falsehoods or absurd stories, and then they would explain matters to the friends.

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3408. Do you remember Case No. 17? Yes.
3409. Was she occasionally put in a single room? Yes.
3410. When she first arrived at the institution was she bathed? Yes; I bathed her myself.
3411. Were there any bruises on her body at that time? She was very much knocked about, and black and blue in places. She was a very violent patient, and always throwing herself about. At the time I bathed her she was black about the hips.
3412. Did she die while at the institution? Yes.
3413. Shortly before her death did you send for a priest to administer the last rights of the Church? Yes.
3414. Who went for the priest? A nurse named Josephine Mackay.
3415. Had the patient been ill for some time prior to this, and unable to take any food? Yes; for about a month, I think.
3416. When the priest arrived at the institution was she alive or dead? We thought we heard her breathe after the priest arrived, and Father O'Callaghan himself said he thought he heard her breathe.
3417. Did you know when the official visitors arrived at the institution? Yes.
3418. Did you ever hear a nurse say, "Go ahead, make haste, the visiting doctors are here"? Yes.
3419. Did Dr. Vause accompany the official visitors on their tour of inspection, and offer to afford them every information about the patients? Yes, generally.
3420. Did he always appear to take a great interest in the patients? Yes.
3421. Did you always know when he would make his rounds? He used to go in and out at different times besides making his ordinary round, and if there were any patients sick he was always very attentive.
3422. Who administered medicines, such as sleeping draughts and so on? I did.
3423. Did you ever depute this power to anybody else? No, not unless I was going out, and then the next in charge would take my place. I, however, generally gave the medicine to the patients.
3424. Was there at times great difficulty in regard to keeping the stockings on the feet of patients? Yes, there was.
3425. Does the same question also apply to boots? Yes; in some patients we have to lock the boots on their feet. They are always wanting to get them off.
3426. Were any of the nurses dismissed while you were at Bayview House? Yes.
3427. Can you tell me the names of any of those dismissed? I forget the names, but I know there were dismissals.
3428. Do you think they were always dismissed for good reasons? I think so, for Dr. Vause always wanted a very clear explanation about everything.
3429. Was he always particular in seeing that the work was carried on properly, and that the rules and regulations of the institution were strictly obeyed? Yes.
3430. Did any complaint against nurses for disobedience mean instant dismissal? Yes.
3431. Was Dr. Vause most punctilious in the matter of discharge of duty? Yes.
3432. Did you ever hear of a nurse or nurses having been discharged for making a justifiable complaint, such as, for instance, the food being bad, or the clothing insufficient? I never heard of it in my time.
3433. You, in your position of matron, would have, I presume, every opportunity of talking with Dr. Vause about the welfare of the patients, and the management of the institution? Yes.
3434. Whenever there was a complaint or suggestion made to him would he always willingly listen, and if possible, do the right thing? Yes.
3435. Do you know a man named Henry Gearey? Yes, I have met him since I left Tempe. He called on me and he wrote to me.
3436. Where were you living at this time? At Dr. McCarthy's, in Elizabeth-street.
3437. Did Gearey call on you there? Yes.
3438. Did he ask you to call on him at his private house? I think he wrote to me. This is the letter:—
- Miss E. Morrisey, 9, Brisbane-street, Surry Hills, Sydney, October 29th, 1894.  
Would you kindly appoint a time that I can see you again with reference to Bayview Asylum. I called several times, but you were not at home. I should be glad to see you at my house at any time you may appoint.
- Yours truly,  
H. GEAREY.
3439. Did you see him after the receipt of that letter? I saw him on the Saturday afternoon after.
3440. What was the object of this visitation on his part? To gain evidence as far as I knew about the management of Bayview House.
3441. Did he say to you that he had authority to do so? No; not exactly. He said that there was to be some inquiry, and he wanted to know if I could give evidence, as he said it was my bounden duty to do so. I told him I did not care about it.
3442. Did he say it would be an advantage to you to give evidence in this inquiry? Yes; I think he said something of that sort, and added that it would be only the proper thing to do so.
3443. What did you say to that? I said I did not want to get mixed up in the affair at all, and would rather not give evidence unless I was compelled to.
3444. Did you give Gearey to understand that you would be an unwilling witness? I told him that I did not want to have anything at all to say in the matter.
3445. Did he threaten to make you give evidence? No.
3446. Was Maggie Macleod present at any of the interviews between Gearey and yourself? No.
3447. Did you ever see Gearey and Maggie Macleod together? No.
3448. Have you had any talk with Maggie Macleod about this matter? Yes; several times.
3449. Did you both agree as to evidence? Yes, I think, in some things.
3450. What were the things you mentioned—or did she mention to you any charge or neglect against the patients? After some preliminary conversation, she said she had asked for a further supply of butter for the Government patients. She said that Mrs. Gilchrist, the lady superintendent, had cut the butter supply down very short. She said that there were only 2 lb. given out, and I said I thought there ought to have been 6 lb.
3451. When you saw Gearey did he show you any evidence, or the notes of any evidence he had obtained from other persons? No; as a matter of fact I had very little to say to him.
3452. When he found out that you did not care to give evidence, did he press you with the view of obtaining any information in your possession? No; I cannot say that he did. On all the occasions that he saw me or I saw him I gave him very little to his satisfaction.
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3453. Am I to understand from your evidence that, according to your experience, Bayview House was fairly well managed? Yes; as far as I know.
3454. Did you ever have any experience in lunacy work before? No.
3455. Was Bayview House conducted in a comfortable and homely manner? Yes.
3456. Were Dr. Vause and the attendants careful and considerate in dealing with the patients? Yes.
3457. Did you ever see the attendants abuse the power reposed in them? No.
3458. Did you ever see them treat patients inhumanely? No.
3459. While you were there, was everything done that should be done for the welfare of the patients? Yes.
- 3459½. *Dr. Garran.*] Did Mr. Gearey tell you that if you came before this Commission and gave evidence, you would be paid for doing so? I don't remember.
3460. Did he, as an inducement, say that you might get a Government situation afterwards? No, not exactly a Government situation; but he said supposing that Case No. 29 or Case No. 30 were released as a result of the inquiry, I might get something to do looking after them.
3461. I want you to give me a clear answer about the means you had, or the means there are, for getting a cup of tea, cocoa, coffee, or any other warm drink during the night. Can you get that without waking anybody else? No.
3462. Supposing anything went wrong with patients at night and a warm drink was required, could you get it without waking some other official? No.
3463. Had you the same means of access to the kitchen and to the place where the stores were kept as the attendant on the male side had? No; there was a cross lock on the door on the female side. I could, however, go round to the kitchen side and get hot water. I could go to the kitchen side if I wanted to.
3464. Do you know if there was anyone on duty at night in the men's department? I do not know much about the male side.
3465. Supposing that during the night patients became excited in one of the large rooms, would the nurses there have authority to put patients in the single rooms without consulting you? Yes, they could do so.
3466. Could you do so on your own authority without waiting on Dr. Vause? Yes.
3467. For what reasons would you put patients in those single rooms? I would do so if a patient became restless and interfered with the sleep of other patients, or if a violent patient struck any other patient.
3468. When you had to move patients into the single rooms did they always go in willingly? Not always. Sometimes it would take as many as two or three nurses to get them in.
3469. Would any violence be used to put the patients in these rooms? No, not violence; but sometimes we would have to use all our strength before we could get them in.
3470. Was it a usual thing for female patients to have sheets on their beds? Yes. There was only one patient whose sheets were taken away during my time.
3471. We have had it in evidence from other witnesses that it was the regular custom to fold up the sheets and put them away from the beds except when they were required, not for sleeping in, but for show purposes;—is there any truth in such a statement as that? No; not to my knowledge. There was one dirty patient whose sheets were taken away.
3472. Did you, as matron of the institution, ever issue to the nurses orders to fold up the sheets and take them off the beds? No; I never gave any authority to take them off.
3473. Do you know if they have been taken off? Only in the case of dirty patients. One was Case No. 31 and the other Case No. 32.
3474. Do you think the nurses could have done such a thing without your orders or knowledge? No, I do not think so.
3475. Did you ever give any orders for the sheets to be removed? No.
3476. Do you know that Maggie Macleod says most distinctly she always took the sheets off the beds at night, and they were folded up and put away, adding, "They were put on in the morning again but never used at night." Is that the truth? All I can say is Maggie Macleod was only there a fortnight while I was there.
3477. Do you know a nurse named Rose McMahon? Yes; she was in the dining-room and subsequently a nurse in one of the bedrooms.
3478. When you were dressing the patients to receive visitors did you ever put a clean skirt over a dirty one? Sometimes.
3479. Are you quite sure of this one point—that it was only the extremely dirty patients whose clothes you changed? Yes. We would not put a new skirt over a dirty one, but simply make the patient tidy, and some of the patients were able to dress themselves. We would not change the dress at all unless the one being worn looked more than ordinarily shabby, torn, or dirty.
3480. Did the female patients ever complain of cold in the winter time? Very seldom.
3481. Did they ever complain of a want of sufficient bed clothing during the night? I never heard of it.
3482. Did the restless patients throw off their clothes during the night? Yes; and more than that, some of them would insist on sleeping on the floor. We could not keep them in a bed.
3483. Did these particular patients ever complain of cold? No; they had not sufficient sense to complain.
3484. Did those whom you thought had sufficient sense ever complain about an insufficiency of night-clothing? I never heard of it.
3485. Did any of them ever appear to be suffering from cold and complain? No; not that I know of.
3486. Was it the duty of the nurses to complain to you if they thought patients had not enough night-clothes? Yes.
3487. Did any of the nurses ever tell you as much? No.
3488. Did the patients placed in the single cells ever complain of having suffered from cold? No; they never had the sense to do that.
3489. Did you ever ask Dr. Vause for anything that was wanted and meet with a refusal from him? No. Sometimes I might ask him for certain things and have to wait some little time before I obtained them. I could not always get what I wanted immediately.
3490. Did he ever refuse you anything that was properly and necessarily wanted? I have always got everything eventually, but sometimes I would have to wait.
3491. Was it your duty to report all matters to him? Yes.

3492. Did you always report when a patient was placed in a separate cell? Yes, immediately, unless it happened during the night and the doctor had gone to bed. Bridget  
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3493. Looking back and taking a full view of the whole of your experience, do you see anything you could complain about during your time at the institution? Nothing beyond the fact that I think there should have been a night nurse. 23 Nov., 1894.
3494. Do you mean by that there should have been a night patrol? Yes.
3495. How many large rooms are there? There are four.
3496. Would you put a nurse to sleep in each with the patients? No, not if my staff was large enough to supply nurses on night duty.
3497. Do you think that one nurse moving about the whole of the rooms on night-duty would be sufficient? Yes.
3498. Do you think that attendant also should look into the separate cells? She might do so.
3499. *Mr. McGowan.*] Do you know whether these ten or eleven cells on the female side were occupied by patients every night? As a rule, there would be a good many of them occupied—in fact, all full; but sometimes two or three would be empty.
3500. You referred a little while ago to Case No. 17;—do you say that she was ill for a month before she died? Yes, she was.
3501. Do you not also say that she would not take much food? No, she never would take food during that time.
3502. Did you give her any medicine for her particular complaint? We would always try to but the difficulty was that she invariably spat it out.
3503. Did you report her case to Dr. Vause? Yes, frequently.
3504. Did he see her? Yes, he would see her every day; he would feel her pulse, and do what he could during the month previous to her death.
3505. Did he prescribe medicine for her? Yes.
3506. Was there any effort made to make her take this medicine? Nothing beyond giving it her.
3507. Did you report to Dr. Vause the circumstance that she spat the medicine out of her mouth? Yes.
3508. Did you hear of an accident happening to Case No. 25? Yes; I think it arose out of some row with a nurse named Nellie McBride, and the patient got her eye cut.
3509. How was this done? I think she got into some tussle with Nellie McBride. She knocked Nellie McBride down, and in the struggle sustained the injury to her eye.
3510. Was this matter reported to Dr. Vause? Yes.
3511. Did he attend to the injury? Yes.
3512. Did you leave Bayview House in 1893? Yes.
3513. During the six months before you left was there a male attendant on duty near the kitchen through the night, so that you could go to the kitchen in the night-time to get a cup of tea, or any other warm drink for the patient? I do not remember.
3514. Do you think it is possible for a male attendant to have been on duty without you knowing it? I think I should always have known of it if there were one on duty.
3515. *Dr. Manning.*] If the supply of clothing ran short, and you asked Dr. Vause for more, did you get it at once? Sometimes I might, and on other occasions I would wait. If there were any clothing in the house I got it.
3516. How long, as a rule, did you have to wait before you received an additional supply? As a rule, not long; but sometimes for a fortnight.
3517. What things did you run short of? Sometimes one, sometimes another; especially chemises and underclothing. The material would be obtained, then I would assist in making them up.
3518. Do you say that the food was fairly good in quality and plentiful in supply? Yes; it was good, plain food.
3519. Was there generally food left remaining on the Government side after the patients had had their meals? Yes.
3520. Did they always get sufficient and have well filled plates? Yes.
3521. If they asked for more could they get? Yes.
3522. And would there be some left over then? Yes.
3523. What was the supply of vegetables like? It was quite sufficient; there would be potatoes, and sometimes parsnips, carrots, and other varieties.
3524. How much notice did you receive when official visitors came to the asylum? Sometimes we would get a few minutes, but we would never get very long.
3525. Would the time depend upon whether the visitors remained at the office or went direct to the wards? We never knew which way they would go. Sometimes they would go one way, sometimes another. On one occasion straight to the building, and on another they might visit the male division first.
3526. Sometimes would 5 minutes elapse, and sometimes half-an-hour, after the arrival of the visitors before they reached you? Yes.
3527. When you had short notice was it possible for you to do much in the way of changing the dresses of the patients and making them presentable? Well, there were five of us, and we used to help each other. A great many patients we did not change, but some of them we did.
3528. When the official visitors went round, were they accompanied by Dr. Vause? Yes.
3529. Was it the custom of the official visitors, supposing they went round the institution with you instead of the Medical Superintendent, to ask you about the condition of the patients? Yes; they would ask their names.
3530. Have you seen them occasionally checking off the names of patients in the book? Yes; they always did it.
3531. Has it been the custom of the official visitors on the occasion of their visits to speak to the nurses? Yes; but more frequently they would speak to the matron.
3532. Do a good many of the patients show fight when in the single rooms? Sometimes they are violent.
3533. If it were necessary to enter the room of a noisy, troublesome patient at night, would it be safe for one nurse to do it? No.
3534. For instance, would it be safe for one person to open the door and go into a cell occupied by Case No. 15? No. 3535.

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3535. Are these people in the single rooms in good health? Yes; they were all very strong and healthy.
3536. Can you tell us anything about a nurse named McBride having been rough and cruel in her treatment of Case No. 23? I never saw anything of the kind in my time.
3537. Was any report made to you of such a fact? No.
3538. Was she a very dirty patient? Yes.
3539. Was there only one of these patients who occupied the single room who might be dangerous if the door was opened by one nurse? There was more than Case No. 15; there were some whom you could go near, but there were Case No. 15 and Case No. 33, and others whose names I forget, whom you could not go near.
3540. In these cases if you had given the patients utensils, would they have used them in the ordinary way? Not all of them.
3541. What would some have done with them then? They would have used them to bang the doors, or as weapons of attack upon the nurses when they opened the cell-doors in the morning.
3542. Would it have been safe to have given one of them to Case No. 15 or Case No. 33? No; they would either have used it in the manner I have described or, perhaps, have torn it up.
3543. *Mr. McCowen.*] Since Gearey waited on you in regard to this matter has anyone else other than Maggie Macleod interviewed you upon this subject? No.
3544. *Dr. Garran.*] The witness Maggie Macleod, in her evidence, complained about vermin being in the beds and everywhere else. She says she complained to you as matron, and when she was asked what the matron said, she replied: "She said it was no use, she could not get the doctor to do anything";—did you ever say such a thing to Maggie Macleod? I never recollect having done so.
3545. She also says that "Often and often I have not only spoken about this (that is, referring to the women being placed in the cells naked), but I have also complained as to the way in which the patients were clothed and fed. It was simply shameful";—did she ever complain to you about these things? No; she was not on the Government side for more than a fortnight while I was there. She was not on my side at all.
3546. The witness Macleod also said that the women never slept in sheets; that there were only two who used sheets the whole of the time she was there—Case No. 16 and another;—is that true? No; it was not true in my time.
3547. She was also asked if the patients often complained of the cold, and she replied, "Yes, often";—did she ever tell you that? No.
3548. She was also asked "Did you ever see an indiarubber utensil in these rooms?" and her answer is, "No; not up to the date you name";—do you say there were five in those rooms? Yes; there were five, made of indiarubber.
3549. Do you not see how different her evidence is from yours;—which is correct? I know I saw those utensils there.
3550. The witness Macleod further says, "that there were a lot of new sheets made for the use of the patients just before she left the Asylum, and about the time the facts respecting Case No. 1 became public";—do you know if that is true? No, I was not there then.
3551. Do you know if there was any marked change in the supply of these and other things? No.
3552. *President.*] Was there any necessity at the time you left for an unusually large supply of clothing to be brought into the institution? We could get plenty of clothing when we wanted it, and our instructions were, in the matter of clothing, to be economical and not to be extravagant.
3553. If we had evidence to say that a large supply of clothing was brought in immediately after the case referred became known;—is that true? I do not know, I was not there.
3554. Have you not said in your evidence that some of the patients placed in these single cells become very obstreperous and noisy? Yes.
3555. How many nurses would go in the morning to these cells to release these patients? One for ordinary cases when they did not get obstreperous,
3556. Would it not sometimes require two or three nurses to remove a patient? Not unless they were very violent and attempted to strike the nurses.
3557. Do I understand you to say it would be dangerous for one nurse to open the door of the cell occupied by one of these violent patients? In the night-time it would.
3558. Was it a usual thing for you to be out at night? No. What I mean to say is, it would not be safe for one nurse left alone at night to open the door of a cell containing a violent patient. In the daytime it did not so much matter, for then everybody was about, and assistance could be given if necessary.
3559. *Dr. Fause.*] Were the stores, such as tea, milk, and sugar, available at night? [*No answer.*]
3560. What I mean is, were there not tea, sugar, milk, and so forth in the cupboard in No. 1 and No. 2 dining rooms, between tea-time at night and breakfast-time the following morning? Sometimes there would be some left.
3561. Did you get your stores one day at breakfast-time and in sufficient quantity to last until breakfast-time the next day? Yes.
3562. Would not the breakfast stores for the following morning be in those cupboards all through the night? Yes.
3563. Was there generally sufficient milk? Yes.
3564. Did you get a fresh supply of milk every morning? Yes, we had fresh milk every morning and at dinner-time.
3565. Could you get milk at any time during the twenty-four hours of every day? Yes.
3566. Do you mean to say there were no special stores given to you for night use? Yes. I am a little nervous so you must bear with me.
3567. *President.*] Have you not said that before you could make a warm drink during the night that you would have to waken the cook? Yes. I never had a key of the kitchen.
3568. *Dr. Fause.*] Could you light the fire if necessary during the night in either No. 1 or No. 2 dining-rooms? Yes.
3569. Do you remember there being a kerosene stove provided for the cooking of these things? I do not remember.
3570. Was the long dormitory separated from the single room by a narrow passage? Yes.

3571. Could nurses sleeping in the dormitory hear any disturbance made by a patient in the same room? Yes. . . Bridget  
 3572. Have you heard those disturbances yourself? Yes. . . Morrisey.  
 3573. And do you sleep near to the courtyard? Yes. . .  
 3574. Had you a requisition book which you could sign for any special articles of diet? Yes. . .  
 3575. Was it your duty to order things you wanted by making an entry in the requisition-book? Yes. . .  
 3576. Whenever you wanted anything, did you put it down in the requisition-book? Yes. . .  
 3577. Was there ever a requisition refused? I cannot say that there was one refused, but I had to wait  
 for things sometimes.  
 3578. First, would you run short of things, and then make a requisition for them? Yes.  
 3579. Do you mean to say that clean dresses were put upon dirty patients on the occasion of official  
 visits being made to the institution? Yes; we used to change the dresses.  
 3580. Do you mean to infer then that you, as matron, allowed patients to become dirty in the institution?  
 I cannot say dirty—I mean that some of the dresses would be soiled and old, and we used to change them  
 so as to make the patients appear brighter.  
 3581. Did you ever put clean clothes over a dirty patient? No.  
 3582. Did you keep dirty patients in the place, and put clean clothes over them to deceive the visitors?  
 No. We used to remove old dresses and put better ones on.  
 3583. Did you have any special instructions from me to change the dresses of the patients for the visits  
 of official visitors? It was always done, and I always understood that you knew it was done.  
 3584. Did I ever tell you directly that the patients were to be made presentable when the official visitors  
 came? No, not directly; but it was a customary thing to make them so, and I thought you knew of it  
 and approved of it.  
 3585. Was it not merely the custom to tidy up the patients, and to gather them together, so that they  
 could be seen by the official visitors? Yes, and to change the clothes of those whose clothes wanted it.  
 3586. Could you not change their clothes at any time? Yes.  
 3587. Would you wait for the arrival of the official visitors before you would change the clothes of a dirty  
 patient? No, certainly not.  
 3588. Was Case No. 28, a private patient, who was sometimes on the Government side of the house,  
 possessed of clothing? I do not know what Government patients had except their own uniform. I knew  
 they were supplied with that.  
 3589. *Dr. Manning.*] Was not Case No. 28 for some time a private patient, and then did not her husband  
 cease to pay for her? Yes.  
 3590. At one time did she possess clothes of her own? Yes.  
 3591. And did you put Government clothes on her? No.  
 3592. Was she at Bayview House for some time, and then transferred to one of the Government asylums?  
 Yes.  
 3593. *Dr. Vause.*] Do you think there ought to be a night nurse instead of having nurses sleeping with  
 patients in the dormitory? Yes.  
 3594. Did you ever tell me so? No.  
 3595. *President.*] Did you simply follow out the rule that had been in existence before you occupied the  
 position of matron? Yes.  
 3596. Did you speak to the doctor at all about this suggestion? No.  
 3597. *Dr. Vause.*] Regarding this message about the official visitors—did you understand it to be an  
 intimation that the visitors had arrived, and that you were to get ready to accompany them round the  
 institution? I do not exactly understand the question. I always went to the office to meet the visitors.  
 3598. Do you remember Mr. Nugent Robertson going round as an official visitor? Yes.  
 3599. Do you remember him pulling the beds down and looking at the mattresses? I do not know; I  
 think that was in Mrs. Hankey's time.  
 3600. Have you ever seen him do it? I have seen him turn up the corner and pull the bed on one side.  
 3601. To see if the bed was clean and all right? Yes.  
 3602. Has he done this on several occasions? I cannot say that I have seen him do it several times. He  
 would just put his hand on it and feel it; but sometimes catch hold of the corner of [a sheet, look at it,  
 and put it back.  
 3603. Did he do the same with the single-room beds? Yes.  
 3604. *President.*] With regard to these single rooms;—were you in the habit of changing the things on  
 the occasions when official visitors came, and then putting others in for the use of patients at night? No;  
 this was not done with my knowledge.  
 3605. Supposing we have had evidence to that effect;—what do you say? The custom, while I was there,  
 was for a patient to have the two beds in a room. Sometimes we would take out one and leave the other.  
 These beds were always clean and fresh.  
 3606. What happened to the bedding of the dirty patients? The dirty straw was always changed, and  
 the ticks were washed and filled with clean straw every morning.  
 3607. *Dr. Garran.*] Do I understand you to say that if there had been a night attendant watching Case  
 No. 1 you would have heard him moving about? Yes.  
 3608. Would he have had to go from the kitchen and across the yard in going to and from the single  
 room in which the patient was confined? Yes.  
 3609. How far from him would your bed-room be? My bed-room was on the other side.  
 3610. But how far away;—is it a hundred yards? I cannot say.  
 3611. Would you have been able to hear an attendant walking across the yard? No. I might hear him  
 going down the passage, and I could hear anyone rattling about in the kitchen.  
 3612. Did you ever hear anyone walking about the main building on night-duty? Never.  
 3613. Are you reasonably sure that if anyone had been on night-duty during the time Case No. 1 was in  
 that solitary room you would have been able to hear him moving about? I think so.  
 3614. *President.*] How long was he in that cell while you were matron? I do not know. I know he was  
 in a bed-room for a time.  
 3615. Was he then removed over to the other place? Yes, for three or four weeks, I think, while I was  
 there.

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3616. Do you remember the time exactly when he was taken over to that single room? No. I do not exactly know what goes on on the other side. I know he was over there, because I used to see them taking milk and things to him.
3617. As matron of the institution, do you know that there is complete isolation between the male and female sides? Yes.
3618. In consequence of this many things might go on of which you knew nothing? Yes, that is the case.
3619. *Mr. McGowen.*] Did you see these single cells at night? Yes.
3620. How many women on an average would be put in those cells quite naked? I should think about five in all. In two of the rooms there were bedsteads.
3621. How many of these patients slept on straw? Only one—Case No. 15.
3622. *Dr. Manning.*] Occasionally, have you seen me go into the wards at dinner-time? Yes.
3623. Occasionally, have you seen me go into the kitchen and examine the food there? Yes.
3624. Have I come back again and occasionally remained to dinner, or to see the dinner? Yes.
3625. Had you any knowledge that I was coming back? You came back once when I did not know anything about it.
3626. What I want you to answer is this: Was there any likelihood of special dinners being prepared for my visit? No; we never knew when you were coming.
3627. Was it quite possible to prepare anything specially for a visit of this kind? Yes; but I think one day you were there the dinner was rather better than it sometimes is.
3628. Do you mean then it was better one day than on others, and by good fortune I happened to pounce upon it? Yes.
3629. *President.*] Did Dr. Manning pay a visit one day and after making his rounds come back and stay to dinner? Yes.
3630. Did you know he was going to stay? Yes.
3631. Did you get some extra things for dinner on that day? Yes.
3632. What was it—a better meal altogether;—what was extra? I do not think it was a better meal; the extra was pickles.
3633. Did you ever hear a statement made to the effect that some of the patients had said they were always glad to hear that a visitor was going to stay that day, and they only wished that they would come every day, for then they would get a good meal? I do not know of it.
3634. Would it have been possible to have prepared an extra good dinner on the occasion of the official visitors coming to the institution, when you did not know of their coming until they arrived? No; there would not have been time.
3635. *Dr. Vause.*] Do you think that when you were in your bedroom at night-time you could see or hear anybody going into the kitchen with a passage and a large dormitory between them and you? I do not know.
3636. When you were in your bedroom did you hear anyone in the kitchen? No; not unless they came over to the side where the vegetables were kept.
3637. *President.*] How then can you hear them moving about at night? Sometimes I stay up very late—as late as 12 o'clock,—and then I can hear them if they move about.
3638. If there were anyone in the men's dining-room would you be able to hear him? No.
3639. Would it not be possible for a warder or attendant to go into that kitchen many times during the night without you hearing him? He might do so.

[Witness withdrew.]

Mary Magney sworn and examined:—

Mary  
Magney.  
23 Nov., 1894.

3640. *President.*] Are you employed as a housemaid at Bayview House? Yes.
3641. For what period were you there in that capacity? About two years. I left there on the 24th of last January.
3642. Did you get a certificate of good character when you left? No; I did not leave good friends with Dr. Vause.
3643. How was that? I do not think there was anything particular. I suppose I did not suit him.
3644. Was that on account of you not being familiar with your duties, or had you neglected some duties? I do not know. I know that I did not leave on good terms.
3645. Were you quite familiar with the duties of the nurses, the routine of the patients, and the customs observed in the management of the institution? Yes.
3646. Did you give out the stores? Yes, sometimes.
3647. Was there always an ample supply of food? Yes, I think so.
3648. Was there always an ample supply of clothing? Yes; we had a fresh supply of clothing every Monday morning.
3649. We have had it given us in evidence that some of the patients were not properly clothed, and that there was anything but an ample supply of wearing apparel;—is that so? I never heard of there being an insufficient supply of clothing.
3650. When the official visitors came to the institution to see the patients was there due notice given to the nurses that the doctors had come? I myself would generally tell the matron that they had come, because she was supposed to come over from the building to the office to go round with the visitors.
3651. Do you know if the patients were put in good order when the visitors arrived? I never saw them get patients ready.
3652. Not in the way of fixing up their dresses or putting on a new collar or anything of that kind? No.
3653. Were the patients shown to the visitors in the same clothes as they ordinarily wore, or was the clothing changed? It was not changed to my knowledge.
3654. Do you know a man named Henry Gearey? Yes; he has called to see me at the place where I am staying.
3655. Did he ask you any questions or for any information in regard to the management of, and the patients in, Bayview House? Yes.
3656. Did he ask you to give evidence before this Commission? I think so.
3657. Did he ever say it would be to your interest, or to your future advantage, to give any information on this subject? I do not think so. He may have done.

3658.

3658. Did he say you would be paid any sum of money for giving evidence before this Commission? There was something said about expenses being paid, and some of the other girls told me that Gearey had told them he would get them good appointments if they would give evidence in this inquiry.

3659. Did he ever say anything to you about being able to secure you a billet, and so on? No.

3660. And I suppose you would have scorned the idea if he had offered it to you? Yes; it was never offered.

3661. Did he ask you about Bridget Morrissey? Yes.

3662. Did you give him the information he needed? I did not give him much.

3663. Did he seem satisfied with what you did give? No.

3664. Did he ask you if Dr. Vause was intemperate in his habits? I think he told me he had heard that Dr. Vause took drink, and I said in reply I had been there two years and had never seen it.

3665. Have you ever seen Dr. Vause under the influence of drink? No.

3666. Have you seen him at dinner parties in his own house, when he has been entertaining his own friends? Yes.

3667. And either on or after any of these occasions have you seen him the worse for liquor? No.

3668. Is Dr. Vause always available when his patients require to be seen? Yes.

3669. Is he on these occasions always attentive to the requirements of his patients? Yes, very much so.

3670. Do you give this evidence in his favour, although you had a dispute with him, which ended in your leaving his service? Yes.

3671. Do you give it because you consider it to be your conscientious duty? Yes.

3672. Did you ever see the patients neglected or ill-treated? No.

3673. Was Dr. Vause perfectly attentive to his duties, and could he be seen when required? Yes.

3674. *Dr. Garran.*] Was Case No. 1 an inmate of Bayview Asylum in your time? Yes.

3675. Do you know if a night-attendant waited upon him while he was in the single room? I do not know. I know he received special attention in the day-time, and that Dr. Vause used to send him his meals from his own private table.

3676. Did it come to your knowledge in any way that this patient had a night attendant? No.

3677. *Mr. McGowen.*] How long before you left Bayview House had he been taken from the bedroom upstairs and put to sleep in the single room across the yard? I do not know.

3678. Do you know the names of the official visitors to the institution? Some of them. There are Dr. Cox, Dr. Manning, Sir Alfred Roberts, and Mr. Nugent Robertson.

3679. Do any other regular visitors go round the asylum? No; none other than the official visitors and the patients' friends.

3680. *President.*] When the official visitors come to the institution, do they go first to the office or to the main building? They always went to the office first.

3681. Would they generally remain there for some time? Not for very long—perhaps for 5 or 10 minutes.

3682. Would they then be looking over the books, to see the names and get other particulars of new patients? Yes; and they would be engaged in this for about 10 minutes sometimes.

3683. *Dr. Vause.*] Do you remember if the official visitors have ever gone through by themselves without waiting for me? Yes.

3684. Did they wait very long then? No.

3685. Was it their habit to look at the official books before going round the institution or not? I think they did generally look at the books first.

3686. Did you wait to see if they did? No; I simply answered the door.

3687. Can you say if they looked at the books first or not? I thought they did; that was my idea.

[Witness withdrew.]

Mary Doherty sworn and examined:—

3688. *President.*] Are you employed at Bayview House? Yes, as cook for some time, and I still occupy that position.

3689. We have had complaints made to us to the effect that the food is not properly cooked;—is that the case? No; not that I know of.

3690. Have you ever had any complaints made to you about the cooking? No.

3691. Was the food always of good quality? Yes.

3692. Is it sometimes better than others; for instance, in the height of summer does the meat get bad? No; we always have fresh meat every morning.

3693. What joints are generally cooked for the patients? Perhaps a leg of mutton one day and a shoulder another, and we have roast beef on Sundays, and roast and boiled mutton on Mondays; we have soup three times a week, and roast beef on other days.

3694. Is there a fixed arrangement with regard to your supplies? Yes, we have an arrangement to get the same kind of food on the same days in every week. Beside the roast and boiled mutton, we get roast beef on other days, and sometimes haricot. On the days we have no soup we have two vegetables; on Thursday we get corned beef and dumplings, and mutton on Fridays. Some of them will have fish. Then there are two vegetables, boiled rice and potato pie. On Saturday we get beef again and mutton.

3695. Do they always get a good breakfast in the morning and tea in the afternoon? Yes.

3696. Did you ever tell any nurse that Dr. Vause would not allow any more food on one occasion, when she complained that the amount supplied was not sufficient? Not to my knowledge; there was always plenty of food.

3697. Did any nurse ever complain to you of the food being so badly cooked that the patient would not eat it? Never.

3698. At what hour do you get up in the morning? Five o'clock.

3699. What time do you go to bed at night? Any time after 7 o'clock.

3700. Do you generally go as early as 8 or 9 o'clock? No.

3701. Do you lock the kitchen up? I never lock it.

3702. Is the door always left open? It has never been locked.

3703. Could anyone get into the kitchen at night, either from the male or female side? An attendant could get in on the male side, but not from the female side.

Mary  
Magney.

23 Nov., 1894.

Mary  
Doherty.

23 Nov., 1894.

Mary  
Doherty.  
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3704. Why is that? Because there is a cross-lock on the door which shuts off the female side.  
 3705. Do you know whether there are kept in the dining-rooms supplies for night use? Yes, there are always supplies there.  
 3706. Both on the male and female sides? Yes.  
 3707. What supplies are kept? The attendants can get what they want.  
 3708. What generally was kept there? There was always bread, butter, milk, tea, and sugar.  
 3709. *Dr. Garran.*] Would any nurse be able to make a cup of tea or other warm drink without waking you? Yes.  
 3710. We have been told in evidence that nurses could not get into the kitchen to the fire at night;—is that so? They always had a fire in the private ladies' dining-room, and there were refreshments too.  
 3711. Could the attendants make a cup of tea or coffee without going to the kitchen? Yes.  
 3712. Are you quite sure on this point? Yes, I am.  
 3713. Do you remember when Case No. 1 was taken from the upstairs room to sleep in the single room in the yard? I do not know when he was removed there.  
 3714. From where you slept could you hear attendants walking about the male side during the night? Yes.  
 3715. Supposing attendants were up at night, watching Case No. 1, could you have heard them walking about? I often heard attendants walking about. There was always somebody walking about.  
 3716. Did you sleep very far from the courtyard? No, not very.  
 3717. Do you know whether night attendants did watch this patient? I do not know, but to the best of my opinion there were.  
 3718. Can you speak positively on this point? I can say I have heard people walking about during the night.  
 3719. *Dr. Vause.*] Is there a diet list hanging up in the kitchen? Yes, there is.  
 3720. Do the patients have fish to eat on Fridays? Yes; as well as meat.

[Witness withdrew.]

TUESDAY, 27 NOVEMBER, 1894.

[The Commission met at 11 a.m. in the Board Room, Chief Secretary's Office.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
Esq., M.D., INSPECTOR-GENERAL OF THE  
INSANE.

ANDREW GARRAN, Esq., LL.D.  
JAMES SINCLAIR TAYLOR MCGOWEN,  
Esq., M.L.A.

Dr. Vause was in attendance to hear evidence and examine witnesses.

Mrs. \* \* \* sworn and examined:—

Mrs. \* \* \*  
27 Nov., 1894.

3721. *President.*] Had you some relative in Bayview House at one time? Yes. (Case No. 34.)  
 3722. What relation was she? My cousin.  
 3723. Do you remember the time of her admission? I cannot remember exactly. We took her body away on the 28th of May, 1892. I think she was there about a fortnight altogether.  
 3724. Did you pay for her accommodation and maintenance at Bayview House? Yes.  
 3725. Do you remember how much you paid? I really forget; but I think it was four guineas per week.  
 3727. For what reason was she put in Bayview House? I do not know. I certainly think she was not insane; she was very dull at times and suffered from excessive weakness. When she was taken to Bayview House Dr. Vause was away. Dr. Hetherington saw my cousin, and his opinion was that she had no business there at all.  
 3728. Was she troublesome in her behaviour, so troublesome indeed that it was considered by medical men that it was necessary she should be removed to an asylum? I think so. I believe two doctors (one Dr. Alcorn, of West Maitland) advised that she should go there. I do not remember the other doctor's name.  
 3729. Were medical certificates obtained before she was admitted to the institution? Yes, certainly.  
 3730. Do you remember the names of the medical men who gave the necessary certificates? I think Dr. Alcorn was one, but I forget the other.  
 3731. Was the other Dr. Beeston, of Newcastle? I believe he was the doctor; but he had not seen her for some time.  
 3732. Did he not give a certificate saying he had seen her on a certain date; I may as well tell you that we know he gave a certificate, for I have it in my hand now? I know my cousin went away for a change and went to West Maitland, but about the certificate I cannot speak.  
 3733. Do you know if Dr. Beeston had known your cousin for the last twenty-five years? Yes, I think he had.  
 3734. Do you think he was perfectly familiar with the nature of her case? Yes.  
 3735. Do you know that he certifies in this certificate [*Exhibit C. See Appendix*] before me that he has known Case No. 34 for the last twenty-five years; that she is naturally of an active and lively disposition; that of late she has become morose and taciturn; that her appearance is greatly altered, she having become vacant. Do you know these facts are certified to on the 28th of April, 1892, so that Dr. Beeston must have seen her a few days before she was admitted to Bayview House? I do not think he did. She was away; I believe her mother went to Dr. Beeston and stated something about my cousin's symptoms.  
 3736. But here is Dr. Beeston's certificate saying he saw her personally at Newcastle. Might not that have occurred without your knowledge? I do not think so.

3737.

3737. But we have here a certificate saying Dr. Beeston saw her on the 28th of April before she was admitted? I do not know anything about that. Mrs. \* \* \*
3738. Still it occurred, and it is also certified that her mother informed Dr. Beeston that your cousin had latterly become violent and could not be kept in bed, and that she did not recognise her mother nor any others about her;—do you think that is so? I do not. I was constantly with my cousin. I was reared with her, and I never saw any violence in her at all. 27 Nov., 1894.
3739. Was Dr. Alcorn well acquainted with the nature of your cousin's case? I think he knew about it.
3740. Do you know that he saw her on the 14th May, 1892, at West Maitland, before she was admitted to Bayview House? Yes.
3741. Do you know that he says, speaking of your cousin at that time, "She rambles in her talk, and is listless and stupid; at times refuses to speak for hours together; refuses food, has loss of memory, and cannot say how long she has been ill; is dirty in her habits, and attempts to tear her clothes; has delusions, fancying that birds are singing around her bed, and other fancys of that sort";—is this statement in accordance with your experience? I know she was very quiet of late.
3742. Did she refuse to take her food? No, never.
3743. Had she loss of memory to such an extent that she did not know how long she had been ill, and so on? I did not notice this. She was very quiet, and did not speak sometimes for hours together.
3744. Was she dirty in her habits before she was admitted to Bayview House? I never saw her.
3745. Do you not say you were constantly in her company? I do not mean it exactly in that sense. I live in Sydney, she lived at ———, but I used to see her frequently.
3746. How often did you see her? I cannot remember exactly.
3747. Did you see her twice a week? No.
3748. Did you see her once a week? No.
3749. Did you see her once a fortnight? I used to go and stay a week, fortnight, or three weeks at a time in their house, and I never saw my cousin dirty in her habits or violent.
3750. Did you ever hear or know that she occasionally had delusions, fancying that birds were singing around her bed? No, never in my life. She stayed once for seven weeks with me, and I never saw anything or heard anything of the kind.
3751. Would you be surprised to learn, on the opinion of the doctor, that she had been gradually failing in health for over a year? I know that for eighteen months she did fail in health, for she was greatly troubled at the death of her husband. For seven weeks after her husband's death she did not cease to cry.
3752. Would you be surprised to hear that her relatives state that she had fallen into a listless and stupid state; that at times she falls into this listless state and remains staring at something for some time, but does not know anything about it? I would not be surprised at her relations telling the doctor this, but all I can say is their experience is different from mine.
3753. Do you know whether at times your cousin did not know her most intimate friends? No; I know I met her on the railway platform when she was going to the asylum. I was in company with my mother, who said "Do you know me?" She replied "Yes"; and she appeared to know us.
3754. It is also stated that her mother informed Dr. Beeston that your cousin had latterly become violent and could not be kept in bed, and that she did not recognise her own mother, or anyone about her;—is that correct? No, it is certainly not in accordance with my experience.
3755. Did your aunt bring your cousin down from the country and persuade her to go to Bayview House in the hope of her getting better? Very likely, but I never thought she was much wrong.
3756. What is the nature of the complaint you have to make in reference to the treatment of your cousin while an inmate at Bayview House? Dr. Vause was not there when I paid my first visit after my cousin was admitted. Dr. Hetherington was there. On the following Friday morning I and my mother called to see my cousin. We went back again at 9 o'clock at night, and saw Dr. Hetherington, who was rude to us. I said that my cousin was dying then. He said she was not dying. I then said that her mother had come 102 miles to see her daughter. Dr. Hetherington objected to anyone seeing the patient at that time at night. I, feeling sure that my cousin was dying, insisted that her mother should see her, and we were allowed in. She was nearly blind, and we were taken into a dark room, and had some difficulty in seeing the patient. I saw then that the end was near, but Dr. Hetherington said she was not dying. She died on Saturday night or early on Sunday morning. What I complain of is what I consider to be the harsh treatment.
3757. How long was Case No. 34 a patient at Bayview House? Nearly a fortnight.
3758. Had she a private room? No; but we understood she was to have one when she went there. We paid for one.
3759. Did she ever use one? No; there were at least twenty beds in the room she was in.
3760. When you visited the institution were you allowed to see your cousin? I saw her on two occasions.
3761. Did she appear to be well dressed in clean clothes? She was never dressed at all. She was in bed the whole of the time she was there—in bed in one of the dormitories.
3762. Did Dr. Hetherington tell you that she was in no danger whatever? Yes, he told me that on Friday night at 9 o'clock, and she died either on Saturday night or Sunday morning.
3763. Did you afterwards see her body laid out in the mortuary? I call it a stable. There was fodder under my feet, and a couple of bags of fodder in the place. There was no window even, but only an aperture containing iron bars. I call it disgraceful. I spoke to Dr. Vause about it later on. I asked him to see us for the money, and we would expose it. He said he would not sue us.
3764. Did you complain to Dr. Vause? Yes.
3765. What did he say? He seemed to infer that Dr. Hetherington had not done his duty, and he had the place cleaned up.
3766. Did he say anything to you about Case No. 34 being in the habit of taking an excessive quantity of liquor? Dr. Hetherington told us that. I also spoke to the matron concerning her clothes. When she went into the institution she took three boxes well filled with linen, but before she was dead there was no linen left.
3767. What did Dr. Hetherington say concerning your cousin's drinking habits? He said she had taken a great deal too much stimulants.
3768. Did Dr. Hetherington say anything about the certificate of death? No. 3769.

- Mrs. \* \* \* 3769. Nothing at all? Not that I remember. I know I was very much annoyed at the way in which the body was laid out. The matron told me that my cousin had been well looked after, and I told her that if I had a sick pup I would not leave it at such an institution to be nursed.
- 27 Nov., 1894. 3770. Did you understand that the body was laid out in the apartment that was used by Case No. 1? I had some idea of the kind. I went to the office of the *Sunday Times* as soon as the case occurred, thinking to make a statement about our own affair. The editor, however, did not seem inclined to run any risk of libel, so nothing was said.
3771. On the whole, then, you feel very much dissatisfied? Yes.
3772. First, as to the treatment of your cousin? Yes.
3773. Then with the attendants? Very dissatisfied indeed. I told Dr. Hetherington that there was a good home for my cousin whenever she wanted one, and I thought it was a shame she should remain at Bayview House.
3774. Were you dissatisfied because of not being informed of the day or hour on which your cousin died? Yes; they did not tell me she was dead. I went out there thinking to see her and found she was dead.
3775. Are you also dissatisfied at the way in which they laid out the body and prepared it for the funeral rites? Yes; I think the least they could have done would have been to let us know she was dead. We went to call on her on Sunday and found her lying dead. The body was removed from the institution, taken to Newcastle, and buried there.
3776. Who induced you to make a complaint to Mr. Jeanneret, then a Member of the Legislative Assembly? I do not know. I went to the *Sunday Times*, but as I said before, nothing appeared there for fear of a libel action. I said I could substantiate all I said, and that I was not alone when I made my visits to the asylum.
3777. Did you take the precaution of having some one with you? No, not as a precaution, for I did not think that necessary.
3778. Are you very dissatisfied with the way in which you were treated there? Yes.
3779. *Mr. McGowen.*] Did you not say in answer to a question put by the President that you were not surprised at anything your relations at ——— would say about your cousin when the application was made for her admission into the asylum;—what do you mean by that? Well, we are not on very friendly terms; that is what I mean.
3780. Had those relatives any interest in your cousin that might be served by her removal to the asylum? They had an interest this far, that if she was sent there she would spare them perhaps a great deal of trouble. They sent for these doctors, and I think it would have been much kinder to have sent my cousin to her mother. They had a business place, and I suppose they wanted to get rid of her.
3781. Did you ever find out when your cousin did die? No.
3782. Did you visit Bayview House on the Saturday and see your cousin? Yes.
3783. Did you go again on Sunday and find she was dead? Yes. On Sunday my mother and her mother visited the institution, and after waiting about half-an-hour were told by one of the nurses or the matron that my cousin had passed away.
3784. You did not know she was dead before then? No.
3785. When the visitors saw her on Saturday did they think the end was so near? I did, and I think it would have been kinder to have put her in a room and allowed her friends to stay with her. The body was taken away on Sunday afternoon and sent to ———.
3786. Did you see the corpse in the stable, as you call it? Yes.
3787. And was it prepared for burial? It was on a board or door placed on trestles. I think it was prepared for burial as well as they knew how to prepare it.
3788. Did you threaten to expose Dr. Vause in connection with this matter? I asked him to sue me for the money owing.
3789. Did he say anything about making public a statement to the effect that your cousin was addicted to drink if you did sue him? He told me Dr. Hetherington said that.
3790. Had your cousin a sufficient quantity of clothing? The matron said she had not, as her clothes were all gone.
3791. Did you see the boxes of clothes sent to Bayview House for her? Yes, they were brought to my house and sent on from there.
3792. Do you know the name of the matron to whom you complained? I do not.
3793. Was it Mrs. Gilchrist? I do not know. She said she had been there many years. It may not have been the matron but the housekeeper; she had a big bunch of keys, and I think she told me she was the matron.
3794. *President.*] As far as you know, were the original terms on which your cousin was admitted to the institution agreed to? No.

[Witness withdrew.]

Miss \* \* \* sworn and examined:—

- Miss \* \* \* 3795. *President.*] Have you a sister in the Bayview House Asylum? Yes.
- 27 Nov., 1894. 3796. Do you remember how long she had been an inmate? Eight years, I think.
3797. Were you living in England a little over two years ago, and at that time did you receive certain reports about the treatment of your sister? Yes.
3798. Did you in consequence of those reports leave England and come to Australia to look after your sister? Yes.
3799. On whose advice did you take this action? On the advice of my lawyer in England.
3800. Had you letters of recommendation from the captain of the ship? Yes.
3801. Have you had correspondence with him since? Yes.
3802. When you arrived here did you immediately make inquiries about your sister? Yes; a fortnight after my arrival I called to see my sister. I presented myself to Dr. Vause, who was then very polite to me, but at the same time said he doubted whether I was the sister of his patient, Case No. 30. I satisfied him of my identity, and he then allowed me to see my sister. I was accompanied by Mrs. S \* \* \*. After the first interview, which was on July 30th, I went to Bayview House on the 2nd and 3rd of August, 1892. On the 3rd of August I was out all day with my sister, with Mrs. H \* \* \*, and with Mrs.

- Mrs. S \* \* \*. We all went to Manly and spent an enjoyable time, my sister being perfectly quiet and rational. On the 5th, the 12th, and the 16th of August I, accompanied by Mrs. S \* \* \*, visited my sister at Bayview House. On the 20th of August I received a telegram not to go out again with my sister, as Dr. Vause was ill. We had arranged for all four ladies to go to Bondi on that day. About the same time my sister's son arrived from New Zealand, and, with Dr. Vause, put a stop to any further going out. On the 23rd of August—this is all in the year 1892—I again called at the Asylum with Mrs. \* \* \* \*, and she was prevented from seeing my sister. On the following Monday, the 29th of August, I called again, and was most grossly insulted by Dr. Vause, who said, "You shan't see her," and held up his fist to my face. Her window was closed with a double window, so that I could not see her. Dr. Vause said to me, "You are only come for her money." I said, "I have not; I have come for her body." I had a basket of oranges with me, and asked that I might be allowed to give them to her, but was refused. On September 6th I again went with Mrs. S \* \* \*, and we were both grossly insulted by Dr. Vause. Dr. Vause said I could not see my sister then.
3803. Was Mrs. S \* \* \* a friend of yours? I was living with her, and I took her to Bayview with me because she had seen my sister on six previous visits. She felt deeply for my sister in her trouble.
3804. What happened on the 6th of September? I was told by Dr. Vause to wait patiently for a week, as I was only, on the order of her son, to see the patient once in every fourteen days. Dr. Vause pushed Mrs. S \* \* \* downstairs and said she should not see my sister.
3805. Did you consider this anything but nice treatment? Yes, I felt it very bitterly, because there was no cause for it.
3806. Do you think there might have been some misunderstanding in connection with this matter—for instance, you might not understand Dr. Vause exactly? Oh, no.
3807. Do you not think there might have been some particular reason why your sister should not be seen on that day? No.
3808. Might it not have been that your sister was at that particular period a little more mentally deranged than usual? She was all right, for the matron said to me, "You walk up and see your sister."
3809. Did you bring this matter before the Supreme Court, and apply for a writ of *habeas corpus*? Yes, but my sister was never brought before the Judge.
3810. Were her sons there? There was no one there except myself and Mrs. S \* \* \*.
3811. Who opposed your application for the writ? My sister's son. Mr. Crick, my solicitor, said I had gained the day. The son did not appear personally, but he opposed me by affidavit. I saw Dr. Manning about this matter before going to Court. He referred me to several solicitors, and gave me two sections of the Lunacy Act, sections 81 and 90, under which to take action. When I took this action it was opposed, which I think very unjust.
3812. Did the sons oppose your application? Yes, and their opposition was successful. I again wrote to Dr. Manning, but I got no answer to my letter. I then employed another lawyer to go on with the case.
3813. Had you any correspondence with the former Colonial Secretary, Sir George Richard Dibbs? Yes; and I also received a letter from Mr. Brunker, the present Colonial Secretary.
3814. Did you use every opportunity you could to obtain your sister's release? Yes.
3815. Did you ever have anything to do with the management of your sister? Yes; poor dear \* \* \* and myself lived in apartments in Middleton-square, London. She was always very manageable then. I have heard her two sons say that they are firmly resolved that they will never have anything more to do with their mother as long as they live—that they would rather do anything than come in contact with her.
3816. What is the cause of this disagreement between Mrs. \* \* \* and her sons? I cannot tell. They have never behaved properly to her as sons should, and in that respect they are just like the father, for he always treated my poor dear sister badly.
3817. Do you think then that the sons have inherited the dislike of the father to the mother? Yes.
3818. Do you believe that in consequence of this dislike the sons are acting in this particular way towards their mother? Yes.
3819. How do you account for medical gentlemen certifying that your sister should be placed in an asylum? Oh, one of her sons is up to everything. He said he would have her put in. His uncle, writing to me, says, " \* \* \* positively refuses to come in contact with his mother again," and he thinks that is a foolish resolve because he is sure she could not injure him.
3820. What does the uncle say to that? I do not know.
3821. Do you not think when he mentioned his opinion about the mother not inflicting an injury that he must have been at some time or other persuaded there was some danger to be feared from her? I cannot explain.
3822. Coming back to the 6th of September, when you say Mrs. S \* \* \* was roughly treated by Dr. Vause, did Mrs. \* \* \* \*, in consequence of this treatment, take Dr. Vause to the Police Court? Yes, to the Newtown Police Court.
3823. Did she issue a summons against Dr. Vause? Yes.
3824. What was the result? Mrs. \* \* \* \* lost the day. She had no lawyer, and the case was dismissed for want of evidence. Mrs. \* \* \* \* had a different witness in Court to the one who took us upstairs when the interview took place.
3826. Did the stipendiary magistrate make any remarks in connection with this case? I do not know.
3827. Who was the magistrate on this occasion? It was Mr. Giles, the deputy stipendiary.
3828. Did he not remark, after the evidence was given, that the complainant seemed to be a woman who always had a grievance? I do not know.
3829. Did not the magistrate say he had no hesitation in saying that whatever inconvenience she had suffered in the matter was the result of her own misconduct? I do not know.
3830. I am reading an extract from a newspaper report. Do you think it is a true account of the proceedings: It is stated that the two ladies visited the institution together, after Dr. Vause had informed Miss \* \* \* that she was not to bring Mrs. S \* \* \*. The doctor told Mrs. S \* \* \* that she could not proceed upstairs, but she said she would go on, and witness then placed his hand on her shoulder and forced her back. She resisted all the time, flourishing her parasol;—is that the case? I know she never misbehaved herself.
3831. Did the magistrate dismiss the case? Yes.

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- Miss \* \* \* 3832. And did he also censure the prosecutrix for bringing it into Court? Yes, but Miss \* \* \*, who gave evidence, did not see the occurrence.
- 27 Nov. 1894. 3833. Do you know Dr. M'Donagh? Yes.
3834. Did he examine your sister too? Yes.
3835. What is his opinion? He said that my sister is by no means dangerous; that she had been allowed out in my care; and that he considered her removal out of the asylum would be of great benefit to her, and that her state of mind generally would be much improved by such removal. He also said in his report that she might be let out on application for three months under a doctor's supervision and under my care and that of a maid.
3836. Did Sir Alfred Roberts, one of the official visitors, report anything in connection with your sister? Yes; he said he would sanction her release at once.
3837. Do you know that official visitors have the power of discharging patients? I know Sir Alfred Roberts said he would discharge her to-morrow. He would give his sanction for her removal without any hesitation, but that her sons opposed her being taken from the asylum and placed under my care.
3838. But do you know that Sir Alfred Roberts has the power to do this? He referred me to Dr. Manning.
3839. Does Dr. Cox say much the same thing? Yes, but the sons oppose it.
3840. Do you think that natural on the part of the sons, or do you think a sister's love is greater than a son's love? I do not know, but I do not think there is much love in her sons.
3841. Do you know Mrs. M \* \* \*, the wife of Dr. M \* \* \*, late of \* \* \*? Yes.
3842. Did she on one occasion, and in your company, call at Bayview House? Yes, to see my sister.
3843. How was she treated? She was met with a refusal.
3844. In a nice, quiet, gentlemanly manner? No; Dr. Vause said, "You take a chair in the sitting-room." He would not allow her to see my sister.
3845. Was there not something in connection with a bouquet of flowers? My sister was sitting at the public window. I took with me a bouquet of flowers. Mrs. M \* \* \* took them from me and pushed them through the window to my sister.
3846. Do you not think that such an action as this would be sufficient to provoke the temper of the Medical Superintendent;—do you not think it was direct disobedience? I think it was very hard that I was not allowed to see my sister.
3847. What fee does your sister pay per week? She pays three guineas per week to Dr. Vause.
3848. Where does this money come from? It is a pension paid for the services rendered by my sister's late husband.
3849. Is that the whole of the pension money? Yes.
3850. What interest will her sons have in keeping their mother an inmate of the asylum against your will? No interest that I am aware of. The pension goes when she dies; it dies with her.
3851. Would they have any interest of a pecuniary kind in keeping her there? No; they will not sanction her being put under my care.
3852. Are you on bad terms with the sons? No.
3853. How often have you met them? Only twice. I met one of them once in England when he was a boy, and once out here.
3854. Is there any quarrel between the two families? No; the Rev. Mr. \* \* \*, the deceased husband of my sister, always had a great dislike to my papa.
3855. Have the sons ever stated to you the reason why they object to you having charge of your sister? I think they have said I have a fiery temper. I do not think I have. I like to speak plainly and tell the truth.
3856. Is the only object you have in taking care of your sister that which leads you to believe you could attend to her better than she is cared for in the institution? Yes.
3857. Are you satisfied with the manner in which your sister is maintained for the payment of three guineas per week? No; she has always told me that the food was very poor in quality.
3858. Have you seen the food? No.
3859. Do you not think you should see it yourself before making such a charge as this? Perhaps so; but I have heard other people say the same thing.
3860. Do you say that the food is not only plain but also there is no fire in your sister's room during the winter? Yes.
3861. Do you say she only has a kerosene lamp at night—that her room is poorly furnished? Yes.
3862. That she has her meals in her own room? Yes.
3863. That she goes out very little, and, when she does, pays for her own conveyance and for meals for herself and maid? Yes.
3864. Is she always supplied with an ample quantity of clothing? Yes; she seems comfortably dressed.
3865. Is her room, as furnished by herself, fairly comfortable? Yes, I think so. I have only been in it once or twice.
3866. Does she complain to you about anything except that she is detained in the institution? I know she wants to get away, but she has only complained about the food.
3867. Does she complain about the quality of the food or the way in which it is cooked? She does not seem to like it. She has been brought up very delicately and had grown used to Indian life and French cooking. She had been in the habit of having little dainties, and she now misses them.
3868. Do you remember your cousin, Captain \* \* \*, or rather the son of Captain \* \* \*, coming over from \* \* \* to help you in this matter? Yes.
3869. How was he received then? He was received most harshly by Dr. Vause, so much so that he wrote to my lawyer in England complaining of the case generally. He wrote as follows:—

I HAVE much pleasure in introducing myself as \* \* \*, son of the late \* \* \*, of H.M.S. " \* \* \*." My cousin, \* \* \*, wrote to me several times about her dear sister, \* \* \*, now confined in the private asylum at Tempe, so I thought I would come over here from New Zealand and help my cousin, \* \* \*, to try to get \* \* \* released. I may as well tell you that \* \* \* and I called at Bayview House to see \* \* \*, and Dr. Vause refused our seeing her. I asked him the reason. He answered, "That is my business"; so, rather than have any words with a brute of that description, I wished him good afternoon. I now intend getting an order from the Secretary of State to visit all public buildings and institutions. I will also try and get a special order from the Governor to see \* \* \*. In the meantime we have consulted Messrs. Wallace and Robson, solicitors, requesting that this cruel case should be brought before the House of Representatives which is now sitting. I have offered to take charge of

of Mrs. \* \* \* as far as New Zealand, and she is welcome to stay with my family until such time as she wishes to return to England with Miss \* \* \*. I cannot understand any son being so cruel as to keep his mother locked up, who is to my knowledge perfectly harmless, and in such a vile den, and no one being allowed to see her. There is something very underhanded about the whole affair. Her very window is debarred of light. My cousin, \* \* \*, seems to be in great trouble at not receiving her money from you regularly, and I know she suffers therefrom, having been put to a great deal of expense over her sister, Mrs. \* \* \*. Trusting to hear from you, I have, &c.,

Miss ———  
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To H. Ramsden, Esq.

Sydney, 7/4/94.

3870. Was application made to His Excellency the Governor, Sir Robert Duff, for an order of admission? Yes.
3871. What was the result? Sir Robert Duff referred us to Dr. Manning.
3872. Did Dr. Manning then refer you to Dr. Vause? Yes.
3873. Did you then see your sister? No, sir. Dr. Vause refused our seeing her.
3874. Do you really want to get possession of your sister? Yes; that is my great desire.
3875. Supposing that we were to allow her out for a few months, would you be willing for her to remain under the supervision of a doctor? Yes; certainly.
3876. Do you feel capable of accepting that responsibility? Oh, yes; I have had my sister under my care before. She lived with me in England while we were in apartments. She lived with me for some time before she came out here to see her son.
3877. What means have you? I have got my income.
3878. What does that amount to per annum? Sixty pounds.
3879. Do you think, with your income of £60 a year, you would be able to give your sister the same advantages she is getting now for an expenditure of three guineas per week? No; she would pay for her own board with me from her pension, and then there is additional money under my father's will. That money is now accumulating in the Lunacy Office.
3880. How is it that that is there? I saw Mr. Edwards at the Master in Lunacy's office, and he informed me that he had received money of my father, and that it was accumulating for my sister's benefit.
3881. How much is there in the Lunacy Office? Between £800 and £900.
3882. Have you any share in that? No; that is all my sister's.
3883. So that with your £60, with your sister's pension, and the money likely to come from your father's estate, do you think you could make a comfortable home for your sister? Yes; and such is the patient's own wish. She desires that I should look after her—and always did.
3884. Can you tell me the origin of these feelings entertained towards her by her sons? No; I cannot tell.
3885. Cannot you fathom the reason at all? No; I wrote a most kind and pathetic letter to my sister's son remonstrating him for his harshness. I cannot understand it.
3886. Do you imagine that their minds are warped against their own mother? I really do not know, I cannot understand it.
3887. *Dr. Garran.*] What is the exact amount of this pension money? It is £187 per annum.
3888. How much is paid for your sister's keep at Bayview Asylum? Three guineas per week.
3889. When this is paid then is there much of the £187 left? No; every quarter Dr. Vause gets £40 for her keep and £24 a year for her dress.
3890. Does the whole of this go to your sister? Yes.
3891. When she dies does the pension go on to the sons? No; it dies with my sister.
3892. Would her sons have any pecuniary interest in keeping her there? No; there is nothing beyond, unless there is some interest in the money accumulating under my father's will.
3893. So far as the pension is concerned, would they get anything at all? No; that is for my sister's use solely.
3894. Supposing she is released from Bayview and placed in your care would you put your £60 per annum and your sister's £180 per annum together and live upon the whole? Yes.
3895. Do you also anticipate the accumulated money, amounting you say to between £800 and £900, coming into your sister's possession? Yes.
3896. If your sister were liberated would her sons have any chance of sharing that amount with her? No, that belongs to my sister under my father's will.
3897. Supposing your sister dies whilst at the asylum, how is that £800 or £900 to be divided? That is a question I cannot answer.
3898. But do you not know the contents of the will? The will does not make any provision in that direction.
3899. Has your sister ever made a will? I do not think so. She always said she would give her money to my sister \* \* \*.
3900. Do you think she is capable of making a will now? Yes, certainly. She has her senses about her, and knows what she is doing.
3901. If she were released from Bayview House would she get immediate possession of the money? Yes.
3902. If she died in the asylum how would that money be divided—would it go to the sons or to you, or to your sister \* \* \*? I do not know. It might go to the sons. Some might come back to me; but I suppose it would go into the hands of the Curator of Intestate Estates, and he would divide the money.
3903. Do you say that in your opinion your sister is always quite sensible and understands what she is doing? Yes.
3904. Is she always the same? Yes, as far as my experience goes.
3905. Has she ever been an inmate of any other asylum? Yes; she was in an asylum in Melbourne for a short while.
3906. Was that a Government asylum? No; it was a private asylum.
3907. Was she admitted to that on a medical certificate according to the provisions of the Lunacy Act? Yes.
3908. How long after her arrival in Australia was it before she was admitted into this private lunatic asylum? About a fortnight after she came off the ship. She was taken to the asylum by her son, so she told me.
3909. Was she admitted on that occasion on the certificates of two medical officers? No; she was put in on the certificate of one only—a Dr. Molloy, who is since dead. I have received a letter from the matron of the institution saying it was a most disgraceful thing to put my sister, a sane woman, into that asylum.

3910.

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3910. Did you take your sister about with you? Yes, frequently.  
 3911. Was she quite quiet in her behaviour? Yes, always.  
 3912. Do you think that Dr. Vause is willingly and wilfully keeping your sister in confinement knowing that she might be with safety let out? Yes, I think so; in fact I believe he is in league with my sister's sons.  
 3913. Do you not say that your sister's sons have no pecuniary or financial motive in keeping your sister in the asylum? Yes, I do say so.  
 3914. What other inducements have they for keeping her there? I really do not know. They surprise me by their action.  
 3915. Do you not say the visiting doctor, Dr. Cox, would agree to your sister's removal? No; I said Sir Alfred Roberts. He said he would sanction my sister's removal from the institution to-morrow, but the sons oppose it.  
 3916. Do you blame Sir Alfred Roberts in any degree for the continued detention of your sister? No, nor Dr. Cox either.  
 3917. Do you think they would be willing to allow your sister to go out? Yes.  
 3918. Do you think Dr. Manning is of the same opinion? No, he always opposed me.  
 3919. Do you think that the four doctors, Dr. Manning, Dr. Vause, Dr. Cox, and Sir Alfred Roberts, all really think that your sister is in a fit state to leave the asylum? Sir Alfred Roberts and Dr. Cox have told me that she was fit to go out, but Dr. Vause and Dr. Manning hold a different opinion. They are not in favour of letting her out.  
 3920. Does Dr. McDonagh say that she should come out? Yes, he signed an affidavit to that effect.  
 3921. *Mr. McGowen.*] In answer to Dr. Garran do you not say that one or two of the visiting doctors have said to you that if they had a sister in that place they would try to get her out? No; not exactly that. Sir Alfred Roberts said that I was a noble sister, using my utmost endeavours to get my sister removed from a place where she ought not to be.  
 3922. *President.*] Am I to understand that your sister was in Crichton Asylum on one occasion? Yes, about twenty-six years ago, and then the celebrated Sir James Cox, M.D., said my sister was a victim of persecution.  
 3923. Was your sister put in that asylum by her late husband? Yes; he took that action while he was in India. My father and others worked hard for six years, and eventually got her liberated.  
 3924. *Dr. Manning.*] Do you know that two or any two of the official visitors, say Sir Alfred Roberts and Dr. Cox, together have the power of discharging any patient from the institution? Yes; I have been told so.  
 3925. Knowing that they possess this power to discharge, and having expressed the opinion that your sister is in a fit state to be removed, does it not strike you as strange that these gentlemen have not exercised this power? No; because the sons oppose my sister's removal.  
 3926. Did you get your sister released from an asylum in Scotland? Yes.  
 3927. Did you live with her afterwards? Yes; I lived with her about a month in Scotland, and then went to England.  
 3928. Did she then come to see her sons in Victoria? Yes; she came to see her sons. Before she left England I said, "Don't go, they will entrap you." I think I was justified in saying that when the son tells his uncle that he will not meet or come in contact with his mother.  
 3929. Do you not say that you have had your sister before? Yes; she stayed with me after papa died for some four years. During that time she was visited by many influential people in London, amongst them being the late Sir Andrew Clarke, the celebrated doctor, who told me my sister was not mad, but eccentric.  
 3930. Do you not say that her son is in league with Dr. Vause to keep your sister at Bayview House? Yes.  
 3931. *Dr. Manning.*] I will now, Mr. President, read a letter which I have received from this son. This letter is as follows:—

18 August, 1894.

Dear Sir,  
*Re Mrs. \* \* \**, Dr. Vause has informed me that \* \* \* continues to cause him much annoyance, and to agitate for the transfer of my mother to her care, also that the idle hope of release which she raises disturbs and deprives her of the calm repose so necessary to her case. \* \* \*, I understand, has given out that \* \* \* is detained at Cook's River by my orders, and not because her state of mind requires she should be there. I am anxious, therefore, to reassure you in writing of that which I have so often told you personally, namely, that my brothers and I have only one wish in our mother's unfortunate case, and that is that she should be made as happy and comfortable as circumstances will permit. My orders are that she is to be indulged to the utmost degree, and to be granted whatever pleasures her heart may desire. Further, should her income be insufficient to supply her wants Dr. Vause has instructions to charge the balance to me. No greater pleasure could be afforded my brothers and me than to know that our mother was able to go into the world again, and a home awaits her in my brother's house or mine in that event as she may elect. In order to facilitate action should a favourable change occur, I have given a power of attorney to Messrs. A'Beckett and Horrocks to act for me in this matter. You will therefore have someone on the spot to refer to should necessity arise. Again, provided my mother's state of mind should warrant the authorities in giving her a trial with a private family preparatory to her transfer to my brother or me, it is my desire that she should be afforded the opportunity of demonstrating that she is fit to be in the world, but I make this stipulation: such trial must be given with a family responsible and favourably known to the authorities. Under no condition is my mother to be given into the care of Miss \* \* \* or to be placed with a family with whom she is acquainted or is likely to have influence. I am satisfied that Miss \* \* \* visits to Mrs. \* \* \* are highly injurious to her case, and I desire that they should be restricted so far as the authorities may deem prudent.  
 Yours faithfully,  
 \* \* \*  
 Dr. Manning,  
 Gladesville, New South Wales.

- The question I want to ask now is: Did you see that Mrs. \* \* \* sons are quite willing and even anxious for their mother's discharge, provided she is in a fit condition? [No answer.]  
 3932. Do you think your sister is quite sane and able to manage her affairs? Yes; she did so in England.  
 3933. Does she know the amount and value of her property? Yes.  
 3934. Is this her writing [*Letter produced*]; Yes.  
 3935. This is what she says in one part of her letter:—

Feeling strong now, and well enough to wend my own way to my fortune of late left to me, an immense sum of money lying dormant and secret in England \* \* \* The Treasury lends me the money and is repaid from England; Money is the bane of life to get all or in part if they can. Out free I should be active to prevent. Buying a lovely site and park grounds in England, building thereon mansion, lodges, cottages \* \* \* My sons to live in the grounds with me; two are rich—the one not with me to stay—a retinue of servants, a young lady companion, lady visitors from time to time, callers, garden parties, &c., leaving the whole to my children twenty years hence.

- Do you recognise that as your sister's handwriting? Yes; it is her handwriting certainly. 3936.

3936. Do you think all this could be done with the £900 accumulated at the Lunacy Office? I cannot tell; but that would be sufficient to get a cottage, and I know well that she does not want a mansion.
3937. Do you say that your visits to your sister have been restricted to some extent? Yes.
3938. Did you not give Dr. Vause a good deal of trouble in one way or another? Never.
3939. Were you not a persistent source of worry to him? Never.
3940. Is it not a fact that you made some arrangement with a man to run away with your sister or to abduct your sister from the asylum? No.
3941. Is it not true that you gave this man the sum of £20 to secure your sister's escape, and that this man is now in gaol for the part he took in that transaction? No; that is all wrong. Judge Coffey gave the decision in my favour. We did not try to abduct my sister. We simply endeavoured to get her out by stratagem.
3942. Is it not a fact that you tried to get her out and that the man who assisted you is now serving a term in gaol for having done so? Yes.
3943. When you came to me did I not give you all the information I could as regards taking legal action for obtaining the writ of *habeas corpus*? Yes.
3944. Did I not do all I could to help you in this matter? Yes, you did, and at the same time brought an affidavit against me opposing my application.
3945. *Dr. Vause.*] On the occasion of the trouble with Mrs. S. \* \* \*, had you not been told previously that she could not see the patient? No, she was not told that. Some man told me that the next time I came I must not bring anyone with me.
3946. Did I give any grounds for refusing to allow you to see the patient? Yes; you said her son forbade it, and that I could not see my sister without the sanction of her son.
3947. What did the closing of the window consist of? It was closed with a double-glazed window shutting out light and fresh air.
3948. Do you know if there were any iron bars there? Yes.
3949. Were these taken away? They were there when I saw her through the window.
3950. Were they taken away subsequently? I do not know; I have not seen the room.
3951. Were not the iron bars removed and substituted by a glass window? I do not know that.
- [Witness withdrew.]

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Mr. \* \* \* sworn and examined:—

3952. *President.*] What is your name? \* \* \*
3953. Have you a sister (Case No. 35) an inmate of Bayview House Asylum? Yes; I have.
3954. How long has she been there? Since 1884, I think.
3955. Do you remember the circumstances in which she was placed there? Yes. She had been lodging with a widow lady at \* \* \*. She stayed there for a time, then came down to Sydney to see her brother, \* \* \*. She called at his house early one morning, when he said to her, "Sit down, \* \* \*, and wait a while." He then went out, got a cab, and drove her to the asylum.
3956. Did he do so without any medical examination? I think so. She had been examined some years before by Drs. Fortescue and Hodgson. They are since dead.
3957. When did that examination take place—when she was taken away the first time? It was shortly after my mother's death, early in 1884; in February, 1884, I think.
3958. Was she placed there at that time? Yes.
3959. Who gave the certificates on that occasion? There were none at all that I know of.
3960. Had she been at Bayview House before then? Yes; some years before. Dr. Tucker, who kept the place, was a friend of my father's. My father took her out.
3961. Did you in August, 1891, have your sister examined by Dr. Ashwell, of Glebe Road, and Dr. Mark Henry Long? Just about this time I saw Mr. \* \* \*, one of the trustees, and said, "What about \* \* \*—how is she getting on?" He said, "Would you like to take a couple of doctors out, and see whether she is fit to come out?"
3962. Did you try to get your sister out then? Well, I wanted them to go out and give me a report on her condition.
3963. Did you obtain this report from the medical gentlemen? Yes; before my mother's and my father's deaths.
3964. In the year 1891 did you take any action? About that time I entered a suit in the Equity Court, on the advice of Dr. Manning and others. As a result of that Equity suit, she was not released. After the trial Mr. \* \* \* took out fresh orders.
3965. Did you believe she was insane at the time? I am perfectly certain she was not.
3966. Are you confident on that point? She was erratic, nervous, and irritable, but as far as insanity is concerned I think she was quite sensible. While we were talking she could go back for thirty or forty years, and remember dates and places as well as I can.
3967. Do you know Dr. Ashwell, of Glebe Road? Yes.
3968. Do you know that he is a medical practitioner? Yes.
3969. Do you know that when he examined her on the 19th August, 1891, he said she was incoherent, and rambling in conversation—that she is in the habit of accusing her attendants of neglect? No.
3970. Do you know that it was said of her that something had gone wrong in her mind, and that there was something wanting;—do you think that after having made a personal examination and certified that he had discovered these symptoms, that he is correct? I think he is not correct. I think he said this because he was working at the instigation of my mother in company and with Dr. Vause and Dr. Manning.
3971. Have you ever heard that Dr. Mark Long certified that Case No. 35 was, on the 19th August, 1891, "rambling in conversation; constantly changing the subject; very voluminous in her conversation; tells me that Dr. Vause was rude and looked down upon her; and that the late Mrs. Vause accused her of jumping out of the store window; that the food is not good, and that the tea they get in the asylum is gradually poisoning her; got very excited whilst conversing";—do you think that this description made by Dr. Long is correct? No; it is not correct.
3972. Is it correct if her brother \* \* \* informed Dr. Long that she once attempted to empty a kettle of boiling water over her niece? It is all bosh. My brother has six or seven unmarried daughters, and
- at

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- Mr. — at my sister's death they will get the whole of her money. It is only since my father's death that this position has been assumed.
- 27 Nov., 1894. 3973. Do you conscientiously believe this statement to be incorrect? Yes, as far as I know.
3974. During the time you have known her, have you on any occasion known your sister in any way to misconduct herself or commit any act that should result in her detention in a lunatic asylum? Not since her father's and mother's deaths. Prior to those events her father thought it advisable to put her away for a time.
3975. Did she get better after her first detention? Yes.
3976. Are you rather suspicious concerning the asylum reports having reference to your sister's case? Yes, because I think they touch them up.
3977. Do some of the attendants report to you on your sister's position and state in the asylum? Yes.
3978. Are you always anxious to have the fullest information about your sister? Yes.
3979. Do you get inquiries made through the attendants? No; only through Mr. Gearey.
3980. How does he know of what is going on in the asylum? He seems to know everything that is going on in connection with Bayview House. For instance, if I go to him this morning and say I want to know what has happened in regard to my sister during the day, he will tell me to come again at 4 o'clock and then he will let me know everything that is going on.
3981. Is he, comparatively speaking, a stranger to you? Yes.
3982. Have you had conversation with him frequently? Yes; now and again.
3983. Can he tell you within twenty-four hours of the time of happening the history of every event in connection with the asylum? Yes; he can tell me all I want to know.
3984. Have you any reason to believe that Gearey has any special means of access to Bayview House? I do not know.
3985. Is he an officer of that institution? I do not think he is. I believe he is an inspector at the Town Hall in Sydney.
3986. Does your sister occasionally ask why she is kept there? Yes; she is sensible enough to ask that question.
3987. Is your sister rather attached to you? Yes; she always was. My brother \* \* \* had not even seen her until I brought him to this country from Africa.
3988. When you had conversations with your sister, did she seem to be perfectly rational, and well enough to be away from any kind of restraint? Yes.
3989. Was there anything at all eccentric in her conduct? No; she always used to ask why she could not come out.
3990. Are you a man possessed of independent means? Yes.
3991. Have you any family at all? No; only myself and my wife.
3992. Do you know through whom your sister's maintenance is paid? That I could not find out until about eight months ago. After the trial in 1890 I went to the Master in Lunacy. I employed a solicitor, as I wished to know the state of the account. I was referred to Dr. Manning, and I never got any statement. Then I entered the suit in Equity.
3993. Does the Master in Lunacy pay for your sister's maintenance at Bayview House? Yes; I presume so.
3994. If he does not, do you know who pays for her? I do not know.
3995. Do you think that your brother \* \* \* has any pecuniary interest in keeping your sister there? Only in this way, that his children will reap the benefit after my sister's death. Up to the time of my mother's death he had no means whatever.
3996. What is about the age of your sister? Fifty-four or 55 years.
3997. At her death does her property go to you and your brother? It goes to my brother and his children.
3998. Under whose will is this decreed? The will of my mother, \* \* \*, who formerly owned, or formerly of, the \* \* \* Estate.
3999. Does your brother get certain special privileges in regard to your sister at Bayview House? Yes, he does.
4000. Are you allowed similar privileges? No; I am not allowed to converse with her except in the presence of attendants. Letters that she has written to me have been perused before I have received them; in fact, in 1891, I wrote to Dr. Vause and demanded twelve letters I had previously written, and which I think my sister did not get.
4001. Is it not an extraordinary thing that letters should be opened before you got them? I cannot understand it; I think my brother understands it, though.
4002. Do you not think that your elder brother, who is connected as closely to you and your mother and your sister as you yourself is to either, has not a prior claim in connection with a family matter of this kind;—do you know that he, by the will of your mother, has been placed in the position of one having a prior claim? It is only recently that he has been appointed a trustee, and that was done by a little bit of manœuvring. I am trying to dispute his right to that position. I know he keeps my sister there because after what has been used for her maintenance he or his children will get the rest. He wants her to be there for her natural life, there is no doubt about that.
4003. Are you satisfied with the treatment your sister receives at Bayview House? No, I am not.
4004. On what points are you dissatisfied? My sister has told me that on frequent occasions Dr. Vause has taken her by the shoulder and pushed her into a room. She says her food was coarse stuff, and that often she was compelled to fill herself with dry bread. She also says that she suffers severely from piles, and gets into trouble for soiling her linen. I believe that since this inquiry began she has been better treated. Dr. Manning shakes hands with her now, but prior to that he would not speak to her, and if she spoke to him he would attempt to put her off.
4005. Has she ever spoken to you or your wife, or has your wife ever spoken to you on the subject of your sister being a victim to any particular disease peculiar to women? Never; I am perfectly sure of that. I am certain on that score. I have reason to go back for some years in reference to that. I can only say that my sister suffered from an ebullition of temper. A medical gentleman of eminence examined her, and the result was he said there was nothing to be feared, and that she was perfectly right.
4006. *Dr. Gárran.*] Are you aware that there is a fixed date on which Government visitors shall inspect private asylums? Yes.

4007. Do you know whether the attention of the visiting committee was ever directed to this case? Not that I know of. Mr. ———
4008. Do you know whether members of the visiting committee, personally, individually, or collectively, examined your sister? No; she tells me they did not. I think, however, Sir Alfred Roberts spoke to her occasionally. 27 Nov., 1894.
4009. Am I to gather from your answers to the President that you accuse Dr. Vause and others as being interested in keeping your sister at Bayview House? Yes.
4010. Do you not think that the visiting committee appointed by the Government is intended to be a powerful protection against anything of this kind? It may be so, but still it may be through their ignorance that there is no protection. I felt compelled to go to the Court on the advice of Dr. Manning and Dr. West, and one or two others. I suppose it never struck us to go any further.
4011. Were you personally persuaded by Dr. Manning? Yes; through Dr. West, Mr. \* \* \* \*, then M.L.A., my wife, and another lady.
4012. What was Dr. Manning's opinion? It is a report in answer to a petition presented to Sir George Richard Dibbs for her release. It amounts to a recommendation that my sister should be kept in custody.
4013. Do you mean to say that from this report Dr. Manning was of opinion that the lady is insane, and not fit to be discharged? Yes.
4014. Except under special care? Yes. Prior to that Sir Alfred Roberts and others reported that this lady was a little peculiar at times.
4015. Supposing that your sister were to be released would you reap any direct pecuniary interest? No, nothing. All that my sister and myself have, in the way of property, would go to my brother and his children.
4016. Do you really believe that your sister is perfectly sane? Yes, I do.
4017. *President.*] Did you bring the whole of this matter before the Supreme Court? Yes, before the Judge in Equity in 1891.
4018. What was the result of the investigation? Well, the release of my sister was refused. I think the whole business was a pre-arranged matter, for I saw my brother and Dr. Manning shaking hands and hobnobbing together outside the Court before the case came on.
4019. Did not the Court decide that \* \* \* \* was an unfit person to have charge of his sister, \* \* \* \*? No, not that I know of. I have been thirty-five years in this Colony, and my character, I think, both domestic and otherwise, will bear as much investigation as that of Dr. Vause or Dr. Manning.
4020. Did you send a petition, or be instrumental in causing a petition to be sent, to Sir George Dibbs, in the hopes of steps being taken to get your sister under your own control? Yes.
4021. Were the reasons which prompted you in doing so purely a desire to benefit your sister? Yes, purely and simply so.
4022. Had you any other object? No. I can get four first-class business men, men of repute to whom I have not spoken, who will with me ask you why my sister is kept in Bayview House. All her friends want her out because, so far as they know, she has never done anything which should keep her in.
4023. Was your sister always particularly sympathetic and attached to you? We were always friends, and she was particularly devoted to my father, who could do with her as he liked; in fact she conducted the whole of his correspondence after he was seized with illness, and while he was lying in bed up to the time of his death.
4024. *Dr. Manning.*] Have you not said that your sister was first taken to Cook's River Asylum in 1884, immediately after your mother's death? Yes.
4025. Have you said anything about your sister having been previously at Gladesville in 1875? My father took her there, and he took her out again. I was not asked the question.
4026. Was she taken out and put under your father's care? Yes.
4027. Did your father again put your sister under safe keeping? Yes.
4028. Were the two doctors whom you sent to Bayview House and paid for, the gentlemen who gave a certificate or certificates for her further detention? Yes, I paid them fees. I saw Mr. \* \* \*, the trustee, and then sent these gentlemen out to the asylum. I also took Dr. Philip out there after a little time. He said he knew Dr. Manning, and would see him. I knew my sister could converse in French, and she did so with Dr. West.
4029. Although you believe your sister, Case No. 35, to be perfectly sane, do you not think she is a little difficult to get on with? Not the slightest; she is as sensible as you or I. She would never agree with my brother's family for a couple of hours together. She never wanted to.
4030. Did you not state that you saw me outside the Court shaking hands and hobnobbing with your brother? Yes. That was when the case was before Judge Windeyer. There was yourself, also my brother and Dr. Hetherington, and then the case by consent was sent on to Judge Owen.
4031. Did I appear before Judge Owen at all? No; not that I am aware of.
4032. *Mr. McGowan.*] When did you enter the suit in Equity in the hope of getting your sister out of the asylum? In 1891.
4033. Do you know in what month of that year? I do not know.
4034. Do you know whether it was previous to the date of August 19th, 1891, when the certificate affirming that your sister was insane and a proper person to be taken charge of and detained under care and treatment was issued? Yes, I am quite sure that the Equity suit both began and ended prior to that date; in fact long prior to that date.
4035. At first was your sister put in an asylum on the wish of your father, and, subsequently, by him released? Yes.
4036. Did she remain for some time at large, and then be placed under restraint again during your mother's lifetime? Nothing of the sort.
4037. Was she again put in the asylum in 1884? Yes, after my mother's death, to get rid of her.
4038. Was that in 1884, after your mother's death? Yes.
4039. And has she been in the asylum ever since? Yes.
4040. On what certificate? Only on the order of Mr. \* \* \*.
4041. Then this certificate had nothing to do with the incarceration of your sister previous to the Equity suit? No.
4042. At the time you entered the Equity suit, were there any orders for your sister's detention? No.

- Mr. 4043. Did you know that under the Lunacy Act, the doctors being dead, there was any necessity for fresh orders? No.
- 27 Nov., 1894. 4044. Do you know on what date you entered the Equity action? In 1891.
4045. Would it be prior to August of that year? Yes.
4046. Did it come out while that Equity suit was proceeding that your sister was incarcerated on the doctors' certificate which secured her first admission to an asylum on her father's application in 1875? I do not know that it did.
4047. Have you any reason to believe that your brother asked your sister if there were any other certificates except those issued on your father's request in 1875? I am sure there were no other certificates.
4048. Do you not say that you have no pecuniary interest whatever in seeking your sister's release? None whatever.
4049. If she were liberated what would you do? I would keep her for nothing; I am able to do it.
4050. Do you not also say that, providing you die before your brother, your brother gets the benefit of your money? Yes; he and his heirs will receive all.
4051. Do you say that you brought him over from \* \* \*? Yes; I lent him money to come here. I went over there and worked my way over here in a sailing vessel, and I lent him £300 to land him here. He landed in Melbourne without a shilling, and I fetched his family over.
4052. Has your brother any motive in keeping your sister at Bayview House? Yes, undoubtedly. Under the will of my mother she takes a considerable interest, and when she dies this goes to him or his children.
4053. Supposing your sister comes out of the asylum would she have any power to deal with any money? I believe her interests are concerned in valuable property under the will, but my brother will not give me any information about this, neither will the other trustee. I am inclined to think that everything belonging to my sister goes to my brother in the case of her death.
4054. Well then, why is it not to his interest to keep her there? I think the Master-in-Lunacy has to be counted with. Everything must go through his hands.
4055. What motive can your brother have in keeping your sister in the asylum if on her death everything goes into his or his children's hands? If my sister was out of the asylum she would possibly live up to her income, but while she is in the asylum there must be funds accumulating. I know that in 1884 or 1885 the other trustees had some hundreds of pounds in hand.
4056. Supposing we were to recommend the release of your sister would you promise to keep her well? I would keep her willingly, and much better than she is kept in the asylum. I have talked about her case to Dr. West. He has known the family for a good many years and his opinion is that my sister is not insane.
4057. Do you think your sister is not insane? Yes; she is as harmless as a child.
4058. Supposing a couple of medical men decide that she is insane, what have you to say? Well, that I can bring half a dozen medical men to say she is not.
4059. *President.*] According to a statement I have before me it appears that your sister was first admitted to Bayview House on May 31st, 1881? I cannot speak about that, I know my father died in 1883.
4060. Were you on particularly good terms and aware of the movements of your family at that time? I do not know.
4061. According to information before us, it appears that your sister had leave of absence from the 20th of December, 1882, until she was readmitted to Bayview House, or in other words that she was not discharged? According to what my father told me she was discharged, and he also told me never to agree to her going in again. My mother also told me never to allow her to go back again.
4062. Was she not discharged on the 20th of the eighth month, 1891, and readmitted on the same day? I suppose that is the date on which the certificate was signed after the Equity suit had been decided in the Supreme Court. I suppose Mr. \* \* \* took it out in order to get her back again.
4063. Do you hold that she was illegally detained until then? I was always under that impression.
- [Witness withdrew.]

WEDNESDAY, 28 NOVEMBER, 1894.

[The Commission met at 11 a.m. in the Board Room, Chief Secretary's Office.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
ESQ., M.D., INSPECTOR-GENERAL OF THE  
INSANE.

ANDREW GARRAN, Esq., LL.D.  
JAMES SINCLAIR TAYLOR MCGOWEN,  
Esq., M.L.A.

Dr. Vause was also in attendance to hear evidence and examine witnesses.

Mr. \* \* \* (brother of previous witness) sworn and examined:—

- Mr. —. 4064. *President.*] Have you a sister at present an inmate of Bayview Asylum? Yes.
- 28 Nov., 1894. 4065. How long has she been there? She was readmitted in 1884.
4067. Can you tell us very shortly and to the point the unfortunate circumstances of your sister's case? My father found it necessary to put her in Gladsville Hospital for the Insane as far back as April, 1875. My sister at this time was about 36 years of age.
4068. Did your father have your sister particularly attended to on account of the sad circumstances of her case? Yes; I recollect her in my early life, and then a good number of years elapsed before ever I saw her again. In early life I knew her in \* \* \*. My father came out here and brought my sister and the rest of the members of the family, but at this time I was not with the family as I was in \* \* \*. When I came out here some provision had been made for the treatment of my sister outside my father's house. She was not in his house then. Her condition at this particular time, as far as I could ascertain, was

was that she was extremely quiet, and occasionally had fits of mania, which usually took the form of extreme jealousy. My mother was generally the special object of my sister's distemper, but at times she would fall upon any servant about the place whom she may have got on fairly well with at first. At the same time there was no reason for the change in her demeanour. That was the general course of her conduct for a time; eventually these fits would resolve themselves into attacks upon her father. My good father was deeply devoted to this poor soul—there was nothing he would not have done for her. She would attack him most cruelly, and accuse him of every crime in the calendar. She would wander about the place for hours at a time, and stray away across the paddocks; but, worse than all, she would sometimes disappear from the house for a considerable time. We would know nothing of her whereabouts until, perhaps, she would turn up again at any moment, and just as if nothing at all uncommon had happened. This was such a change from her early life, for as a child she had every possible advantage. She would come home from these rambles without a dress on, and still did not appear to realise that she offended against any law of propriety. This sort of thing went on for some time until it became unbearable, and eventually my father was compelled to take action, and he had her placed at Gladesville.

Mr. —  
28 Nov., 1894.

4069. Who were the doctors that examined her and signed the certificate for her admission to Gladesville? I cannot tell you exactly, but I think Drs. Fortescue and Joseph, who were in charge of Gladesville at the time. Her condition continued to be just the same while she was there. We used to visit her frequently, and her great trouble seemed to be in reference to the treatment she had to undergo. She was very rough in her charges against the place at the time, and we also found out that whenever there was any attempt to control her movements she would resist to the utmost and simply turn round on any and every one.

4070. Was this actual physical violence an unusual thing? I do not know what actually took place, but I do know that she would at times resort to actual violence, even before she went to the Gladesville Hospital for the Insane. I recollect one instance when she attempted to upset a kettle of boiling water over one of my children, a good-sized girl, residing with her grand-parents at the time. I know, too, that on more than one occasion she came in personal conflict with the servants about the place, but I do not think she ever did any absolute harm.

4071. How long did your sister remain at Gladesville? She remained there until December 24th, 1875.

4072. Did she come home on that day? Yes; I presume you observe the day; it was Christmas Eve, and the family in kindness of disposition agreed that we might give her a trial and determined to have her home for the Christmas festivities.

4073. Was she on this application discharged from Gladesville? I think she was, as far as I know, but I am not quite certain as to the process followed.

4074. To the best of your recollection was she discharged? I am not certain whether she was let out on leave or discharged.

4075. How long did she remain at home after her removal from Gladesville? Things went on at home for a while fairly well, and then she became worse again.

4076. Did the same symptoms show themselves? Yes, but in a more aggravated form; besides there was something else. I have a younger brother, and he was causing my parents just as much trouble as my sister. His particular weakness was drink. He was in the habit of coming home at all sorts of hours and in a very deplorable state. My sister would always be about at these unearthly hours to receive my brother, and she seemed to simply rejoice in what was going on. She did not for one moment grasp in the least the seriousness of the position. He, too, would bring her all sorts of presents, and this fact helped so place her beyond the power of our control. My mother and father made arrangements with different parties to take charge of her. She, however, would, as before, disappear from wherever she was placed, and then finally turn up as if nothing had happened. She would go to most extraordinary places and naturally people soon got tired of her. When my father and mother went out of town they would leave her sometimes with me in charge. Then, as a rule, she would become beyond my control. While in these fits her practice was to go up and down the verandah, talking at the top of her voice. I would let her do so until bed-time, and then I would say to her, "Now, \* \* \*, you have to stop this game and go inside; it will be 12 o'clock directly." She would tell me to mind my own business. I would tell her that if she would not do it of her own accord I would take her in. Twelve o'clock would come round, and I would then pick her up and carry her in. Another of her practices was to rub herself against a post, bruise herself if possible, and then pretend that these marks were evidence of my ill-treatment of her on the previous night. This kind of thing went on for some time, and then in sheer desperation my father had her placed in Bayview House.

4077. Was she, comparatively speaking, a young woman when you noticed, or when the members of your family first noticed, these peculiar circumstances in connection with your sister? No; as a girl she was at a boarding-school at Bayswater. At first everybody was very kind to her, and she seemed to be all right. After a while, however, she developed certain eccentricities there. I think jealousy, or something of that kind, was at the bottom of it. She used to think other people better than herself. She would get on some of their clothes. At times she would cut the clothing into shreds, and put it down a certain place.

4078. Up to the time she was taken to Gladesville had she shown any moral or sexual obliquity or anything of that kind? No, not that I know of.

4079. Was it because she was becoming so very troublesome at home that her father placed her again under restraint? Yes; he did so in May, 1881.

4080. Was it not in August, 1881—I want you to be quite sure about this date, for it is rather particular? I think it was about the month of May.

4081. Do you recollect what your father did? He had her placed at Bayview House.

4082. Was this the first time she had been at Bayview House? Yes.

4083. Were the necessary medical certificates obtained for her admission? Yes.

4084. Are you aware of that fact? Yes.

4085. Do you remember what doctors examined her? Not distinctly, but I am inclined to think they were Dr. Hodgson and Dr. Fortescue.

4086. Do you not say that Dr. Fortescue examined your sister before she was admitted to Gladesville? Yes.

4087. Do you think he examined her again? He would have done so, if he were alive when she was admitted to Bayview House.

4088.

- Mr. ——— 4088. Did Dr. Hodgson do so too? I think he had to do with the case.
4089. Did your sister remain long at Bayview on this occasion? Yes, until she was taken out on leave.
- 28 Nov., 1894. 4090. At about what time was she taken out on leave? Some months afterwards. I think a considerable time afterwards.
4091. Was she then taken back to Bayview House again on account of her unsatisfactory condition? Yes; I remember her going back. I know something of the circumstances.
4092. What were they? The circumstances were that after my mother's death—in fact after the death of my father and mother—the trustees under the will of my father, Mr. \* \* \* and Mr. \* \* \*, made similar provision for the treatment of my sister, by placing her in various houses at Waverley and other centres. She left each one periodically after having remained a short while. If she could not escape through the door she would go through the window. On one of these escapades, as soon as she obtained her freedom she visited a hairdresser's shop, and had the whole of her hair cut off. She then disappeared, but after a while we found her. She was then placed with other people at the Glebe, and from there she was taken away by the younger brother to whom I have already referred. The trustees came to me in a state of alarm as they were unable to find her. We went to Parramatta and found her living in what most people would term a bark humpy, where were also her brother and his then wife. It was a very miserable business, and the trustees, after consultation with Archdeacon \* \* \* placed her with a lady whose name I cannot remember, but who was residing at \* \* \*. My sister remained there for a while; eventually she turned up at my house in \* \* \*. From the time she was taken away from \* \* \* until this she went through a very bitter experience.
4093. Was this experience of an altogether unsatisfactory nature? Yes, most disgraceful and most painful.
4094. Did your brother take some action about that time in connection with your sister's case? No; he did not take action until 1891.
4095. What did the trustees do eventually? I am not quite sure about what was done; but I think, after talking the affair over, they came to the conclusion that there was nothing for her personal safety than to place her in confinement in Bayview House again.
4096. Do you remember the occasion of her being taken to Bayview House after this consultation? I ought to recollect all about it, for I really believe I went with her.
4097. Had you a medical certificate when you took her on this occasion? I am not quite sure what was done then in this respect, but I feel certain that everything that was done was done in proper form.
4098. Do you know what particular form? No; but I am convinced in my own mind that what was done was right, although I do not remember the exact process. One of the trustees, the late Mr. \* \* \*, was the solicitor, and he knew the proper course to take, and I feel sure he took it.
4099. Were instructions followed under his advice? Yes, he was acting under instructions.
4100. Did Mr. \* \* \*, the other trustee, take any part in the proceedings other than as a friend of the family, or did he leave the whole matter in the hands of Mr. \* \* \*? Everything was left in the hands of the co-trustee.
4101. Does your memory serve you with regard to the specific particulars? No.
4102. But do you think that everything was done according to law as far as you know? Yes.
4103. Did your sister remain for a considerable time at Bayview House before any further action was taken? Yes.
4104. What was the next step? After various attempts I think the Court was moved.
4105. By whom? By my brother, and I saw from a report in the Press, that the matter had been dealt with by the Court, and that the judges had refused to make some order applied for by my brother.
4106. Did you see the notice that an order had been applied for? Yes.
4107. Was that application made before His Honor Judge Owen? Yes.
4108. Was it decided that your brother was not a proper person to have the custody of your sister, providing she were removed from Bayview House, and that she ought to go back to Bayview House? Yes; I believe that was the effect of it.
4109. Do you remember your brother sending out to Bayview House Dr. Ashwell and Dr. Long to examine your sister about that time? I think that the trustees sent those doctors out.
4110. Your brother had given it in evidence on oath that he sent these medical gentlemen out and paid their expenses? That is not correct, for I was the medium of paying the expenses.
4111. Did your brother then send the doctors out, or did the trustees do so? I think the trustees, desirous of seeing if anything could be done in my sister's behalf, sent the doctors out. I will read you an extract from my diary under date of August 14th, 1891.
4112. What circumstances do you refer to? I will read the extract. It is as follows:—"My brother took two persons out to Bayview this day, August 14, 1891, and as he asserted they were connections, Case No. 35 (who was in a bad frame of mind) was allowed to be seen within doors. Then \* \* \* asked for her to go out with him into the grounds, which was assented to, and he invited the two men to follow. They had previously given their names and addresses to the doctor in charge, but now, staying behind in the office, they confessed to having given false names, &c. One of them, who said he was \* \* \*, editor of \* \* \*, stated they had been induced to accompany \* \* \* on the representation that there was a lady quite sane confined in the asylum against her will, and he (the editor) and a photographer friend had come out to take her portrait and gather information with view to an article of exposure in his paper. He added they had seen at once that Case No. 35 was as mad as a hatter, or something to such effect, and regretted the deception. They left. My brother then spoken to by the doctor about his conduct, said, "Well, they are connections; they are journalists." He then went to 'Cook's Hotel,' treated the bar crowd, and finally wound up with a free fight."
4113. Do you remember that a few days after this two doctors went out to see how things were going on then? I think Drs. Ashwell and Long went at the request of the trustees. I think, also, that my brother had seen Mr. \* \* \* and said something should be done. He then pointed to two gentlemen as doctors, a Dr. De Kempf, or Le Kempf, and another doctor whose name I do not recollect. I know that the trustees requested Dr. Ashwell and Dr. Long to go out, and both were paid through me as the medium. I gave them my cheque, and the trustees afterwards paid me.
4114. Did these doctors give certificates of your sister's condition? Yes.
4115. Did you ever see those certificates? I think I did.

4116. Will you look at these [*Certificates produced. See Exhibits D to G—Appendix*], and see if you Mr \* \* \* recognise them as being the same? I think they are the same.
4117. How do you account for the necessity for documents of that kind in the circumstances you have mentioned to us? I do not know; I cannot account.
4118. Have you not already stated that, to the best of your belief, all the necessary legal formulæ were gone through? Yes.
4119. Do you not see that a fresh set of admission papers have been obtained;—can you account for that I do not know, sir.
4120. Do you not see how to clear up this difficulty? No.
4121. The point is this: Your sister had been a patient for some considerable time. Your brother goes to the institution; he says he sends a doctor there, and he proposes to expose the whole matter in the press. The trustees then take action, and get doctors to go out and certify as to your sister's condition, and then fresh papers are obtained to bring your sister as a confinee of Bayview House under the provisions of the Lunacy Act;—how do you account for that? I cannot account for it. With regard to the date on which the trustees made a special request to certain medical men to go out there and see my sister I am not quite certain; it may have been a little later than \* \* \*.
4122. Do you remember the action being heard in the Supreme Court. Was it not about the same date—that is, the end of \* \* \* or the beginning of \* \* \*? Yes.
4123. Was it in connection with that application to the Supreme Court that these fresh certificates were obtained? Oh, no; I cannot imagine that.
4124. Were not these papers taken out subsequent to the action and determination of the Supreme Court Judge? Yes, apparently, so.
4125. Some fortnight or three weeks later? Yes.
4126. How do you account for this—can you not give any explanation at all? I do not understand it; there must be something of which I know not, but I do not know that the doctors went out at the request of the trustees.
4127. But did they not go out and sign admission orders for a patient already in the asylum? This I cannot remember; my impression is that the visit I have referred to as made by these two doctors is not the particular matter referred to on the other date.
4128. But still were they not the same two doctors? Yes.
4129. And did they not make the visit at about the same time or a little later? I cannot clear it up, and yet I see on this certificate something which identifies myself with it. I have written on the front of it between lines written by the late Mr. \* \* \*, "trustee under the will of her mother."
4130. Was Mr. \* \* \*, the solicitor, with you when you wrote that, or rather when the front page of the certificate was filled in? Yes; most of the words written were in \* \* \* 's handwriting.
4131. Did he ask you to insert those words or did you insert them of your own accord? I cannot say.
4132. Do you recollect the terms of your mother's will? Yes.
4133. Does your mother's will confer the power of trusteeship indicated in that paper? Yes; the trustees were placed in the position of guardians.
4134. As a matter of fact in this whole matter did you act under the advice of the then trustees, and at the time believe they were conducting the business in a legal and proper manner? Of course I naturally thought so.
4135. If there are any imperfections about this are you in any way responsible? I am responsible in this way, that I acted to the best of my belief and my knowledge, and did not act wrongly.
4136. Can you give any explanation for writing in these words? No; I cannot.
4137. Since your sister has been placed under the authority of Dr. Vause I suppose you have visited her frequently? Yes.
4138. Are you perfectly satisfied with the way in which she has been treated? Yes.
4139. Both as regards food and clothing, attendance, and everything else? Yes.
4140. Do you visit her at different hours? Yes; I have had opportunities of visiting her, for which I have every reason to be thankful.
4141. Do you think it would be unsafe for your sister to be removed and placed in charge of some private person? Yes.
4142. Do you think if this course were followed she would go through the same bitter experiences she passed through on previous occasions? I do, sir, most certainly.
4143. Has your brother interfered a good deal in connection with the proposed removal of your sister from the institution? Yes.
4144. Do you think your brother is a fit person to be entrusted with the care of your sister? I can only answer that question in one way. It is painful for me to have to do it, but I will read you some memoranda covering the period between December, 1884, and December, 1892. During that time my brother was charged at the Sydney Police Court five times with drunkenness, and once for being illegally on premises, the last-mentioned charge being made at the instance of his wife. In December, 1892, he was charged with and fined for drunkenness. On another date an information was lodged against him. The police went to his house and found his wife was lying almost in extremity. They tried to ascertain from the doctor attending her what was the matter. The information was refused. I was very anxious and made further enquiries, and learned that my brother had so brutally ill-used his wife that her life was endangered, and if the matter had gone any further his punishment would have been very severe. That is my answer, I am sorry to say. A man who dances on his father's grave is not fit to have charge of an invalid sister. I have kept clear of him myself, and I intend to do so while I live. I may add, that since being a trustee under my mother's will I have rendered to the Master in Lunacy, at frequent intervals, a report on the patient's condition and treatment as a patient at Bayview Asylum. I have a copy of one of my reports, it is marked enclosure No. 4, and is as follows:—The trustees have taken special pains to note Miss \* \* \* 's treatment as a patient at Bayview Asylum, and her mental condition. An arrangement with Dr. Vause, permitting occasional day visits to the household of her eldest brother (the senior trustee), has been continued, and, when circumstances allow, visits are now more frequent. It is understood of these visits that one of the trustees shall be present and responsible for the patient's safe custody and return to Bayview, so that she is free for the time being from official oversight. Usually a day once a fortnight is the time fixed, but there is no restriction as to the frequency of the visits,

Mr. \* \* visits, neither is there as to calls at the asylum to see her. There are, of course, specified days for receiving visitors, but the asylum authorities permit access any day within reasonable hours to one of the senior trustees' daughters. The latter is afforded the fullest opportunity of inspecting the provisions for her aunt's comfort as to residential accommodation, and also as to personal requirements in the way of clothes, &c. She testifies most favourably; also that the lady superintendent at the asylum, (Mrs. Gilchrist) is specially kind and painstaking in supervising Miss \* \* \* 's wardrobe, and seeing that she is kept supplied with every reasonable requirement. Miss \* \* \* 's physical health is excellent; but as regards her mind, the trustees regret to state the most careful observation has failed to reveal any real improvement. Mentally she is neither better nor worse; and there are strong grounds for fearing that were she beyond legal control the eccentricities of conduct and manners to her person that pertained in the past would be found in no degree diminished. When last "on leave" (the second occasion) Miss \* \* \* resided at times with her father and mother; with her eldest brother, and her youngest brother the late Dr. \* \* \*; and also in six other households (not relatives), where the fullest provision was made (by adequate payment) for her comfort and safety. In no instance could she content herself for long. At first all would go well; then a mania of suspicion, jealousy, and revolt—sometimes developing into a degree of violence—would possess her, and, if not watched and prevented, away she would go, whither no one could be certain. Although naturally proud of disposition, she would at such times billet herself in the most undesirable quarters, quite unsuited to her position in life, and in some cases in the fullest sense inconvenient. No designed moral laxity is intended to be conveyed, but all idea of the ordinary conventionalities of life would seem to be lost sight of, and dangers not to be mentioned were, of course, incurred. Sometimes she could be traced easily; at others, weeks would elapse without news, until suddenly she appeared at her father's or some friend's house in the best of humours, and as if nothing out of the way had happened. Usually, little by little, she would in the most matter of fact way, with but apparent innocence of their gravity, relate experiences only too suggestive. It was the utter failure of all efforts to keep Miss \* \* \* within safe bounds that compelled the original trustees to return her as a patient to Bayview Asylum. This step was approved by her only sister, Mrs. \* \* \*, and her husband, Dr. \* \* \*; also by Dr. \* \* \*, youngest, and \* \* \*, eldest brothers. It may also be stated that Dr. \* \* \*,—who is resident in England, but knows the case well,—recently wrote to the senior trustee his advice that, on no account should Miss \* \* \* be allowed to fall into private hands. The total want of understanding of the general fitness of things is still at times a marked characteristic with Miss \* \* \*, and it is the trustees' desire to emphasise as one matter leading up to their conclusion, that restraint is still necessary. Usually her memory is excellent; but is not always used on profitable topics. Sometimes, when sitting quietly at the table with the senior trustee and family, she will suddenly revert to, and relate with circumstantial detail and much gusto, some of the very inconvenient experiences above referred to. Even apart from personal safety and being well cared for, the trustees are convinced that Miss \* \* \* is in reality far happier at Bayview than when she was at large. Nothing could be kinder than the treatment she receives, and this when in a good frame of mind she will admit. Of course she resents control; that she always did; but that is necessary. She is taken to church, for drives, and to concerts when she will go, by the asylum folks. And it seems the only thing further to be done for the present is to increase the frequency of her visits to the house of the senior trustee where there are young people she is fond of, and where at times she meets old friends."

4145. Do you affirm that the statement you have just read is correct? Yes; I do.

4146. In the course of his evidence your brother said he was your sister's favourite brother, and much attached to her, and further that your father specially recommended that your sister should be handed over to his care. Is that so? It is a most utter falsehood. My poor father knew too much to make such a recommendation as that. If I may be permitted, I would say that my father had such an opinion of my brother that he made all settlements on my brother only life interests. My mother in her will also made certain provision for him. There was about £100 provided for him, but in all cases they were only life interests, and all these life interests, in the main, he has managed to get rid of.

4147. Was it that they had such little confidence in him that your father and mother only provided life interests for your brother? Yes.

4148. Your brother told us in his evidence that according to your mother's will all his property in case of his death would fall to you. Is that the case? No, sir; but a portion of my sister's property would fall to me and the other sister jointly.

4149. Is there any special provision in the will making you the recipient of these moneys as they fall in? There is nothing of the kind. If my brother hints at such a thing he is wrong entirely. With regard to the larger portion of my sister's property I must inform you that in case of her death that goes to my children.

4150. Has your brother such a sufficiency of independent means as would lead you to think him to be a proper person to have charge of your sister? No.

4151. As regards money matters would he be in the position to take as much care of your sister as she receives now? No; his total means are very limited. He gets £28 from one property, £45 per annum from another, and that makes, I think, about the sum total of his income. He has a very slight income, and has never done a day's work since he has been in Sydney, and it is his boast that he never will.

4152. This is a somewhat delicate question I am about to put to you; it is, however, necessary that the question should be asked, and you will understand what I mean when I ask you if any members of your family besides your sister have been subject to fits of insanity, either on your father's side or on your mother's side? Yes; on my mother's side I am sorry to say. There is a man now in Sydney a relation on my mother's side who is insane, but it is a harmless kind of insanity. He spent the early part of his life in England, and he is at present decidedly unbalanced.

4153. In giving the evidence you have given to-day regarding the routine followed at Bayview, and the treatment of your sister there, are you solely desirous of doing the best you can for her welfare in her unfortunate position? I trust so. I can imagine no other reason. I may add that at great personal and monetary sacrifice, and on the suggestion of Dr. Vause himself, I went to live, for my sister's benefit, in a house opposite the asylum itself. I did this on purpose to be near at hand whenever I could be of any service; as far as my experience goes Dr. Vause has been most kind in every shape and form. Everything likely to benefit my sister or to add to her comfort has been done, and Dr. Vause has been informed by me

- me that he is to obtain, irrespective of cost, whatever he may deem to be desirable for her benefit. Where Mr. \* \* \* I am living now is my sister's property.
4154. Do you pay rent for that house? Yes; and I have to regularly account to the Master in Lunacy for that rent as an asset in my sister's property. More than all this, Dr. Vause informed me that whenever my sister's condition would permit I could have her across at my own residence, provided I would be responsible for her safe-keeping. From the time I went to live out there my sister, when well enough, has been at my house one day per fortnight. I would receive her myself in the morning, stay with her all day, and take her back to Bayview House at night.
4155. Do you remember having lived in \* \* \* ? Yes.
4156. How long did you live there? About fifteen years.
4157. Did you come over from \* \* \* to Australia as a passenger? Yes.
4158. Who paid your passage money here? I did.
4159. I ask you to remember that you are on your oath, and having done so, will now ask you, supposing your brother stated in evidence, on oath, no later than yesterday, that he paid your passage money over here—is that true, or did he send you the money? The whole statement is cruelly false.
4160. *Dr. Garran.*] Has your brother any direct pecuniary interest in getting your sister out of Bayview House? None other, except what I must assume. If my sister were removed from Bayview House I know adequate provision would be made for her maintenance elsewhere, and supposing my brother had charge of my sister he would, in that sense, be to some extent pecuniarily interested.
4161. Do you think your brother would be able to live better in his own house if he had his sister in his charge? Undoubtedly he would. At present her keep costs at the asylum £100 a year. Dr. Vause has a free hand to spend anything within reason—he can spend what he likes. My sister's income is sufficient to make it worth my brother's while to get possession of her if he can.
4162. So, then, do you mean to say if your sister were released from Bayview House and put under your brother's care, he would be able to live on your sister's income, added to his own, in much better style than he lives now? Certainly.
4163. Have you, as the elder brother, any direct pecuniary interest in keeping your sister at Bayview House? I cannot imagine any.
4164. Does it absorb the whole of her income to maintain her at Bayview House? No.
4164. What becomes of the rest of her fortune? It is in the hands of the Master in Lunacy, who now has some three or four hundred pounds.
4166. Will that accumulation of money ultimately benefit you or your children? That would accumulate, I think, for the benefit of my family.
4167. Amongst how many is that money to be divided? Amongst four, I think—no, three.
4168. What do you estimate your sister's present income at? The portion under my mother's will is £180 per annum.
4169. How much of that income is left after her maintenance is paid for at Bayview House; what I mean is, after the expenses incurred at Bayview House have been paid, how much remains per annum to swell the accumulating funds in the hands of the Master in Lunacy? I think the cost at Bayview is about £125 per annum, and the whole of the amount of my sister's income is £180 per annum, besides a settlement.
4170. And how much is the settlement? It is a half interest in three properties, which yield in gross about 50s. per week, or (say) 40s. per week net. This is derived from a property settled on this sister, and on another sister living in England. That is held by separate trustees, and could not enter into this matter at all.
4171. But how much do you think accumulates each year? I think in all about £110.
4172. *Mr. McGovern.*] We have it in evidence that you accompanied your sister, or put her in a cab, and took her to Bayview House:—have you a distinct recollection of that circumstance? I have some recollection of my sister going with me.
4173. Did you induce her to go. It has been given in evidence that she called upon you, that you asked her to sit down for a few minutes, that you went straight away, obtained a cab, and took her to Bayview House. In answer to the President you said you think you went out with her, but did not know how;—what really happened? I think I went out with her.
4174. If so, is it not likely that you would go out in a vehicle? Yes, I suppose so.
4175. Do you know how she was taken to Bayview House on the second occasion? I do not remember the details, but I certainly had my share in the responsibility of her being taken there.
4176. Had you the responsibility of a trustee then? No; nothing more than the responsibility of her brother.
4177. Did you believe that you were safe in acting on the authority of Mr. \* \* \* the then trustee, and did you believe you were right in the action you took? I took no action beyond going to the asylum as her brother. I simply accompanied the trustee as her brother.
4178. Were the trustees with you and your sister? Yes, undoubtedly.
4179. Do you know that certificates were made out on the opinions of medical men for her admission on that occasion? No; I do not like to charge my memory so as to speak with certainty on that point.
4180. Are you confidently of opinion that on that occasion the trustees obtained the certificates from two medical men, which are required by law before a patient can be admitted to an asylum? I can fully assure you that I had no idea, that I have no doubt now, of the fact that she was put in the asylum in proper and legal form.
4181. Does your statement amount to the fact that in 1875 your father put your sister in Gladesville when Dr. Fortescue was one of the medical men who gave the certificate; that in 1881 your father again sent your sister to an asylum—Bayview House this time, and that Dr. Fortescue and Dr. Hodgson were the medical men who gave the certificate; that she was liberated the same year at your father's request? Yes, I think so.
4182. Did your sister conduct any business for your father during his illness—did she write the whole of the correspondence, or anything of that kind, immediately prior to his death? Not to my knowledge.
4183. Your brother has told us that she wrote the whole of your father's correspondence immediately prior to his decease? That is utterly false; she was mad at the time, even much worse than she is now. My brother was not even permitted to approach my father's house just about this time. 4184.

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- Mr. \* \* \* 4184. Are you positive that in 1884, when the trustees put your sister in Bayview House, that they complied with all the forms of the Lunacy Act? I cannot say; I am not even acquainted with the Lunacy Act.
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4185. Do you think they obtained the necessary medical certificate? As far as my knowledge and belief are concerned, I am convinced that all proper and legal forms were complied with.
4186. In August, 1891, when your sister had been seven years at Bayview House, after the trustees had put her there in 1884, why did the trustees have to obtain fresh orders of admission? I do not know why it was done.
4187. In July, a month previous to the dating of the order and about the time her brother moved the Supreme Court, did yourself and co-trustees, thinking your sister was not legally detained on the certificates of two medical officers, since dead, get any information which compelled you to take out fresh orders a month later—that is, in August? I do not think so.
4188. I want you to be sure on that point, and I again ask you did anything occur or anything come to your knowledge, as one of the trustees, to the effect that your sister was illegally detained? Certainly not.
4189. Did anything whatever occur which induced you to get a fresh order a month after the Court was moved? I am confident that no intimation reached me or my co-trustee to the effect that my sister was illegally detained.
4190. Therefore, you cannot explain why this fresh order was taken out? I cannot explain. To me it is a peculiar part of the whole affair. There must be something connected with it that I do not understand.
4191. Did anything come out in July, when the action in the Supreme Court was taken, to induce you to obtain fresh certificates? No; I have not the slightest doubt in saying that.
4192. Supposing your brother has stated in evidence that the trustees discovered that your sister was illegally detained, and that they, therefore, obtained fresh certificates to keep her in—is there any truth in that? I do not think so. I do not know of anything, and have never heard of any question of that kind raised before.
4193. If you never heard anything to this effect, why did you get a fresh order for the admission of your sister as a fresh patient, when, as a matter of fact, she had been an inmate of Bayview Asylum from 1884 to 1891, a period of seven years? [*No answer.*]
4194. Do not the certificates show, or does not the evidence show, that the Supreme Court was moved in \* \* \* that yourself and your co-trustee found that the order was not in conformance with the law, although your sister had been in Bayview Asylum for seven years previously, and in August you got certificates from two doctors for the detention of your sister in compliance with the terms of the Lunacy Act? I cannot say; I have no recollection of that kind.
4195. Coming back to this report which you, as a trustee, furnish to the Master in Lunacy, how often do you submit these reports to that official? Every six months. It is only this year that I had anything to do in that matter, and I took the earliest opportunity of rendering a report dealing with the general treatment of my sister.
4196. Can you tell me whether your predecessor, the late Mr. \* \* \*, as a trustee, visited your sister and furnished a report to the Master in Lunacy? I cannot say. I know that both Mr. \* \* \* and his wife visited my sister.
4197. Did you receive any instructions when you took the position of a trustee to furnish these reports? My instructions were from the Master in Lunacy.
4198. To the effect that you should furnish him with a report every every six months? Yes.
4199. Does the Master in Lunacy send out any officer to ascertain how your sister is treated? The Master in Lunacy has charge of my sister's estate, and I suppose he knows what he ought to do.
4200. Did he demand this report from you? Not exactly demand it. I made out the report in view of the uncertainties of life. I did not know but what something might happen to me any day, and I thought I would take an early opportunity of stating in writing my views on my sister's case, and her treatment at the asylum.
4201. I thought you told me that the Master in Lunacy instructed you to report to him every six months? I took it as such, and I have furnished fully half a dozen reports. The Master's instructions were that I should render him all accounts.
4202. But what has this report to do with accounts? You will see that it is marked Enclosure No. 4, and that is one of the first batch sent in.
4203. Do you know whether the Master in Lunacy sends an officer to Bayview House to see whether a report like that is correct? I know nothing about what the Master does.
4204. *President.*] Do I understand from you that you send in to the Master in Lunacy a number of documents connected with your official duties as a trustee, and amongst these documents is this report marked Enclosure No. 4? Yes.
4205. Did you send that one in particularly, although perhaps not exactly officially, merely to supply the Master with this record in case anything happened to you? Yes.
4206. Are you aware that the Lunacy Act provides that official visitors shall look into the matters you refer to in your report? Yes.
4207. Not so much the Master in Lunacy as the official visitors? Yes.
4208. *Dr. Manning.*] Are you aware that Mr. \* \* \* is dead? Yes.
4209. Did you act mainly under his instructions in regard to all official matters connected with your sister's confinement in Bayview House? Entirely.
4210. Are you aware that the certificates on which your sister was confined in 1881 were produced in Court when your brother made application for your sister's removal? I think certain certificates were produced. I did not see the papers, therefore I cannot speak distinctly.
4211. Do you not think if the Court had found that your sister was illegally detained it would have been the duty of the Judge to discharge her? As far as I understood that question was not raised or was not dealt with. She was there properly, and the Court declined to discharge her.
4212. Do you think it would be the duty of the Court to see that the patient was legally there? Yes.
4213. Are you aware that a special point was raised as regards this case—that your father, who had signed a request on which she was admitted, was then dead, and that a difficulty arose as to who was his legal representative? I really did not hear that. I cannot say, for I was not present during the whole of the proceedings.
- 4214.

4214. Was this left to Mr. \* \* \* in the main? Certainly.

4215. Are you aware that new certificates were obtained by Mr. \* \* \* owing to some doubt having arisen relative to the custody of your sister, the person originally signing the certificate being dead? I do not recollect anything about that.

Mr. \* \* \*  
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[Witness withdrew.]

Eliza Hunter sworn and examined:—

4216. *President.*] Are you engaged at Bayview House? Yes, as laundress.

Eliza Hunter.

4217. How long have you been there in that capacity? For thirteen months.

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4218. Has there always been an adequate supply of linen for the use of the patients? Yes.

4219. Always? Yes.

4220. Have you ever heard any complaints about there being a short supply of linen? No, not at all.

4221. Do you remember there being some little talk about the removal of Case No. 1 from the institution? Yes.

4222. Have you had since that time an extra amount of work to do? No.

4223. Have you noticed any change whatever in your duties? No.

4224. Has there been a larger number of sheets coming to the wash? No, there have been no more than there usually was.

4225. Is the supply of things passing through the laundry the same now as it was six months ago? Yes, and as it was eight or twelve months ago.

4226. Is the number of strong rugs about the same? Yes.

4227. But are there not a number of these strong rugs destroyed, and sheets torn? Yes, there is always a supply in stock to renew them, so that the number keeps much the same.

4228. Is there the same quantity of under-linen and other wearing apparel as formerly? Yes.

4229. Do you remember a nurse named Maggie Macleod? Yes.

4230. Did you ever fall out with her? Yes, she used to try to keep the work back, she would detain the dirty linen and I complained about it.

4231. Did any other nurse do the same thing? She was the only one I complained about.

4232. To whom did you complain? To the matron, Jessie Fuller, but she did not seem to take any notice of it.

4233. Is there a stock of clothing kept in the laundry for use? Yes.

4234. Has your issue of clothing been the same for the last few months as it was previously? Yes, it has been the same always since I have been there.

4235. We have had it in evidence from several witnesses, that immediately after Case No. 1 was taken away from Bayview House a great change took place, inasmuch as a large supply of under-linen, material for clothing, and bedding was purchased;—if that had been done, must you not have known of it, and I ask you now did you ever know of any such thing? No, I am quite sure of that; there has always been the same supply of clothing coming to and going from the laundry, since I have been there.

4236. Has there been any striking difference in the quantity? No, certainly not.

4237. Do you know the witness Maggie Macleod very well? Yes.

4238. Have you placed every confidence in all that you have heard her say? At one time we did, but we found out that she was very untruthful.

4239. Do you mean she did not often stick quite to the truth? Yes.

4240. Did you complain that she tried to induce the other nurses to keep back the soiled linen? Yes.

4241. Must she not have been a torment to you in this respect? That is just what she was.

4242. Did keeping this linen back lead to a lot of confusion in your work? Yes.

4243. That being the case, how did you keep up the average of supply? I had to try to do it as best I could, but it was hard work to keep it up.

4244. Was that the case six or eight months ago, and prior to Macleod leaving the institution? Yes.

4245. After you had been there for some time I suppose you thoroughly knew the work of a laundry in a large institution of this kind? Yes.

4246. Do you think there was always a sufficient supply of the different articles passing through the laundry? Yes.

4247. Have you been in any large institution besides this? No.

4248. Had you any practical experience of laundry work before? Yes.

4249. Were you engaged for your present position by Dr. Vause? Yes.

4250. Did you sign the book of instructions, obligations, and regulations? Yes.

4251. Did you ever see or hear of cruelty being practised on the patients? No; there never was any cruelty, as I know of or heard of.

4252. Is it a large laundry at Bayview House? Yes.

4253. Does the work of it occupy the whole of your time? Yes.

4254. What time do you go to bed at night? Between 9 and 10 o'clock.

4255. Is it not pretty hard work;—have you any assistance? I have one assistant.

4256. Do you know much about the men's side of the institution? I know nothing about it.

4257. Where do you sleep? At the end of No. 2 ward, and just off No. 1 yard.

4258. Has it been your habit to have a good deal of conversation with other nurses? No; very little. I did not encourage it.

4259. I suppose you had passing through the laundry a large quantity of soiled linen? Yes; there was very much soiled.

4260. Taking it as a whole while you have been at the institution, as far as you can remember, was the same amount of clothing passed through the laundry on an average as there has been passing through lately? Yes.

4261. *Dr. Garran.*] I suppose, of course, there were many other things passing through the wash besides sheets? Yes.

4262. Maggie Macleod gave it in evidence that during her time at the institution she always took the sheets off the beds at night, folded them up and put them away, then put them on the beds again in the morning,

- Eliza Hunter. morning, but never used them at night, because she said if they had been used at night they could not have been used for long, as there was not sufficient for a change;—is that so. I do not think so.
- 28 Nov., 1894. 4263. Could you tell me if this were the practice by the fluctuation in the number of sheets passing through the laundry? I do not know about that; there was always a stock kept in the cupboard.
4264. Did you get more than two sets of sheets for wash from that ward? Yes.
4265. How many pairs of sheets per week did you get from her ward—more than two pairs? Yes, certainly; I got more than a dozen pairs per week.
4266. Then, that being so, must they have been used on the beds? Yes.
4267. If, then, Maggie Macleod says there were only two patients in her ward, during the whole of the time she was there, who slept in sheets at night, must she be saying what is not correct? Yes.
4268. She was asked also if the patients in her ward wore night-dresses. She said “no; that they never had a night-dress in her time; that fourteen women slept in her ward; that only one had a night-dress until some were made lately, when some coarse brown calico was brought, and Dr. Vause got the coachman’s daughter to come in and make it up”; is that true? No; it is not true to say that only one had a night-dress.
4269. Did you get as many as fourteen from that ward? Yes.
4270. Can you say how often clean night-dresses were given out? She could get them whenever they were wanted.
4271. How many per week do you think would be sent to that ward? I did not take particular notice, neither do I know how many were returned from the ward to the laundry.
4272. Did these things come back from the ward in separate bundles? Yes.
4273. Do you think that the evidence given by Maggie Macleod on this particular point is incorrect? Yes.
4274. *President.*] Did you say just now that you had one assistant? Yes.
4275. Do any of the patients assist you besides the one assistant to whom you refer? Yes.
4276. How many? Five or six.
4277. *Mr. M’Gowen.*] Do you know a former nurse of the institution named Lizzie Verity? Yes.
4278. Was she a truthful girl? I did not have many dealings with her.
4279. Do you say that at first you thought Maggie Macleod was reliable in her statements, but that you found out afterwards she was untruthful? Yes.
4280. Have you found out anything in regard to Rose M’Mahon, Josephine Mackay, or Lizzie Verity, to lead you to believe that they are not truthful witnesses? I had not much dealings with these girls at all.
4281. Do you not say in answer to the President that you did not notice any great change in the stock of clothing supplied shortly after the 20th of May last? I did not notice any change.
4282. If these girls, whose names I have mentioned, state that there was a great change, and that a much larger supply of blankets, rugs, sheets, and night clothes were purchased, were they speaking the truth? I cannot say anything about that.
4283. Do you think it could have been true if these girls say it was so? I think I should have known if there had been a great change in this respect by the additional clothing passing through the laundry; but I know it never came through my hands.

[Witness withdrew.]

Nellie M’Bride sworn and examined:—

- Nellie M’Bride. 4284. *President.*] Are you a nurse at Bayview Asylum at present? Yes.
- 29 Nov., 1894. 4285. How long have you been there? A year and five months.
4286. In what part of the asylum are you engaged? I am on the Government side. I take charge of the female patients there.
4287. Of all of them? Of about 122.
4288. Were you engaged by Dr. Vause himself? Yes.
4289. At the time of your engagement did you sign a book which stated your obligations and duties, and saying that if you saw anything go wrong you must report the circumstance either to the matron or Dr. Vause? Yes, I did.
4290. When did you commence your duties? I think it was on or about the 3rd of July, 1893.
4291. Did the Government patients always get a sufficient supply of clothing? Yes.
4292. Were you at the institution on the day that we, as a Royal Commission, paid a visit of inspection? Yes.
4293. Were the patients always as clean and as well clothed as they were on that day? They were always just the same.
4294. Did you make any special arrangement, as far as the patients are concerned, when visitors came to the asylum? We might lace their boots and tie their neckties.
4295. Did you do anything to the patients further than that? No.
4296. Did you put new dresses on patients who were dirty? No; when a patient was dirty she was seen to at once.
4297. We have had it in evidence, that new gowns were put over dirty patients; is that so? No.
4298. Did you always know when the visitors were coming to see you? No; not until they were in the house.
4299. Did the visitors as a rule, come to you first? Sometimes they would be in the adjoining yard before I knew of their presence in the building.
4300. Did they ever go to Dr. Vause first? They would generally come round the institution with him.
4301. Did you ever know of the official visitors going round without Dr. Vause, or without notice being given to the nurses of their arrival at the asylum? I cannot say that.
4302. Do you know the official visitors? Yes.
4303. When they go round the Institution do they carefully examine the patients? I never took particular notice.
4304. Have they ever spoken to you about the patients? No.
4305. Have you ever been asked any special question about any special patient on your side? I may have; I think so.

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4306. Was it the usual custom for the patients to be sitting down or standing in a group, and for the official visitors to pass through them? Yes.
4307. Was that all they did? Yes.
4308. How long did these visits generally last? I do not know.
4309. Did you ever receive any intimation that the visitors were in the house, and that you were to get the patients ready? No.
4310. Are you quite sure of this? Yes.
4311. Do you sleep in one of the dormitories? Yes.
4312. With how many patients? Fourteen.
4313. Are there plenty of bed clothes? Yes.
4314. Are there sheets? Yes.
4315. And rugs? No, not in the dormitories, there are blankets and counterpanes.
4316. Is there sufficient clothing on the beds? Yes.
4317. Have you known any cases where Government patients had to wear stockings, which had no feet? I know that the patients always had plenty of stockings.
4318. Do you know anything about the single rooms? Yes.
4319. Did you ever assist in putting the patients in these rooms at night? Yes.
4320. Will you describe the course of procedure in doing so? They would always have their own bedding if they were dormitory patients. There was always plenty of bedding, blankets, counterpanes, and sheets. The other patients would have a bed and pillow, a coarse linen ticking filled with straw, a pillow and two rugs.
4321. What kind of rugs? Canvas on one side and a blanket sewn on the other.
4322. At what time do you go to bed at night? Ten o'clock.
4323. Are you on duty till that time? I am on duty until 7 o'clock at night.
4324. And from 7 until 10 o'clock at night is your time your own for you to do what you like? Yes.
4325. Does a night nurse sit up if there is a sick patient in either of the rooms? There is always a nurse on duty for any special case of this kind. If a patient is sick there is always some one up at night to look after her.
4326. Is there ample provision for making tea or coffee for sick patients during the night-time? Yes.
4327. Where are the necessary materials kept? In the cupboard in No. 1 and No. 2 dining-rooms.
4328. Is there a cupboard in each place? Yes.
4329. Where would you cook coffee or cocoa? There is always a fire in No. 1 dining-room.
4330. Always in winter and summer? Yes.
4331. Were there any means of access to the kitchen at night? No; there was always a fire in No. 1 dining-room.
4332. Did the other nurses know where the provisions were kept? Yes.
4333. Was there always plenty of milk? Yes.
4334. If you wanted to get a cup of tea in the middle of the night, could you get it? Yes.
4335. Did you ever get one? No.
4336. Do you know any other nurse that got one? No.
4337. Have you seen these stores in this place ready for use if they are required? Yes.
4338. Did you always think that there was an ample supply of clothing for the patients in the dormitories? Yes.
4339. Were the patients kept clean in every way? Yes.
4340. Have you ever known a patient being ill-treated since you have been there? No.
4341. Have you ever heard that patients were ill-treated? No; the patients were always treated with the utmost kindness.
4342. Have you ever heard of any patient or patients hurting themselves while in the single rooms? No.
4343. Did you ever take any of the patients out of the single cells early in the morning? Yes.
4344. Did you do it alone? Sometimes, with quiet patients.
4345. Who would go with you if you did not go alone? There has been as many as three or four nurses if the patient was troublesome.
4346. When you have taken patients out in the morning had they always their night-dresses on? Sometimes they had and sometimes they had not.
4347. Were they always provided with night-dresses when they were put in at night? Yes.
4348. How many utensils were put in the ten or eleven single rooms? Seven or eight altogether.
4349. Was every room provided with one? Yes; whenever a patient would use it.
4350. I want you to be careful in answering this question because we have had very different evidence on this point, and I again ask you how many utensils were placed in these single rooms? I am quite sure there were either seven or eight.
4351. Have you seen them yourself? Yes.
4352. Have you seen them clean in the morning? Yes.
4353. Was there always an ample supply of linen available in the laundry? Yes.
4354. Do you know a nurse named Maggie Macleod? Yes.
4355. Do you know that Nurse Macleod has given evidence that is not quite the same as yours? I do not know what evidence she gave.
4356. Would you put any reliance in what she would say? It would all depend on whether she were speaking the truth or not.
4357. Do you imagine that if she was put on her oath and made certain statements that she would not be stating the truth? I cannot say anything about that.
4358. Would you believe her yourself? No.
4359. Do you think that she is not truthful? I do.
4360. What evidence have you got to lead you to such an opinion? I have found out plenty of cases where she has not told the truth. For instance she told me that she put stockings on patients which she never did. I called her attention to this neglect and she told me to mind my own business. She had not done it.
4361. Do you know if that occurred on many occasions? Yes, it did.
4362. Do you remember Case No. 1? Yes

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4363. Do you remember when that patient was taken away from Bayview House? Yes.
4364. Immediately after his removal do you remember if there was a large supply of linen brought into the institution? I never took any notice of any additional supply.
4365. Was the supply about that time anything unusual as compared with the supply at other times? No; I am perfectly sure about that.
4366. Have you seen any alterations being made in the single cells on the women's side during the last few months? No; there is always some alterations going on. When I first went there the rooms were being painted.
4367. How many windows were in those rooms? There were two rooms which had two large windows; but as far as I can see the rooms are now just the same as they were when I went there.
4368. Has not a small window been placed in each room over the door to let the gaslight in? Yes.
4369. Were these windows for letting the gaslight in there six months ago? No.
4370. Has there not then been a change in the rooms in this respect? Yes; I had forgotten that; but the laying on of the gas and the means for letting the gaslight into the cells during the night is the only change.
4371. *Dr. Garran.*] Do you know the ward in which Maggie Macleod was nurse? Yes.
4372. Maggie Macleod told us "that she always took the sheets off the beds except two; that she always folded them up and put them away; that they were put on the beds again in the morning, but that they were never used at night, and if they had been used at night they could not have been used for long, as there would not have been sufficient for a change";—do you think that is true? I cannot say.
4373. Do you know whether the patients had sheets to sleep in? I know there were always plenty of sheets
4374. Was it usual for you to take the sheets off the beds in your ward? No.
4375. Not in any case? No.
4376. Did you not take the sheets off the beds of dirty patients? No.
4377. Maggie Macleod in her evidence said, "that there were fourteen women sleeping in her ward, and that none of them had night-dresses";—is that true? I cannot say.
4378. Did the patients in your ward wear night-dresses? Yes.
4379. Could you get them washed whenever they required it? Yes.
4380. Could you get them for use when they were required? Yes.
4381. If Maggie Macleod says that these patients never had sheets, or night-dresses, is such a statement true? No.
4382. Was there a stinginess in regard to these things as far as you know? No; there was not.
4383. Was there a night-nurse on duty amongst the female patients? Yes.
4384. Has there always been one since you have been at the institution? Yes; for some time at all events.
4385. Is there a male attendant on duty at night-time amongst the male patients? I cannot say.
4386. *Mr. McGowan.*] Do you not say that your duties commence in the morning at half-past 5 o'clock? Yes, in the summer-time.
4387. Are you up until 10 o'clock at night? I am not on duty till 10 o'clock at night, and generally leave off duty at 7 o'clock.
4388. But still if your services are required after 7 o'clock at night, are they at the disposal of the institution? Yes.
4389. Was there a night attendant regularly engaged before the facts about Case No. 1 were made public? Yes, if one was wanted.
4390. What do you mean by that? I mean that if there was a patient sick, there was always a nurse told off to look after her during the night.
4391. Was there a patient in each of these single rooms, pretty nearly every night? Very nearly; and if a patient became quiet while under separate treatment, we would give her another trial in the dormitory.
4392. As a rule were these eleven separate cells occupied by a patient in each every night? Yes.
4393. What time were the patients placed in these rooms? After tea, between 6 and 7 o'clock at night.
4394. What time were they taken out in the morning? About 6 until half-past 6.
4395. Did anyone look into the rooms from the time they were put in at night until they were taken out in the morning? Yes.
4396. Who did that duty? Different girls; and I would go to the patients myself if they became troublesome.
4397. How did you look in upon the patients? We would look through the open door.
4398. Would you do so before you went to bed at 10 o'clock at night? Yes.
4399. Although your duties would cease at 7 o'clock? Yes; if I was called or heard a noise I and other nurses would go and see what was the matter.
4400. Was it then only in the event of a disturbance that you would look into these rooms, after the patients had been put in between 6 and 7 o'clock? Yes.
4401. Would any of these women be placed in these rooms naked? There were two patients occupying these rooms who would never keep anything on them.
4402. Were there only two out of the eleven patients generally occupying these rooms? Yes.
4403. Were there any other cases where the clothing was taken away? I don't remember.
4404. Did you know Lizzie Verity, Rose M'Mahon, Bridget Morrissey, Josephine Mackay, and Maggie Macleod? Yes.
4405. Supposing all these witnesses say that there were more than two patients put in bed every night naked, would they be making a mistake? Yes; they must be.
4406. During your time at the institution did you ever know of a night attendant or night attendants whose regular work it was to look into these single rooms during the night? Yes; a night-nurse always looked after these rooms.
4407. Was there a night attendant kept on duty every night? Yes.
4408. Was it her duty to look into these rooms? Yes.
4409. Are you quite sure on this point? Yes.
4410. Was there a night attendant of this kind twelve months ago, such as there is at present? No.
4411. Is there a regular night attendant now? Yes.
4412. When you go to look into these single rooms do you take a light? Yes. 4413.

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4413. Do you think that the clothing supply for the Government patients is sufficient? Yes.
4414. How long a time elapses from when the official visitors arrive at Dr. Vause's house until they come to the asylum, to where the patients are kept? I cannot tell you that.
4415. Do you think a quarter of an hour elapses from the time of their arrival until they come round the asylum? I cannot say how long it would be.
4416. Have the official visitors ever come through without your having received a quarter of an hour's intimation of their arrival? They have often been upon me before I knew they were in the building at all. I have seen them in the dining-rooms when I have first known they were there.
4417. Is it not a customary thing for some of the nurses to give an intimation that the official visitors have arrived? I never knew of it.
4418. Do you know Case No. 12? Yes.
4419. Was she ever put in a single cell? Only when she became very troublesome.
4420. When she was put in the single cell were her clothes taken away from her? No, she always had a night-dress on.
4421. Do you know anything about an accident happening to Case No. 20? Yes.
4422. Did you take her out of a single room after the accident occurred? Yes; in fact I was there when she was taken out.
4423. Were you with another nurse? I think I was passing by at the time.
4424. Was the patient's arm broken? I did not know it was at the time, but I heard it was.
4425. Was there any blood on it, or on her body? I did not see it, and I did not see her for some time after I took her out, at about half-past 6 in the morning.
4426. Was it so dark then that you could not see the blood on her night-dress? No, it was not so very dark.
4427. Why did you not notice the blood then? Because I think it was on the inside of her arm.
4428. Did you know her arm was broken when you took her out at half-past 6 o'clock? No.
4429. Did she make any complaint? No.
4430. Did you use cold water when you washed dirty patients? There was one patient whom I always bathed in one bath and used cold water. That was Case No. 15.
4431. Did you ever hear of any complaint about a nurse treating a patient cruelly? No.
4432. Did you ever use a scrubbing brush or broom to wash any patient? No, never.
4433. Did an accident occur to Case No. 25? I do not know.
4434. Did she get her head cut? I think there was some accident of that kind. If she did get her head cut it was a mere accident, she was in a violent mood. She caught hold of me, we had a struggle, and both fell together.
4435. Did she bump her head against a door? Yes.
4436. Supposing other witnesses have said it was a customary thing to put women into these cells at night, naked;—is that correct? I never did it. I only know of two cases where women were put in naked.
4437. *Dr. Manning.*] Do you know Case No. 23, a patient at Bayview House? Yes.
4438. Is she always bathed in cold water? No, in hot water.
4439. A statement has been made here to the effect that you roughly used that patient by cleaning her with a scrubbing brush;—is that so? No, I never did it.
4440. Why was Case No. 15 bathed in cold water? Because she was taken to a bath where there was a flexible hose with a rose, which could be used, as she was an extremely dirty patient.
4441. Was she bathed only on one day in this manner? Yes.
4442. *President.*] Was it under Dr. Vause's instructions that this patient was bathed in this manner on this occasion? I do not know that it was anybody's instructions particularly.
4443. *Dr. Vause.*] I knew of the circumstance and was aware that cold water was being used.
4444. *President.*] Who gave you instructions to bathe the patient in this way? I know I was told to do so, but I do not remember who told me.
4445. How often does Dr. Vause go round the institution? Three times a day.
4446. At what time does he go in the morning? Seven o'clock.
4447. When does he next come through? At 12, noon.
4448. When does he come through again? At 5 in the afternoon.
4449. Who administers the medicine to patients when they are sick? The matron, always.
4450. Does Dr. Vause take a great deal of interest in his patients? Yes.
4451. Is he kind and attentive to them in every way? Yes, as far as I know.
4452. Do you report direct to him or to the matron? I report to the matron.
4453. Does she keep a book containing the nature of your report? I cannot say.
4454. *Dr. Vause.*] Do you know that it is your duty as a nurse, and the duty of all nurses, to report any irregularity direct to the Medical Superintendent? Yes, doctor.
4455. Have you seen any bugs while you have been at the institution? No; nothing unusual.
4456. Have you seen every precaution taken to keep the place clean, and in good order? Yes, doctor.
4457. Were not the single-room patients visited during the night whenever the condition of their bodily health required it? Yes, doctor.
4458. Were there not always nurses sleeping quite close to the single rooms? Yes, doctor.
4459. Did you not sleep quite near to them? Yes, doctor.
4460. Could you not have heard the slightest noise amongst the patients during the night? Yes, doctor.
4461. Did you not personally visit the patients in these rooms whenever necessary? Yes, doctor.
4462. Even if you had not been on special night duty? Yes, doctor.
4463. Have you not always had provisions for sick patients during the night-time? Yes, doctor.
4464. Did you think the nursing staff was insufficient for the work to be done? No, doctor.
4465. Did any of the nurses ever complain of being over-worked? No, doctor.
4466. Were sick patients always looked after by a night-nurse? Yes, doctor.
4467. Did night-nurses have ample provision to supply patients with articles of invalid diet, suggested by the Medical Superintendent? Yes, doctor.
4468. In cases of patients not wearing night-dresses, did they wear a chemise during the night? Yes, doctor.
4469. Were patients ever stripped and put in the single rooms without bedding or night-dresses, except Case No. 15 or Case No. 33? No; the other patients always had plenty of bedding or night-clothes.

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4470. Could Case No. 15 be prevailed upon to sleep otherwise than in loose straw? No, doctor.
4471. Did she invariably rip up her mattress, take out the straw, and make her bed in her own fashion? Yes, doctor.
4472. Did she appear comfortable in that way? Yes, doctor.
4473. Does she enjoy good general health;—is not Case No. 15 a strong, robust woman, who makes no objection to having a cold bath? Yes, doctor.
4474. Does she not invariably denude her person of covering during the day? Yes, doctor.
4475. Occasionally does she have to wear a camisole to enable her to be in the grounds with safety during the day? Yes, doctor.
4476. Is it not true that the patients in the single rooms are at first supplied and amply provided with sheets and blankets? Yes, doctor.
4477. Is it not true that these are only changed for stronger coverings when lighter things have been destroyed? Yes, doctor.
4478. Did you ever know of a patient suffering from cold while in a single room? No, doctor.
4479. Is it not true that recent cases placed in a single room for excitement or violence, are provided with three or four mattresses to prevent them lying on or coming in contact with the floor? Yes, doctor.
4480. Do you consider the food is of inferior quality? No, doctor.
4481. Do you think it is deficient in quality? No, doctor.
4482. Did you ever have occasion to complain about the tea? No, doctor.
4483. Was not the same quality of tea provided for each department in the establishment? Yes, doctor.
4484. Do the private patients, Government patients, and nurses all use tea from the same chest? Yes, doctor.
4485. Who orders the bread for the establishment? The matron or the superintendent.
4486. Is it of good quality? Yes, doctor.
4487. And abundant in quantity? Yes, doctor.
4488. Do the Government patients have butter for breakfast and tea on three days a week? Yes, doctor.
4489. Do they get 3lb. of butter on each day? Yes, doctor.
4490. Do they get jam on two days a week? Yes, doctor.
4491. Do they get treacle on one day a week? Yes, doctor.
4492. And dripping on one day a week? Yes, doctor.
4493. Is there always an ample supply of these articles? Yes, doctor.
4494. Were there requisition-books in which you could enter a request for extra diet? Yes, doctor.
4495. Did you ever know of a requisition being refused? No.
4496. Is not the sewing-room under the care of the matron? Yes, doctor.
4497. Do you not have beef and mutton on alternate days in the week? Yes, doctor.
4498. Is the meat not always good in quality, abundant in supply, and well cooked? Yes, doctor.
4499. *President.*] Do you say it is well cooked? Yes.
4500. *Dr. Fause.*] Do you have soup three times a week? Yes, doctor.
4501. Do you have fish once a week? Yes, doctor.
4502. Are the patients specially dressed, otherwise than washing their hands and faces and combing their hair and arranging their dresses, when official visitors arrive? That is all.
4503. Are they got in and specially dressed in clean clothes to receive the official visitors? No, doctor.
4504. Do you know beforehand when the official visitors are coming? No, doctor.
4505. Is it not the rule that the first intimation you have of their arrival is when they are in the house? Yes, doctor.
4506. It has been stated in evidence that some patients, as a rule, only have on a gown;—is that true? That is not true.
4507. Can you state positively that the Government patients are well and adequately clothed? Yes, doctor.
4508. Do you say the same with regard to the private patients? Yes, doctor.
4509. Did you ever hear of any private patients' clothing being placed on Government patients? No, doctor.
4510. Did you ever hear of dirty patients not having clean clothes to wear? No, doctor.
4511. Do you remember Case No. 11? Yes, doctor.
4512. Was she ever in the slightest degree neglected? No.
4513. Was her body ever covered with vermin? No.
4514. Did she for a time only occupy a single room at night? Yes, doctor.
4515. Had that room a bedstead in it? Yes, doctor.
4516. Was it supplied with a horsehair mattress, blankets, sheets, pillows, counterpane and mosquito-nets? Yes, doctor.
4517. Was it on account of her excitement and quarrelsomeness with other patients that Case No. 11 occupied this room? Yes, doctor.
4518. Did she ever complain about it? No.
4519. Was she not brought back again to sleep in the associated dormitory after she became quieter? Yes, doctor.
4520. Did she not say she preferred to sleep in the single room? Yes, doctor.
4521. Do not single room patients require more care and cause greater anxiety to the nurses than the others do? Yes, doctor.
4522. Was this patient ever allowed to lie in the yard exposed to rain? No.
4523. Was she ever permitted to lie about outside in all sorts of weather? No.
4524. Was she left to roll about as she liked in her own dirt? No.
4525. Did she receive every care and attention? Yes, doctor.
4526. Was she not at times a very difficult patient to manage? Yes, doctor.
4527. Was she not very abusive? Yes, doctor.
4528. Would she throw herself down and fight and struggle with her nurses when they attempted to lift her up? Yes.
4529. Was it not on this account that she was occasionally placed in a single room during the day-time? Yes, doctor.
4530. Did you ever know of clean clothes being placed over dirty ones on patients when they went to see their friends? No, doctor.

4531. Did you ever know of a private patient being placed on the Government side of the house without good reason? No, doctor.

4532. Would such a reason be the largeness of the size of the Government dining-room allowing of more freedom of movement to the patient, and at the same time closer observation on the part of the nurses? Yes, doctor.

4533. Would such a reason as this apply to Case No. 13? Yes, doctor.

4534. Was she invariably over in No. 2 or No. 3 dormitory? Yes, doctor.

4535. Is either of these dormitories a Government dormitory? No, doctor.

4536. Do you think that patients were ever placed in the single rooms to save expense? No, doctor.

4537. Or to save the employment of additional nurses? No, doctor.

4538. Do you think the staff of nurses is invariably sufficient? Yes, doctor.

4539. *President.*] How many nurses are there? I forget.

4540. How then can you tell whether there are sufficient in number or not if you do not know how many are employed? I always saw sufficient nurses there.

4541. How many are there on the Government side of the house? Six.

4542. How many patients are there? I think there are fifty patients.

4543. *Dr. Vause.*] Have you not known the official visitors to frequently pull the clothes from the beds in the dormitories when they have been going through? Yes, doctor.

4544. Do you think on these occasions they could see exactly how the beds were made, and whether they were clean or not? Yes, doctor.

4545. *President.*] Did you go round with the official visitors through the dormitories? No, sir.

4546. How then could you tell whether they examined the beds or not? I used to tell by having to go in and put the beds straight afterwards.

4547. Did you actually see them examine the beds? I did not see them, but I have made the beds up again afterwards.

4548. *Dr. Vause.*] Did the medical superintendent ever go through the wards on the occasions of these inspections? Yes.

4549. Have you frequently been present during interviews between patients and their friends? Yes.

4550. Did they have ample opportunity of complaining to their friends? Yes, if they wanted to.

4551. Did you ever hear either Government patients or private patients make any intelligible complaint that did not receive attention? No.

4552. Is it not a fact that as a rule the only complaint heard on these occasions were against detention in the institution? Yes.

4553. Is it usual for more than one nurse to be present at an interview between patients and their friends? No.

4554. Is it not the common practice for nurses to sit in an adjoining room while the patients and their friends hold interviews? Yes.

4555. Do you remember Case No. 17? Yes.

4556. Where did she sleep as a rule? In No. 3 dormitory.

4557. In the event of the patient being sick, would the medical superintendent pay her special visits in addition to the ordinary round? Yes.

4558. Did nurse Macleod have anything to do with the administration of medicine? Not that I know of.

4559. Did Case No. 19 have different food to that supplied to other patients? No; the food was all the same.

4560. Was there any special exception made in her treatment? No.

4561. Did you ever hear Macleod say that the patients were too well treated? Yes, doctor.

4562. What did she say? She said the patients were too well looked after and had too much of their own way.

4563. *President.*] Did she ever say that the food was too good for them? No.

4564. *Dr. Vause.*] How long did Case No. 19 occupy a single room at night? I cannot say.

4565. Were any measures taken to keep patients from removing their clothes, such for instance as boots or stockings? Yes, doctor.

4566. Was every effort made to make patients wear their clothing when they became inclined to remove it? Yes, doctor.

4567. Is it not part of your duty as a nurse to repair the clothing and torn stockings during every afternoon? Yes, doctor.

4568. Do you know if any patients are permitted to wear stockings without feet? No, doctor.

4569. Did you ever hear of any nurse or attendant being dismissed from the institution for making a legitimate complaint to the Medical Superintendent? No, doctor.

4570. *President.*] Concerning Case No. 17, was she cured? No.

4571. Had you the means of observing her? Yes.

4572. Was she a very delicate woman? Yes.

4573. Did she go from bad to worse? Yes.

4574. Do you remember the night she died? Yes.

4575. Was any clergyman present at that time? Yes.

4576. Who? The Rev. Father O'Callaghan.

4577. Who went for him? One of the nurses.

4578. Were you at the bedside of Case No. 17 when he came? Yes.

4579. Was she dead or alive when he arrived? I cannot exactly say.

4580. What is your impression; do you think she was dead? Well, I think she was very near it.

4581. But surely you could tell; did you see her breathe? I did not get close enough to see her before the priest came in. I went to meet the priest; he came back with me to her.

4582. But did you not examine her before then? No, I cannot say that I did.

4583. Did you not find out if she was either on the point of death or dead? I do not know.

4584. Where was Case No. 17 at this time? She was on the private side of the institution.

4585. In one of the associated dormitories? Yes.

4586. Did she receive every possible attention during her illness? Yes.

[Witness withdrew.]

FRIDAY,

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M'Bride.  
28 Nov., 1894.

FRIDAY, 30 NOVEMBER, 1894.

[The Commission met in the Board Room of the Chief Secretary's Office at 11 a.m.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
ESQ., M.D., INSPECTOR-GENERAL OF THE  
INSANE.JAMES TAYLOR SINCLAIR MCGOWEN,  
ESQ., M.L.A.

Dr. Vause was in attendance to hear evidence and examine witnesses.

Henry Copeland, Esq., M.L.A., sworn and examined:—

H. Copeland, 4587. *President.*] No doubt you will be aware that this is a Royal Commission appointed to make certain inquiries in reference to the management of Bayview Asylum, and it has been reported to us that you have been in the habit of visiting this institution during the time it was under the control of Dr. Tucker;—is that so? Yes, I did visit the place, but not so very frequently. However, I think I was there about a dozen times altogether.

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4588. Did you pay your visit merely in a friendly way? Yes, I would sometimes go over on a Sunday afternoon. Dr. Tucker was an enthusiast in making experiments with the microscope. I took some interest in these matters, and used to go over to spend the afternoon.

4589. Have you visited the asylum since it has been conducted by Dr. Vause? Yes, two or three times while Dr. Vause was acting as *locum tenens* for Dr. Tucker. I have not been out there since Dr. Vause has had full charge.

4590. Would that explain an apparent discrepancy in your speeches when you say that you visited the asylum during the time Dr. Tucker had it (Dr. Tucker being a gentleman of considerable scientific attainments), and had interesting conversations with him on scientific matters, and then later on, you said on September 25th, you had not visited Bayview House since Dr. Vause became proprietor? Perhaps so. I do not think I have been there since Dr. Vause was proprietor. Perhaps Dr. Vause himself can tell you whether I have or not.

4591. In any case, as far as your recollection extends, the visits you made there took place during the time Dr. Vause was in charge while he was acting as *locum tenens* for Dr. Tucker, who at that time was away travelling? Yes.

4592. Have you, therefore, some little knowledge of the institution? Yes.

4593. Were you pleased with the manner in which it was conducted, and satisfied with what you saw of it? Yes, I did go through the institution to see the patients, and Bayview House and its grounds always seemed to me just the very place for any person having a friend or relative suffering from mental sickness to send him to. In fact I was very favourably impressed with it.

4594. Did you make any special inspection or inquiry concerning the patients, or just looked round the wards generally? That was all. Occasionally the patients would be round about. I was not interested in any one of them, nor had I even a passing acquaintance there.

4595. Did you ever see anything in the institution while you were going round that would lead you to infer that there was at any time personal violence used towards any patient, or that patients were neglected in their clothing or in any other way? Most certainly not; quite the reverse. The patients were always clean, and everything was as nice as anyone could possibly wish for.

4596. It has been stated that you have a direct personal interest in the institution;—is that so? I never had anything of that kind in any shape or form. I was not so much as one farthing interested, either directly or indirectly. I never contributed one farthing to it. I did not know who owned it, or who owns it now, except that I understand Dr. Vause purchased it from Dr. Tucker.

[Witness withdrew.]

The Hon. Edward Greville, M.L.C., sworn and examined:—

Hon. E. Greville, 4597. *President.*] I suppose you know, Mr. Greville, that we are making certain inquiries concerning the management of the Licensed House for the Insane known as Bayview House, Cook's River Road? Yes.

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4598. Looking over the information provided for us in conducting this inquiry, we find that from some original documents in connection with the institution that you are represented as acting as attorney for Dr. Tucker;—did you do so? Yes.

4599. In what circumstances did you so act;—was it during Dr. Tucker's absence from the Colony? I will tell you the circumstances: In the year 1868 I went to reside at Cook's River. My family and that of Dr. Tucker, who was previously unknown to me, became intimate. For a time no business relations existed between us, but on Dr. Tucker leaving for England and America, where he spent some three years, he asked me and the Hon. S. H. Terry, M.L.C., to hold his power of attorney, which we did.

4600. Do you remember about what date the request was made? It was in April, 1882.

4601. How long was that power of attorney in force? For three years—from 1882 till 1885.

4602. Did you in conjunction with Mr. Terry write a long letter to the Government asking for a continuance of the institution as a place for the reception under the Lunacy Act of Government insane patients? We did.

4603. In the letter you wrote did you give a large number of arguments in favour of Bayview House being used for this purpose? I forget the particulars, but speaking generally I believe we did.

4604. In addition to that did you call attention to the absolute necessity of continuing patients there because of the overcrowding of Government institutions as represented by Dr. Manning, the Inspector-General of Insane? Yes.

4605. Did you point out the advantages there would be if the Government continued to send patients to this institution? Yes.

4606. Do the questions I am asking you form a summary of the long and carefully written document you and Mr. Terry sent to the Government? Yes; that was the object of our letter.

4607.

4607. Subsequently did you make further application to the Government? I do not remember that.
4608. For instance, on the 23rd June, 1891, did you make any application on behalf of Dr. Vause? Yes.
4609. Were you then acting as his attorney in connection with the institution? Yes.
4610. So that with the whole history of the institution, since you have resided in Cook's River Road have you taken a great deal of interest in all matters affecting its welfare? I have, both out of feelings of personal friendship, and because there was a pecuniary interest attached to my connection with it in Dr. Tucker's time. Mr. Terry and myself were appointed under a deed, and there was a stipulation to the effect that there was to be paid to us a certain amount as compensation for services rendered. Later on when Dr. Vause went to England another business arrangement was entered into.
4611. Independently of these business arrangements for compensation for services rendered, have you ever had any direct connection as proprietor, for example, with the institution? No; neither directly nor indirectly. All that was done for both parties was done more out of personal friendship and respect than for remuneration.
4612. Have you visited the institution on a great many occasions? Yes, daily, and I still do so sometimes.
4613. Have you had, therefore, every opportunity of observing, in a general way, and perhaps in particular matters, how the institution is managed? I have known the institution and its management intimately.
4614. Have you known it from, or almost from, its commencement? I have known it from the time of my first acquaintance with Dr. Tucker. Prior to that I knew nothing of the institution.
4615. Do you remember a detached building in which there were two separate cells generally used for patients requiring isolation and restraint? I do.
4616. Do you remember when the separate cells were built? No.
4617. Do you know of the circumstances connected with their erection? No.
4618. Are you aware that this building was ever used as a stable? No; I never knew that it was used otherwise than as a receptacle for refractory patients. That is the purpose to which this building has been devoted ever since I have known it.
4619. Have you ever heard Dr. Tucker say that it was a stable formerly belonging to the old house? No; he told me the place you refer to was built for this special purpose. This is impressed upon my mind, because in the early days I knew a refractory patient who was put in there. He used to be placed there every night, and frequently I have heard noises coming from that solitary room when I have been there of an evening.
4620. Did you always understand and believe that Bayview House was a well-managed institution for its special purposes? I always thought it was.
4621. Did you ever hear of any patient receiving an injury while in the institution? No.
4622. As far as you have seen, was every care and attention bestowed upon the patients? I do not think there could have been more sympathetic or more humane men than Dr. Vause and Dr. Tucker. I believe from my own experience that both of these gentlemen did everything in their power to alleviate the sufferings of the patients under their control—certainly.
4623. There has been a certain anonymous document in circulation in which statements are made concerning the asylum. Have you seen a copy of that document? I think I have.
4624. Among other things it is stated in this document that Mr. Greville is another shareholder in the institution. As a matter of fact, have you anything at all to do with it in this respect? Most certainly not, and more than that I am aware from the title deeds that have passed through my hands that no one has any proprietary or ever had any proprietary interest in Bayview Asylum but Dr. Tucker in his time and Dr. Vause now. From the deeds having passed through my hands as a trustee I am able to state that.
4625. There is another charge made in this anonymous document, and I would like to ask you in reference to certain reports appearing in the *Evening News* if ever you saw any reporter of the newspaper and gave him information upon which a certain statement could be based? I cannot recollect anything of the kind.
4626. The statement is to the effect that something has been secured by Mr. Greville, another large shareholder, which leads to the inference that you had a pecuniary interest in the institution;—is there any truth in that? It is absolutely false.
4627. Another statement is to the effect that Mr. Frederick Gannon, with others, is drawing from the poor insane confined at Bayview House a profit of something like £6,000 per annum;—is there any truth in that? Not the slightest that I know of.
4628. Do you know anything about Mr. Gannon and others netting this return? No; nothing at all.
4629. We have had a number of complaints in connection with the institution, regarding the food and various other matters, including the clothing, which is said to be insufficient. As far as you are aware, in your capacity as a trustee, was every provision made for the comfort of the patients in these respects? It was; and further than that it was my duty to see, by virtue of the position I held, both under Dr. Tucker and subsequently under Dr. Vause, that everything was right and proper in these matters.
4630. I will ask you again if you ever heard or knew that the building used for the isolation of refractory patients was at any time used as a stable? Never to my knowledge.
4631. Had it been erected for the special purposes of isolation as far as you know? Yes.
4632. Were there not stables about the property in some place? Yes, certainly.
4633. Where were they? They were originally near to where the seclusion rooms are now, but later on they were pulled down to allow the putting up of new dormitories and kitchens.
4634. Were they on the site of the present kitchen as far as you recollect? Yes.
4635. *Dr. Manning.*] While Dr. Vause was in England were not Drs. Elliott and Hetherington in charge? Yes.
4636. During that time did you visit the institution frequently? Yes.
4637. Did you do so in Dr. Vause's interest? Yes, for I considered that I stood in his shoes as it were. It was my duty to watch over his interests while the others were there temporarily.
4638. Did you give both these gentlemen during Dr. Vause's absence a free hand as far as minor expenditure was concerned? Yes.
4639. Did you stint them in any way while they had the management of the institution? Certainly not. I never heard that they stinted the patients either. If I had heard so I should have considered it my duty

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duty to speak. I was frequently among the patients at this time. My position in the institution was well known, and if there had been any complaints against the Medical Superintendent I think they would have been made to me. I think my position was generally recognised there.

4640. Did both of these gentlemen manage the institution to your satisfaction? They did so far as the internal arrangements were concerned. As to their medical supervision, that was no business of mine. I consider if there had been any fault to find it would have been found.

4641. In all your dealings with the Colonial Secretary's Office, with regard to this establishment, were you merely acting as attorney for the then proprietors? Yes; I was acting as attorney during their absence from the Colony.

4642. In addition to that, have you of late taken some interest in the manner in which the place has been conducted—I mean, of course, since Dr. Vause returned? Yes; but that interest has been out of friendship for Dr. Vause—purely as a friend.

4643. Are you aware that an application was made for 300 additional patients to be sent to Bayview House? I am.

4644. Did you take any steps in connection with that application? Yes; I think I did speak to Sir George Dibbs upon the subject.

4645. What was your action in doing so prompted by? By mere friendship only.

[Witness withdrew.]

Mr. \* \* \* \* sworn and examined:—

Mr. \* \* \* \* 4646. *President.*] How are you employed at present, Mr. \* \* \* ? I am in Mr. \* \* \* office.

30 Nov., 1894. 4647. Was not your father, Case No. 1, for some time an inmate of Bayview Asylum? Yes.

4648. Did you have frequent opportunities of visiting him while there? Yes; I saw him every Sunday.

4649. Do you remember how much was paid for your father's maintenance while he was an inmate of that institution? It was either £5 or £5 0s. per week.

4650. What did you expect in return for that payment? Dr. Scot-Skirving went out to see Dr. Vause, and he arranged what was to be done. But Dr. Vause continually told us that my father always had two men with him, and that he was never left for a moment alone. We always told Dr. Vause that if the patient wanted anything it was possible to get, we would only be too willing and happy to get it, or to buy anything that money would buy.

4651. Did your father have a sitting-room, and did he sleep in the dormitory? He had a sitting-room at first, and the first time I saw him at the institution he was sleeping in a room opposite the sitting-room. After that he went upstairs to a long room; then I believe there was some difficulty in getting him upstairs because he was becoming so weak. He was brought downstairs again, and Dr. Vause always told us that he slept in the room opposite the one I saw.

4652. Did he ever make any reasonable or rational complaint regarding his treatment while in the institution? The only thing we asked him about was where he slept, and then he said he used to sleep in a stable.

4653. Did he say so latterly when you saw him? He said so for some months before he was removed.

4654. What did you understand to be his meaning when he said he slept in a stable? I was uncertain, so I asked Dr. Vause what he meant, and Dr. Vause replied that what my father said amounted to nothing more than the mere ramblings of an insane person.

4655. Did your father make this statement on more than one occasion? Yes; he said it when we asked him where he slept.

4656. Was Dr. Vause always present during the interview or did you speak to your father alone? I think I saw my father in the presence of Dr. Vause several times, but I had frequent opportunities of seeing him alone.

4657. Was your father's case a specially troublesome one? Yes; so I am told.

4658. Did he always appear to be in much the same condition? No; not always. Sometimes he was worse than others. On two or three visits for a little while he appeared to be quite rational, and then he would slip away again.

4659. Before he was removed to the asylum was he troublesome at home? Well, he was such a short while there that it is hard to say. We only knew he was insane on Sunday. Then the doctors came, held a consultation, and it was decided that it would be best to take him to Bayview House.

4660. What doctors were there in that consultation? Dr. Manning, Dr. Scot-Skirving, and Dr. Williams.

4661. Did your father appear to be particularly violent at the time he was removed to Bayview House? No; he was not actually violent, but he was very restless.

4662. Had he become dirty in his habits? Oh no, not in the slightest, he was just restless, and was continually walking about the house.

4663. Did you not state a few minutes ago that your father spoke to you about his sleeping in a stable, and that when you complained to Dr. Vause he explained that it was but the fancy of an ill-regulated mind? Yes.

4664. Were you ever told by Dr. Vause that your father was sleeping in an isolated room? No; we always understood up to the very last that he had a man or men continually with him.

4665. Do you remember your father being removed from Bayview House? Yes.

4666. Did he seem to be latterly, that is immediately prior to his removal in a worse condition than he was when he was originally taken to the institution? Yes; he was latterly.

4667. Was he more erratic in his talk? Yes, for a little while at first he was fairly sensible, and then he slipped away again. Then there was not so much change in his condition at all until he became worse again.

4668. Did he ever complain to you about the food he received? No; but he invariably said to us that he never had any breakfast.

4669. Did he ever complain that he was getting cold baths early in the morning? I cannot say that.

4670.

4670. When you saw him on your visits was he well dressed, clean, and tidy? He was not as well kept or Mr. \* \* \* dressed as he is now, not as clean looking nor as tidy.
4671. When you saw him was he clean in his attire, and was his clothing as clean and in as good order as <sup>30 Nov., 1894.</sup> when it was supplied to him? No; it was not as it should be; it was torn a bit, and there were spots on it as if they had been caused by him dropping his food. I think otherwise the clothing was fairly decent.
4672. When you heard the report to the effect that he was kept in an isolated room, did you willingly agree to his removal from Bayview House to Callan Park? Yes; I wanted it done quickly.
4673. Who originally told you about your father sleeping in an isolated room? My solicitors.
4674. Do you know from whom they obtained the information? No.
4675. Do you visit your father at Callan Park? Yes.
4676. Do you see any great change in him now;—does he seem to be physically better? Yes.
4677. Mentally, does he seem to be more composed, as far as you can judge from his conversation with you? Sometimes he seems to be better mentally, but at other times he is much about the same.
4678. Were you present when he was removed from Bayview to Callan Park? I was at Bayview.
4679. Did you go out by yourself? No.
4680. Whom had you with you? Mr. \* \* \* and Dr. Scot-Skirving. They went out at night and removed him. I went out in the morning myself.
4681. Where did you see your father when you went out? In a room opposite the sitting-room; he was sitting there with two attendants.
4682. Did you go out with Mr. \* \* \* and Dr. Skirving in the evening? Yes.
4683. Who had the order for your father's removal? I had.
4684. Who signed it? Sir George Richard Dibbs.
4685. Had it been signed with your full consent, and was it on your desire that the patient was removed? Yes.
4686. Did you see the real place in which he slept on the night before he was removed? Yes.
4687. Did you see it in the morning or in the afternoon? I saw it at about a quarter to 11 on that Sunday morning.
4688. Had it been cleaned out by that time? Yes; it had been washed out.
4689. Did you see any bedding in the room? No; the floor of the room itself was very wet. It looked as if it had been just washed out.
4690. Previously, then, were you really unaware of the nature of your father's sleeping accommodation? Most decidedly.
4691. Did he ever complain about having been personally injured while in the institution? I think on one occasion, as far as I can remember, he said he had a row with an attendant, and the attendant hurt him.
4692. Had he a black eye when you saw him on this Sunday morning? Yes.
4693. Did you ask him how that came about, or did he offer you any explanation? No; I scarcely spoke at all. I did not ask the question.
4694. Generally speaking, were you satisfied with the treatment the case received at Bayview House until you discovered the circumstances connected with his accommodation at night? Well, no; we were not quite satisfied, but still we thought in the circumstances that we had done the best that we could do with him.
4695. Was your mother satisfied? No; but she was of the same opinion—that we were doing the best we could.
4696. Do you mean under the advice of Dr. Scot-Skirving and Dr. Williams? Yes; she thought the patient was getting the best available treatment. I thought the same, but I have been very much undeceived.
4697. *Dr. Manning.*] After having been at Cook's River for some few weeks did your father fall into a condition of great exhaustion? Yes.
4698. Then did he pick up and get better for a time—better mentally and in physical health—more reasonable in his conversation, and stronger in his movements? Yes.
4699. Did he become so much better that you had serious thoughts about taking him home again? Yes.
4700. Then did he have another relapse? Yes.
4701. Was I present at the consultation before the patient was removed from his residence to Bayview House? Yes.
4702. Are you aware that my recommendation at this time was that he should be removed to a private house and placed in the care of an attendant? I remember that there was some such recommendation, but I do not know who made it. I think my mother said one of the doctors recommended that the patient should go to a private house.
4703. Was the determination to send him to Cook's River Asylum arrived at subsequent to the other recommendation? Yes.
4704. *President.*] Do you wish to say anything further about the case, Mr. \* \* \*? No; except that I may add, perhaps, that pretty nearly every time either my mother or myself visited Bayview House we asked Dr. Vause if there was anything we could do—if we could bring my father clothing or anything else. We were only too anxious to do everything we could in the unfortunate circumstances.
4705. *Mr. McGowen.*] In an answer to Dr. Manning, given a moment ago, did you not say that some little time after the patient was placed in Bayview House there was some improvement in his condition;—how long was it before you noticed this improvement? I cannot fix any time, but I suppose it was about five or six months.
4706. How long did the improvement last? Perhaps three or four days; it would certainly not be longer than a week.
4707. Then was he in a sane state until you took him out, or did you notice any improvement during the last six or eight months that he was there? I think he had three improvements altogether during the time he was at Bayview; after these he slipped back to his former state.
4708. When you went into the room at 11 o'clock on Sunday morning, May 20th, did you notice any offensive smell? Yes; there was an abominable smell, although the room had been washed out.
4709. Do you say that your mother repeatedly interviewed Dr. Vause and made offers to supply further clothing, if necessary, for your father's use? Yes, and I did so myself. 4710.

- Mr. \* \* \* 4710. It has been stated in evidence that your father was exceptionally destructive with his pyjamas and singlets. Did your mother supply him with pyjamas and singlets at the request of Dr. Vause? Yes.
- 30 Nov., 1894 4711. Do you know with how many suits of pyjamas he was supplied? I think he had six suits when he went to Bayview. I should think about ten or twelve suits were taken out afterwards. I should think in all he received sixteen suits of pyjamas, or at all events not more than eighteen suits. We always asked Dr. Vause to let us know when he wanted a further supply. They were then sent out at once.
4712. Did your father complain at various times that the room in which you saw him was not the room in which he slept? He did not put it like that. We asked him if he slept in a certain room upstairs, and he always replied that he used to sleep in the stable.
4713. *Dr. Vause.*] Do you remember me saying to you it would be necessary for the patient to occupy a single room? I do not.
4714. *Mr. McGowen.*] Did any authorities of the institution point out to your mother or yourself a room which you supposed your father was in the habit of sleeping in. Did Dr. Vause point out such a room upstairs? That is the room I saw him in at first; then he came down into a room opposite the sitting-room, and that is the room Dr. Vause said he slept in.
4715. *Dr. Vause.*] On Sunday morning, the 20th of May, do you remember telling me that you did not understand what was meant when I said it would be necessary for the patient to occupy a single room? I may have said it, but I certainly do not remember any reference to a single room at all.
4716. Do you know what is meant by a single room? I never remember anything about a single room being mentioned.

[Witness withdrew.]

Mr. Frederick Gannon sworn and examined:—

- Mr. F. Gannon. 4717. *President.*] What are you, Mr. Gannon? I am a solicitor practising in the Supreme Court of New South Wales.
- 30 Nov., 1894. 4718. Are you a solicitor in connection with some matters for Dr. Vause, of Bayview House, Cook's River Road? Yes.
4719. Have you any personal interest in the institution known as the Licensed House for the Insane, called Bayview House? Not the slightest, and never had.
4720. Have you any professional interest in it? Nothing beyond the fact that Dr. Vause is a client of mine.
4721. It has been stated that you have a proprietary interest in the institution;—is that true? It is not true. There is not the slightest foundation for any such statement.
4722. Have you visited the institution a good many times? Yes; very frequently.
4723. Have you had full opportunity of seeing the way in which it is conducted from a general standpoint? I have.
4724. As far as you are able to speak, is everything satisfactory in the matter of clothing, food, and cleanliness—and is the institution well managed? Yes, most certainly. There is not the slightest fault to find, as far as I can see. The whole of the arrangements of the place have always met with my admiration. I have never heard any complaint concerning the institution.
4725. Have you seen or do you know of any personal violence being used towards the patients? None whatever.
4726. Have you ever heard any complaints about there being an insufficient number of attendants? No.
4727. Have you ever heard that the attendants neglected their duties, or that the patients were in any way neglected? No.
4728. In your experience has Dr. Vause always been kind and attentive to the patients under his control? Yes, he has always been most kind; and speaking personally, I can say he has not only been my medical attendant but a friend, and a medical attendant and friend to my wife and family.
4729. Therefore, with all your knowledge of Dr. Vause, are you competent to speak of his character for humanity as well as skill? Yes; there is no man living for whom I have a greater respect than for Dr. Vause. I do not say it as his friend, but I say it as one having lived alongside of him for many years, and one who has had a full opportunity of studying his life and actions.
4730. Do you know who is the proprietor of Bayview House? Yes; I have known no one except Dr. Vause to be the sole proprietor.
4731. We have had it in evidence from the Honorable Edward Greville, who acted as attorney for Dr. Vause, that he has seen a legal document in connection with the proprietorship, and that he is perfectly satisfied that Dr. Vause is the proprietor;—is this confirmed by you? Yes; no one can have a better knowledge than Mr. Greville. Dr. Vause is a client of mine, but I really had nothing to do with the transfer of the deeds.
4732. There is a rumour abroad that "Gannon & Co. are greatly interested—in fact, to such an extent that they are drawing from the poor insane kept at Bayview House no less than £6,000 per annum;"—is that true? It is a fabrication from beginning to end.
4733. There is not the slightest foundation for any such statement? There is not an atom of truth in it.
4734. Do you know of any mortgage over the property? I do not know. I have never had anything to do with one.
4735. We have had a great deal of contradictory evidence in regard to the personal habits of Dr. Vause, and you, having been on most intimate terms with him for some time, will be able to speak with some authority. Is Dr. Vause a sober man in the ordinary sense of the word? He is one of the most sober men I have ever met. I have seen him morning, noon, and night. I have been at parties with him; I have been to the theatre with him; I have been at his house up to 12 o'clock at night, and I never saw him on any occasion under the slightest influence of liquor. I meet him almost every day; no one knows him better than I do; no one knows his habits better than I do, and I can say he is a strictly sober man.

[Witness withdrew.]

TUESDAY, 4 DECEMBER, 1894.

[The Commission met in the Board Room of the Chief Secretary's Office at 11 a.m.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.  
 FREDERIC NORTON MANNING, | ANDREW GARRAN, Esq., LL.D.  
 Esq., M.D., INSPECTOR-GENERAL OF THE | JAMES SINCLAIR TAYLOR MCGOWEN,  
 INSANE. | Esq., M.L.A.

Dr. Vause was in attendance to hear evidence and examine witnesses in his own defence.

Herbert Blaxland, Esq., M.R.C.S., L.R.C.P., sworn and examined:—

4736. *President.*] Are you, at present, Medical Superintendent of the Hospital for the Insane at Callan Park? Yes.
4737. How long have you been employed there in that capacity? Since December, 1891.
4738. Do you remember Case No. 1 being brought to Callan Park? Yes; he was brought there in May last.
4739. Did you see him on his arrival? I saw him in a carriage at the institution.
4740. Subsequently, had you ample opportunities of particularly examining his case? Yes.
4741. Can you technically describe his case? He was suffering from general paralysis of the insane—*locomotor ataxy*.
4742. Was it a bad form of disease? Yes; and he was also in an acutely ammoniacal state.
4743. Was the patient very violent when he was first received into the institution? He was violent as far as he could be in his exceedingly weak state. He was too weak to kick or strike anybody.
4744. Were there any bruises or marks on his body when you first examined him? Yes; his left eye was black.
4745. Were there any other bruises on his body? No.
4746. Has he improved considerably since you received him at Callan Park? Yes.
4747. Was he at first a refractory patient? Very refractory, destructive, dirty in his habits, and used very bad language.
4748. In these respects has he improved very much of late? Yes. After a while he was able to get up, and then he left off his destructive habits, except occasionally, when he destroys articles of clothing. He still sometimes wets his bed.
4749. In treating him did you adopt the separate cell system? He had a single room.
4750. Does he still use one to sleep in? Yes.
4751. Is it the one I saw the other day, containing an iron bedstead? Yes.
4752. Was the iron bedstead in it when the room was first occupied by him? No; it would have been too dangerous to have used one then.
4753. Is there any danger now? No; very often he will not use it, and will order it to be taken out of the room, because he prefers to lie on the floor.
4754. In cases of this kind does not, sometimes, the urine of patients smell very strong? Yes; it becomes highly ammoniacal.
4755. In your opinion, from the large experience you have had in cases of this kind, did you think it was absolutely necessary to place Case No. 1 in a separate room and make special provisions for him, because of his peculiar habits? Yes; I did.
4756. Is he improving now as well as the nature of the disease will permit? He has improved; but I think, comparatively speaking, he is at a standstill now.
4757. *Dr. Garran.*] What has been the course of the progress made? It has simply been development from one stage to another. In these cases of general paralysis, there are different stages. There is first the maniacal, and then the patient, after this is over, passes to what is called the tranquil stage. That is the state in which Case No. 1 is now.
4758. Do you attribute his present condition to any special treatment of your own, since he has been at Callan Park? No.
4759. Do you think the same would have happened if the patient had remained at Bayview House? Yes.
4760. Is there always a man on night-duty at Callan Park Asylum? Yes; always.
4761. Do you think any great importance is to be attached to interfering with the patients or leaving them alone completely through the night? I think interfering with them would often be a source of irritation to the patients.
4762. Supposing you were to get a patient up during the night, do you think it would be worse for the patient than leaving him alone? Not for some of them.
4763. During the course of this inquiry the question has been raised, whether in cases of acute mania it is better to leave a patient alone in a dirty condition during the whole night, or to interfere with him, by waking him up to obey the calls of nature, and so break him in to more cleanly habits;—which is, in your opinion, the preferable course to follow? Not to interfere, in cases of acute mania. One might interfere at times, and to a certain degree, but there is nothing at all to be gained if a man is thrown into a constant state of irritation by telling him to make water or anything else.
4764. If you saw, or if a warder saw, a patient making water on the floor of his room, or on his bed even, would it be wise for him to rush in and tell the patient to use the utensil? No; if he did the patient would not do it. Case No. 1 would not have done it. He insisted on doing these things just as he liked, and if an attendant attempted to stop him he would throw his pillow at him, or the first thing he could lay his hands on.
4765. If you saw him taking his pyjamas off, and he refused to wear them, would it be the proper thing to use anything more than ordinary persuasion, in endeavouring to get him to wear them? No; he would only resist it if you did, and become more irritated.

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- Dr. 4766. Would it, therefore, for the patient's sake, be better to leave him naked, rather than irritate him by attempting to get his clothes on? It would be better to leave him naked.
- H. Blaxland. 4767. Do you think patients suffering from acute mania feel the cold? Not to the same extent as other men and women do.
- 4 Dec., 1894. 4768. Do you mean to say they are not so sensitive and liable to take cold as other people? No; and they always keep themselves warm by exercise, as they are on the move constantly.
4769. As a rule, do you think if they temporarily denude themselves of clothing they do not physically suffer from chill? No; they do not suffer.
4770. The question has arisen as to whether or not it would be proper to interfere with a patient who insists on taking his clothing off;—do you think such would be the proper course to follow? I do not think it would be advisable to interfere.
4771. As far as I can gather from you, am I to understand that the patient was as destructive when first he arrived at Callan Park as he was at Bayview House, and did the attendants endeavour to do all they could to keep him clothed? We tried our best; but to show you the difficulty with which we had to contend, I produce a list of the articles of clothing he destroyed during the first four months of his stay at Callan Park. [*List produced, marked Exhibit "A 1." See Appendix.*]
4772. Does this list show that on May 22nd the patient destroyed eight articles of clothing? Yes, seven garments and one bed-tick.
4773. Was he in a highly destructive state then, and very excited? Yes, he was.
4774. Do you think his excitement was in any way due to his having been transferred from one asylum to another? I think it was.
4775. At first, did you make the experiment of placing an attendant in the single room with him for the purpose of watching him and looking after his requirements? Yes, for a night or two I did; but we found that such a course of procedure would not do at all.
4776. So far as your experience goes, then, did you find it better to leave the patient alone in the single room? Yes, with the precaution of having an attendant always on watch for anything that might be required.
4777. Did you find that this treatment resulted in the patient getting more mental repose and sleep? Yes; the less interference there was the better.
4778. Was there anything cruel or heartless in leaving this patient, while in that stage of his malady, as much alone as possible? No, certainly not, as long as he was visited at intervals.
4779. When he was first admitted to Callan Park could you with safety leave a bedstead in his room for his use? No.
4780. Did you put a mattress on the floor for him to sleep on? We put two or three straw mattresses on the ground. He was in the habit of tumbling about the room and walking about in a restless manner. We therefore put the mattresses on the floor to minimise the possibility of him hurting himself. He would occasionally tear his bedding.
4781. What covering had he when the mattresses were put on the floor? He had a canvas rug;—or more correctly speaking, a rug, made by stitching a blanket between two pieces of canvas, the whole being quilted in the stitching.
4782. Supposing he kicked off his blankets or rug, would the attendant cover him up? Yes; he was always supplied with good bed-clothing. Sometimes he would have more clothing than at others.
4783. I want to be particular about these rugs;—how do you say they were made? There was canvas on the top side, blanket next, and a sheet of dallis underneath. All were sewn together and quilted. Sometimes he would have blankets instead of these; at others he would refuse to use the blankets and say he preferred the rugs.
4784. Was he supplied with warm cocoa or tea at night? Yes, if he asked for it. I ordered at first that he should have warm cocoa or milk as a soothing drink to induce sleep or quietness.
4785. Was he a very troublesome patient? Most extremely so.
4786. Have you ever had in Callan Park a patient equally troublesome? I never had a worse. I think there have been one or two cases as bad, but certainly we never had a worse.
4787. Is he a paying patient? Yes.
4788. Do you know how much is now paid for his maintenance at Callan Park? Yes; £327 12s. per annum.
4789. Have you any means of ascertaining whether this amount covers the cost of his maintenance? It did not at first.
4790. Why not at first? Because of the extraordinary amount of destruction of clothing and other articles.
4791. Do you think the amount you name covers the cost of his maintenance now? I think it now should cover all expenses.
4792. Did members of the patient's family supply his personal clothing? They did at first, and do now.
4793. Although it was torn so repeatedly, was the clothing renewed whenever necessary? Yes.
4794. Do you supply the whole of the bed-clothes? Yes; the bedding and bed-clothes are supplied by the institution.
4795. Do you think the patient cost you more than at the rate of £327 per annum when he first went there? Yes; I think so.
4796. Supposing Dr. Vause received less for his maintenance at Bayview House, do you think he would make much profit? I think not.
4797. Have you ever visited Bayview Asylum? Yes.
4798. Did you see the two single rooms on the male side across the court-yard from the main building? No; I do not recollect them.
4799. In the room in which Case No. 1 sleeps at Callan Park do you regulate the admission of air by opening and closing the window, according to the coldness or warmth of the night? I do not think the upper window is ever touched. It being open does not interfere with the patient, who cannot feel any draught from it.
4800. Do you ever find this room or any of your single rooms cold early in the morning? No.
4801. Do you ever notice that the patients suffer from a chill? No.

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4802. In this particular form of paralysis to which Case No. 1 is a victim, do the patients shake very much? Yes; these paralytic patients are particularly tremulous.
4803. Is it easy to say when a patient is shaking whether it is caused by cold or tremulousness; one witness has said that when he saw this patient he was shaking not only with paralysis, but also from cold—I want to know whether it would be easy for anyone to discern whether the tremor was from cold or paralysis? A medical man might be able to tell, but I question whether a layman would; he would have to be a very intelligent layman if he did.
4804. Do you mean it would take an intelligent man to discover if the shaking was caused by anything other than paralysis? Yes; especially in a case like this one. His case is of such a nature that he cannot feed himself now. He was worse when he first came, for then it took two men to feed him—one to hold him and another to give him his food. This was because of his tremor and restlessness.
4805. Is the tremor and restlessness worse in the morning than in the evening? I do not think it is.
4806. What degree of light is admitted into the room, through that window which you say is seldom closed? A little light comes in.
4807. Do you think the admission of light into these single rooms at daybreak is of any importance to the patients? No.
4808. Are nervous and excited patients most restless in the first part or last part of the night? It is hard to say.
4809. But do you not think that a patient restless in the early part of the night becomes exhausted by his exertions and falls asleep in the early part of the following morning? Some might and others might not.
4810. Is there any advantage in always having the window left open, so that the sunlight can be admitted early in the morning? No.
4811. Is there any medical advantage in this? No; because with a restless patient it would be an advantage to keep the room dark in the morning if he happened to be asleep.
4812. First, then, do you think that darkness in the cell early in the morning is any disadvantage to the patient? No.
4813. Second, do you very much doubt the medical wisdom of interfering with acute maniacs during the night? I do.
4814. Do you think they are, medically speaking, best left alone? Yes; too much attendance would do more harm than good.
4815. Do you think the attendant himself should be allowed to judge when he should enter the room to attend to a patient during the night? Yes; to a very large extent.
4816. How often in the course of the night did an attendant look in upon Case No. 1? When he was first at Callan Park there was a special man stationed outside the room door, constantly on the watch. The patient was also visited every hour.
4817. Supposing you have any ordinary patient, suffering from general paralysis, what course of night treatment do you adopt? He is placed in a single room at night with night-clothing, which he can use and wear if he likes. If he is destructive and tears the clothing up it is removed for safety, as he might tie them round his neck or penis. When the torn clothing is removed a heap of straw is left in the room, and the patient is seen every hour.
4818. Then does every patient confined in a single room get the advantage of night patrols? Yes.
4819. Is a man ever neglected during the night? No.
4820. Do they first have the option of wearing night-clothes? Yes.
4821. And if they are destructive are such patients left with a bed of loose straw? Yes.
4822. Is there any alternative other than leaving them in this manner? Not that I know of.
4823. Have you been able to form any opinion as to the medical treatment Case No. 1 must have received while at Bayview House? No; When he arrived at Callan Park from Bayview House he was simply in one of the ordinary stages of paralysis.
4824. Was there anything in his case or symptoms that led you to believe he had not been properly treated while at Bayview House? No, nothing.
4825. *Mr. McGowen.*] Do you say that patients in the state Case No. 1 was when he was received at Callan Park do not feel the cold? No, they do not; their sense of feeling is blunted.
4826. Yet do you not say that an attendant would go into the cell and put a blanket over him if he threw his bed-clothes off;—why was this done if he could not feel the cold? Because in this case there was a special attendant to do it.
4827. If he is not susceptible to cold, what is the use of putting a blanket over him while he is asleep? This was done on the supposition that it might be more comfortable for the patient.
4828. When you visited Bayview House did you go in your public capacity or as a private visitor? I went there as Acting Inspector-General of the Insane during the absence of Dr. Manning.
4829. *Dr. Manning.*] Might not a patient coming out of his sleeping room early in the morning into the cold air shiver whilst crossing an open yard, especially if he had not been cold in his room during the night? Yes.
4830. Am I to understand from you that Case No. 1 is still in a state of impassivity, and that sometimes he is dirty in his habits? He has been very dirty, messing in and wetting his bed and smearing his body and the room with feces.
4831. Does the urine of patients such as this smell very strong and pungent? Yes; it is a common thing for it to emit a very strong odour.
4832. Is the urine of these patients different in smell to that of people in ordinary health? Yes.
4833. We have had it in evidence that the room Case No. 1 occupied at Bayview House stank abominably until 11 o'clock in the morning, even after it had been washed out earlier in the day;—if it did, would that be anything uncommon? Not at all.
4834. If the room were well washed out every morning would it be ready and fit for occupation again every night? Yes.
4835. Would such a room, requiring constant washing, dry better if it were away from a corridor and had a large door than a single room situated in a corridor such as yours are at Callan Park? Yes, I think it would.
4836. We have had it in evidence from Professor Anderson Stuart that lunatic patients whose tendency is not to use a utensil should be roused up two or three times a night to micturate or evacuate, and to support

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support this opinion he quotes M. Charles Mercier, who in his work on "Lunatic Asylums: Their Organisation and Management," published this year, says:—"Patients who are of dirty habits need constant attention, and are a source of continual trouble in asylums, but fortunately, by assiduous attention, very much may be done to cure them of the objectionable customs." Going on to speak of the treatment, the author of the work I quote says:—"Patients who are dirty from sheer malice, and from a desire to give trouble, are a very difficult class to deal with. This category of patients are the most objectionable of all. Such patients are always made the tenants of single rooms, in which they are, for the most part, left during the night to their own devices, and discovered in the morning in a condition of indescribable filth, and this cause is, in many asylums, unavoidable; but in an ideal asylum, in which the number of attendants is not limited by necessary considerations of economy, such patients would have a special attendant to remain with them at night and to prevent their indulgence in such practices. With the first of the two classes into which patients of his category have been divided, the prevention then would be very easy, and with the second it would not be difficult. Whatever the cause of this uncleanness may be, every dirty patient should be trained into habits of cleanliness by being compelled to attend the closet not only at frequent intervals, but what is most important, at regular times. The nervous, as a whole, and any special nervous mechanism of these particular functions, is much the creation of habit that when once, by persistent training, the habit is established by exercising these functions at fixed intervals and at regular times, the nervous system will be broken into conformity, and the habit will at length become unmodifiable by the individual. For this reason patients who are wet or dirty at night should be taken up at least three times and always at the same time every night and given the opportunity of evacuating. Besides taking these patients out of bed, which should be done every three or four hours, the night attendant should, at each visit—that is to say, every hour examine their beds to see if they are dry, and if they should be wet, they are to be at once changed—dry macintoshes and dry sheets placed upon the bed. Every such patient should be examined by the night attendant before he goes off duty, and every bed should be dry and clean when the day attendant come on." Do you think it would have been advisable to follow this course of rousing the patient two or three times a night in the case of Case No. 1? I know it could not have been done in his case.

4837. Supposing it could be done, do you think it would be advisable to rouse a general paralytic in this manner? Certainly not.

4837½. If Professor Anderson Stuart quoted the words I have read to you in support of his theory in regard to Case No. 1, must he have been mistaken in the nature of the case? I should think so, for my idea is that Mercier, in writing as quoted, refers to old demented who wet their beds from inertia.

4838. Do you think it would be advisable to have an asphalt floor in these single rooms? I think there might be some slight advantage, but at the same time the room would be colder. On second thoughts, too, I do not think there would be much advantage in asphalt floors.

4839. Have you any rooms artificially heated at Callan Park? No.

4840. Do you think it necessary to have artificially heated rooms in this climate? No; I do not see the necessity for them.

4841. Are you aware of any asylums in Australia which have single rooms artificially heated? No; there are none so heated in Australia.

4842. Do you know Dr. Alex. S. Paterson, of Adelaide? Yes.

4843. Is this his writing and signature [*Letter produced*]? Yes.

4844. Dr. Paterson writes as follows:—

My dear Dr. Manning, Colonial Surgeon's Office, South Australia, 23 November, 1894.  
1. There are no single rooms for violent, sick, or excited cases heated by hot air or steam coils.  
2. I do not consider the artificial heating of rooms necessary.

Do you agree with that opinion? Yes.

4845. Is the Tasmanian a very much colder climate than that of New South Wales? Yes.

4846. Do you know Dr. Macfarlane, of Tasmania? Yes.

4847. He writes as follows [*Letter produced*]:—

Dear Dr. Manning, New Norfolk, 24 November, 1894.  
None of our single rooms are heated with either hot air or steam coils. Four of the single rooms off the infirmary ward at the new building for males lately erected have open fire-places. These rooms are used for cases which would be objectionable in the general ward. In this Colony, where the winters are sometimes very severe, it would be an advantage if some of the single rooms were heated artificially, though, as a rule, no inconvenience is caused by the absence of artificial heat.

Does this letter agree with your experience? Yes.

4848. As a matter of fact, in cases of this kind, is it not better that the rooms should be somewhat cold? It is in some ways, for then the patient is more likely to keep himself covered up, and to remain in bed. I have noticed that on cold nights patients are much quieter and remain in bed. On hot nights they are more noisy and restless.

4849. We have had a good deal of evidence as regards patients being specially dressed when they receive their friends on visits to the institution;—do not your printed rules for the guidance of the chief attendant and the matron expressly state that patients on these occasions must be properly dressed? Yes.

4850. In fact, is it not a rule that patients shall not go into the visiting-room except they are properly dressed? They are never allowed to unless they are so dressed.

4851. Is it a rule that they shall be tidied up before they see their friends? Yes.

4852. For what reason? In the hope of training them into good habits. In fact, the change of dress on these occasions is a good education in the habits of tidiness.

4853. Do the friends of the patients like to see it done? Yes, and they very soon grumble if it is not.

4854. Even lately have friends of patients complained to you repeatedly of officials taking patients to the visiting-room not dressed in their Sunday clothes? Yes, there have been complaints of that kind.

4855. Is it an uncommon thing for the friends of patients to bring clothes which they desire them to wear when seeing visitors? No.

4856. Is not this done because their friends like to see them in ordinary respectable clothing, rather than in Government clothes? Yes.

4857. As a matter of fact, are not a good number of the patients at work in the laundry or in the grounds when their friends come to see them, and then the patients are dressed in their best clothes, made clean and tidy, and taken to the visiting-rooms? Yes.

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4858. Are they like children—have to be tidied up when taken to see their friends? Yes.
4859. Have you a patient named \* \* \* at Callan Park? Yes.
4860. A gentleman who pays for his maintenance? Yes.
4861. Does he like to do the dirtiest and hardest work he can find? Yes, always.
4862. Is he ever in a fit condition to see his friends—I mean in appearance? No, not in his ordinary clothes.
4863. Does he dress himself up at night and whenever his friends come to see him? Yes.
4864. Have you had patients transferred to you from Cook's River? Occasionally.
4865. Did you ever hear any complaint made about the food at Cook's River? No.
4866. Do you think it would be unwise economy to stint patients in their food? Most positively I do.
4867. What would the result of such a course be? The patients would speedily become worse in their habits, and more destructive.
4868. Stinting them of food, then, would not pay? No; certainly not.
4869. Would Dr. Vause most likely know that? Yes; I think so.
4870. What is the custom of the official visitors when they come to Callan Park as regards speaking to the nurses;—do they make inquiries about the patients from the matron or the attendants? They always speak to me or the other medical man; as a rule, they do not speak to the attendants.
4871. If the official visitors wish to obtain special information about a patient what do they do? Send for the nurse to the Board Room and make special inquiries.
4872. We have heard you say you are obliged sometimes to put patients in single rooms at night without clothing;—are there some confined in this state nearly every night? Yes, a few; and sometimes in the day as well.
4873. Are there also patients in these rooms, without having utensils for their use? Yes.
4874. Why? Because they would not use them except as weapons, and instruments of noise by battering the shutters and doors. They might use them as weapons of attack on the attendants, or put them on their heads; or they might use them as a receptacle to catch their urine, and drink it afterwards.
4875. For these reasons, then, do you think it would be advisable not to give them utensils at all? Yes, certainly.
4876. Do you frequently have to give excited patients sedatives? Yes.
4877. In special conditions are these sometimes administered in the patient's food or drink? Yes.
4878. Is it absolutely necessary for bad melancholia patients to take sedatives? Yes.
4879. Such as large doses of tincture of opium and morphia? Yes; I have one patient who is taking a grain of morphia three times a day in his food.
4880. Are there many rats at Callan Park? Yes; every now and then there are a considerable number.
4881. Can you assign any reason for the presence of the rats? Yes; they come for the food that is thrown about.
4882. Do the patients feed them? Yes; they like to, and some of them keep rats for pets.
4883. If an attendant finds a rat in one of the rooms, or a rat-hole in the asylum, is it his duty to report the circumstances at once? Yes.
4884. Are these rats more frequently in the yards? Yes.
4885. Do you keep watch for them, war with them, and endeavour to keep them down? Yes.
4886. Have you much difficulty with verminous patients? Yes; I have three Government patients now whose heads and beards have to be continually watched.
4887. Are there any bugs at Callan Park? Yes.
4888. In the new buildings? Yes; and in the old wooden buildings—we could never get them out. We are always watching and at war with them.
4889. Do you find it an extremely difficult task to keep them down? Yes.
4890. Objection has been taken during this inquiry to patients dying in these single rooms;—do many patients die in your single rooms? Yes, a great many; and it would be more objectionable for them to die elsewhere.
4891. Are they placed in these rooms after they have reached a stage of partial collapse? Yes; it is more private for them in their extremity in these single rooms, and we do not want other people to see them die. In the hospital, when a patient dies, he or she is screened off until the body can be removed.
4892. Do you ever tie old or feeble patients in a chair? Occasionally we pass a sheet round them and fasten it to the two sides of a chair.
4893. Occasionally are straps used for this purpose? Yes; I used one for years.
4894. Is this done for the protection of the patients? Yes; when they are out getting fresh air. If they were not so protected they would tumble about and interfere with other people.
4895. From time to time do you transfer people from Callan Park to Cook's River Asylum? Yes.
4896. I have here a list of some of those transferred; will you tell me what sort of patients they are; the first is Case No. 36? She was one of the most boisterous, erratic, and violent patients we ever had.
4897. Was she kept in a single room? Yes; frequently by day as well as by night.
4898. Case No. 37? Violent and aggressive, constantly noisy, and required a single cell.
4899. Case No. 38? Very noisy; melancholia; refused her food; required a single room.
4900. Do you remember Case No. 39? I do not remember her, but I have looked up her case and found that she was noisy, and required a single room.
4901. Has it been your custom for a long time past to select the acute cases to send to Cook's River? Yes.
4902. Has this arisen because of the scarcity of single rooms at Callan Park? Yes; and when sending patients away to Cook's River you can hardly expect the Medical Superintendent to pick his best cases for that purpose.
4903. Was Case No. 19 a troublesome patient? Yes, very.
4904. How many nurses were sent with her when she was taken to Cook's River? Three nurses and one attendant.
4905. Was this necessary for safety? Yes.
- 4906-7. *Mr. McGowen.*] Is she in the habit of making a lot of complaints about her treatment? Yes; and she is very untruthful in her statements. 4908.

- Dr. H. Blaxland. 4908. Is she back with you now at Callan Park? No; she is just at present at Gladesville. She goes the round of the institutions.
- 4 Dec., 1894. 4909. Is this list [*produced—Exhibit A. 1*] a correct list of everything Case No. 1 has destroyed whilst he has been at Callan Park? No, not everything destroyed; but it is correct as far as it is written down.
4910. This shows 118 shirts, 39 blankets, besides sheets, socks, and pillow-slips? Yes; he used to tear them up in our presence, and at the time considered he was making money by ripping his shirts up.
4911. *Dr. Manning.*] How many months was he under your care before you could get him dressed? Four months.
4912. *President.*] Do you say it is the custom to dress up the patients when they are taken to see their friends? Yes.
4913. Is that the universal custom? I believe so.
4914. It has been a matter of complaint in evidence that patients are dressed up in this way in order that their dirty clothes, ordinarily worn, shall not be seen by their friends;—do you know if that practice is followed? They are properly dressed in every case, both male and female patients, before they are allowed to see their friends.
4915. When a patient is put in an isolated cell, is it done on the authority of the attendants, or by the order of the Medical Superintendent? The attendants have power to put patients in isolation, but they must report to me immediately it is done.
4916. Is that the case on both the male and female sides? Yes.
4917. *Mr. McGowen.*] Supposing two attendants on the morning of the 20th of May went into the room occupied by Case No. 1 at Bayview House, and put his ordinary clothes over his dirtied pyjamas and singlet, would you remonstrate with them? If the pyjamas were dirty it certainly would not be a nice thing to do. Perhaps the clothing would not be dirty.
4918. Do you think that in the case of a dirty patient the pyjamas drawers would be likely to escape? No; probably not.
4919. Supposing we have it in evidence that on the morning you received Case No. 1, two attendants entered his room at Bayview House and put his day-clothes on him over his dirty pyjamas and singlet to take him to the bath;—would you expect your attendants to put clean clothes over a filthy pair of pyjamas? No; I should expect they would cover him up with a blanket to take him to his bath; they certainly could not clean him in his room.
4920. *Dr. Manning.*] Do you think that a nurse of a few months' experience in this work is capable of judging whether patients should have drugs or not? Most decidedly not.
4921. It has been given to us in evidence by one of the nurses that one of the patients had what she called drugs, which made her worse, and that being so, she had some doubt about giving them;—do you think a nurse is capable of judging in a matter of this kind? Certainly not; and I should dismiss any nurse who told me that.
4922. Have you paying patients in your cottages? Yes.
4923. Are you obliged occasionally to move them from the cottages to the general wards? Yes.
4924. If a cottage patient becomes worse—noisy and boisterous—what do you do with him? He is removed to the general building until such time as he has quietened down.
4925. Is there a constant change of patients between the cottages where they pay to the wards where patients who do not pay are kept? Yes; a man may live in the cottages during the daytime and be sent down to sleep in the main hospital, and some of them are even put to sleep in single rooms.
4926. *Dr. Faure.*] Do you think it would be advisable to have a sloping floor in the single rooms? No.
4927. Do you think it would be very false economy to stint patients in their food? Most decidedly.
4928. Did Case No. 1 sometimes throw his clothes off without tearing them? I do not think he did. He was always so impatient in getting them off that he always tore them.

[Witness withdrew.]

William Daniel Campbell Williams, Esq., L.R.C.P., M.R.C.S., sworn and examined:—

- Dr. W. D. C. Williams. 4929. *President.*] Are you at present employed in the Military Forces of New South Wales? Yes; I am principal medical officer.
- 4 Dec., 1894. 4930. Are you acquainted with Case No. 1? Yes; I have been for a number of years.
4931. Both before and since his removal to Bayview House? Yes; I have seen him since his removal there.
4934. Do you attribute his illness to any particular cause? I attribute it to extreme worry.
4935. Was the patient attended by Dr. Scot-Skirving? Yes; but when he was first taken ill, I think, but I am not sure, Dr. Scot-Skirving was in England. I saw the patient at the time.
4936. On whose recommendation was he taken to Bayview House? I think it was on mine.
4937. Did you see him immediately after his reception there? Yes; I think I went with him when he was admitted.
4938. When you saw him on subsequent visits did he seem to have considerably improved? He did improve after a time. For the first six weeks or two months he was very ill—in a state which amounted to just a question of life or death. He was extremely ill from physical weakness, as well as mentally. Then he improved for a little time; then again he relapsed, and continued up and down.
4939. As soon as he began to improve in bodily health did his mind get worse? I think that when his physical condition improved his mind cleared up for a time and then became worse again.
4940. How long had he been in the institution before you noticed he was getting worse? After he had been at Bayview House about two months he began to improve, and continued to improve for several months. He then had another attack of mental exacerbation, and he never became as well after this second attack as he did after the first.

4941. Did you frequently visit him while he was at Bayview House? Once a week for many months, but latterly not so frequently.
4942. Are you aware that special accommodation was provided for him? I saw him in two suites of rooms.
4943. Did he usually sleep in a dormitory? The first room I saw him in was on the ground-floor, and that room was used as his bed-room. He slept in an upstairs room afterwards.
4944. While you conversed with him latterly did he ever complain that he was put to sleep in a stable? No; never.
4945. Were you ever made aware that he was placed under restraint and put to sleep in a separate room; I knew he was in a single room, and understood that he always had an attendant with him.
4946. Which room do you suppose that to be? I did not know which, but I thought it was either upstairs or downstairs in the main building.
4947. Did you know that he was placed in a separate room away from the main building altogether? No.
4948. Have you been made aware of that fact lately? Only since this investigation was initiated. No one informed me of it at the time of my visits to Bayview House.
4949. When you visited the institution did you make inquiries as to the way he was treated, and did you always see the patient? I used to see him every time I went out, and he always appeared to be treated just the same as he was at first.
4950. Did you ever have any conversation with Dr. Vause as to his condition? Yes.
4951. Did Dr. Vause ever tell you that he was placed in the isolation room? No.
4952. Were you aware of it at all at the time of your visits? No.
4953. *Dr. Garran.*] As far as you observed at the time of your visits was the treatment of the patient satisfactory? Eminently so.
4954. As far as you saw, were the appointments of his rooms sufficient to keep him in comfort? Yes; in every way.
4955. Was he well fed? Yes; with food from Dr. Vause's private table.
4956. Have you any reason to regret that you advised his being placed there? No.
4957. Have you had any special opportunities of studying insane patients? I have seen a considerable amount of insanity in my time.
4958. Have you any complaint to make of the treatment of this case while at Bayview House? Not the slightest.
4959. Do you feel sure that Dr. Vause did everything he could for the comfort and welfare of the patient? Yes; I think I do.
4960. Do you suspect him of any cruelty or neglect to the patient? Not the slightest.
4961. Did you see anything in his treatment at Bayview House to which you could object? No; I used to be able to go out day or night, and I had the free run of the whole place. I was allowed to go out just as I liked, and at any time.
4962. Up to what period did you make these frequent visits? I cannot exactly remember, but I think it was up to the time that Dr. Scot-Skirving returned. I know I went out frequently for the first two to four months. After that I went out every few weeks.
4963. Did you see Case No. 1 frequently up to December, 1893? Somewhere about that time, I think.
4964. Up to that time were you perfectly satisfied with his treatment? Yes.
4965. If any change for the worse took place in his treatment must it have been after that date? Yes.
4966. *Mr. McGowan.*] Do you know the patient was removed from Bayview Asylum because his treatment was not altogether as satisfactory as you say it was in the earlier stages of his confinement? I would not answer a question as to his treatment put exactly in that way. I would say he was removed because his treatment was alleged to be unsatisfactory.
4967. Have you seen the room where, it is stated, he was placed to sleep for six months? I do not think I have; I do not remember it.
4968. Is it one of two detached rooms in a courtyard away from the main building? I do not remember it.
4969. We have it in evidence that for six months at least, previous to the 20th of May, 1894, he was placed to sleep in this room; does not that cover the period of December, 1893, which you mentioned in answer to a question asked by Dr. Garran? Yes; but I did not know he was confined in this room away from the main building.
4970. From time to time when you visited the institution were you under the impression that he occupied one of the two rooms you usually saw him in? Yes, up to December, 1893.
4971. With an attendant too? Yes, and that he had two attendants for the bulk of the time.
4972. Did you go out to Bayview House after December last, up to the time the patient was removed? Yes; but not as frequently as before.
4973. When you saw the patient was he ever violent and excited? He was in a condition of extreme mental excitement. At the mere sight of a female he would take down his trousers. He was dirty in his habits—so dirty that you could not imagine such conduct from a gentleman. He was, in fact, in a most dreadful state.
4974. Supposing you had been told by Dr. Vause that he was put in an isolation room would you have thought it to be proper treatment? I should have quite agreed with it.
4975. Did they ever know at Bayview House when you were coming on a visit? No; I used to drop in at all times.
4976. Would you go straight to Dr. Vause or to the patient? Dr. Vause was often in the old house. I would go to the office, and then the patient would be brought. First, Dr. Vause would go and see if he was presentable, for at one time if you left him for a few seconds he would have his trousers off.
4977. What time would elapse between your arrival and you seeing the patient? From two to six minutes.

[Witness withdrew.]

Robert

Dr. W. D. C.  
Williams.  
4 Dec., 1894.

Robert Scot-Skirving, Esq., M.B. et C.M., sworn and examined:—

- Dr. R. Scot-Skirving.  
4 Dec., 1894.
4978. Were you medical attendant on Case No. 1 for a considerable period? Yes.
4979. Were you attending on him when he was attacked by mental disease? Yes; with Dr. Williams.
4980. Were you present when he was removed from his own house to Bayview Asylum? Yes.
4981. Did you sign the certificates for his removal? I signed one of them.
4982. Did you afterwards visit him for a considerable time? Yes, in the earlier time of his stay at Bayview House.
4983. Had you always every opportunity of seeing the patient when you called at the asylum? Yes, he was always brought into the room to me.
4984. Were you always satisfied with his treatment, so far as you are aware of the accommodation that was provided for him? I saw the bedroom he occupied at first, but I did not see his sleeping accommodation after I returned from England. I went to England in February, 1893, and I came back to Sydney in September of the same year.
4985. Subsequent to your return did you visit the patient occasionally? I think I did two or three times after I returned, and before he was removed to Callan Park. Two or three times; certainly not more than three; perhaps twice.
4986. Were you told on either of these latter visits that the patient was placed in an isolation room? If I was it did not make any impression on my mind.
4987. After having seen the patient, conversed with him, and ascertained his state of mind, if you heard he was undergoing solitary treatment would you have been surprised? I did not think much on the subject either one way or another. If I had heard that he was in a room by himself I should at once have thought that such treatment was necessary. I always understood he was in a room by himself.
4988. Were you aware that any change had been made in his sleeping accommodation? No; I did not grasp that fact.
4989. Have you seen the two isolated rooms in the courtyard of Bayview House, set apart for the use of violent and noisy patients? No; I did not know of their existence.
4990. Did you know that Case No. 1 was placed in one of these to sleep? No.
4991. Did you make any close investigation into his surroundings? No; I always took a great interest in his case, and the progress of his malady. As to the treatment, I had every confidence in Dr. Vause, regarding him, as I do, as an expert in such cases. I simply trusted to him.
4992. Were you ever informed that the patient was placed in this isolated room? I was not; and I did know of the existence of the building until this day.
4993. *Dr. Garran.*] Have you any objection to putting violent patients in a solitary room? No; if patients are violent it is necessary. At Prince Alfred Hospital we have an isolation ward where we put violent patients.
4994. Has anything come to your knowledge to lead you to doubt the suitability of the treatment of Case No. 1 while at Bayview House? I have got no more knowledge of the case now than what I have derived from public prints.
4995. *President.*] Do you remember when the patient was removed from Bayview House to Callan Park? Yes; I was out there at the time, and his son was with me.
4996. From what part of the building was he taken? I do not know.
4997. Was Mr. \* \* \* with you? He went out to Bayview House, but I cannot remember whether he waited with me. I do not remember who brought the patient to us. We waited in a sitting-room, and he was brought to us. We put him in a carriage; I got in alongside the patient, and we accompanied him across from Bayview House to Callan Park.
4998. What induced you to go to Bayview House on that occasion? My position in relation to the family. They have been intimate friends of mine as well as patients. When this trouble began, the son spoke to me, and told me he had made up his mind to remove the patient.
4999. *Mr. McGowan.*] I understood the son to say in his evidence, that Dr. Scot-Skirving saw the room which the patient occupied;—have you seen it? I never saw the room. I did not know of its existence. It is only by what I have read in the public prints that I have any knowledge of this place.
5000. *Dr. Manning.*] Did I meet you in consultation on Case No. 1 before he was sent away from his own house at all? Yes.
5001. Was my advice then that he should be sent to a cottage in charge of a special attendant? Yes.
5002. Was the arrangement to send him to Cook's River Asylum made independent of me? Yes, it was; the only part you took in it was that you said in the circumstances perhaps it would be best to have a cottage with attendant, until we saw whether the derangement was only a temporary aberration of intellect. Within two days after seeing you the patient was becoming obviously uncontrollable, and as it was difficult to get cottages and reliable men attendants, both Dr. Williams, I, and the friends came to the conclusion that it would be better that the patient should go to Cook's River. I had spoken to you again, and you informed me that new buildings were to be put up at Cook's River. It is a fact that your original suggestion was to obtain a cottage and attendants, but we found it could not be done, and the patient was then sent to Bayview House.
5003. *Dr. Vause.*] When he was located at Bayview House was there any question raised about the new building? I do not think we discussed the matter. The room I saw the patient in was in the old building, and it seemed to be adequate for his case.

[Witness withdrew.]

The Hon. Dr. MacLaurin, M.L.C., M.A., M.D., LL.D., sworn and examined:—

The Hon. Dr.  
MacLaurin.  
4 Dec., 1894.

5004. *President.*] Were you one of the official visitors to Bayview Asylum and other institutions of a similar character? I was.
5005. Do you remember at what period? I forget the date, but it was when Sir Alfred Roberts went home.
5006. Did you visit the institution frequently? Yes, once a month.
5007. Were you satisfied with the general arrangements of the place? Yes, as far as I saw them at the time.
5008. Were the patients properly treated? Yes, as far as I saw.
5009. Did Dr. Vause appear to be attentive to his duties, and was the institution worked satisfactorily? Yes, as far as I saw.
5010. *Mr. McGowen.*] Do you know when you made these visits? Yes; it was some years ago when I was acting temporarily for another medical man, Sir Alfred Roberts, the chairman of the Visiting Board.
5011. Did you send any notice to Dr. Vause informing him when you would make your visits? No.
5012. *Dr. Garran.*] Did you always go out on the same day? No, not always. We generally paid our visit on Thursdays, but not always on that day.
5013. *Mr. McGowen.*] Did you go straight to the asylum, or did you first call at the office? The first thing we did as a rule was to walk into the office and wait there for a little while looking at the books. Then we would go from the office direct to the asylum and come back and thoroughly examine the books.
5014. What interval would elapse from the time you entered the office until you passed on to the asylum? If we did the clerical part of our work first, such as inquiring into the journal and case-book to ascertain the number of admissions and discharges, &c., which we were bound particularly to do, then we might be half an hour or longer. If we went to the asylum first we should only be in the office for a few minutes.
5015. *President.*] Are you acquainted with Case No. 1 particularly? I think I saw him once at Cook's River.
5016. Did you see him in the office or in the rooms supposed to be set apart for his use? He was in bed.
5017. Was he in one of the associated dormitories? He was in a big room upstairs set apart entirely for him.
5018. Do you recollect the time of this visit? It was made in either April or May, 1893.
5019. As an official visitor, did you see the food supplied to the inmates? Yes.
5020. Was it always satisfactory? Yes, as far as I could see.
5021. Is the dietary scale satisfactory as regards variety of food and so on? As far as we could see it was.
5022. It has been stated here on oath by several witnesses that it was a frequent custom for messages to be sent round announcing the arrival of official visitors, so that the patients could be decently dressed and put in proper order;—when you went straight into the wards would it be impossible to do that in the course of the few minutes available? I should think it would; but if this were done it would only be the proper thing to do. If I managed an institution of this kind I should send a message to the nurses to say the official visitors had come, in order that the performance of their duties could be facilitated as much as possible. I think that is quite the proper thing to do.

[Witness withdrew.]

Edward Petrie Sinclair, Esq., M.B. et Surg., sworn and examined:—

5023. *President.*] Are you a graduate in medicine? Yes, of Glasgow University.
5024. Where do you live? At Ennmore.
5025. Have you any knowledge of Bayview Asylum? Yes.
5026. For some time were you employed there? Yes.
5027. In what capacity? That of Acting Medical Superintendent.
5028. When was this? From the 7th January to the 10th of February of the present year—for exactly five weeks.
5029. Had you any experience prior to this in lunatic asylum work? No, except that I have visited asylums as a student.
5030. While you were at Bayview House had you power equivalent to the Medical Superintendent himself? Yes, I had.
5031. How did you come to be employed in that capacity? An attendant came for me on the 7th of January, saying that something had happened to Dr. Vause, an accident of some kind in which injuries were inflicted by an inmate. I was asked then if I would go to the asylum during the daytime and look after things generally until he had recovered.
5032. Had you, while acting in this capacity, an opportunity of seeing Case No. 1? Yes; I saw him daily.
5033. Did you see him amongst other patients or in a room? He was usually by himself in charge of an attendant. He was constantly with an attendant.
5034. Where did he sleep at night? In a single room in a small building directly opposite the big building.
5035. How many of these rooms are there in this building? Two.
5036. How often did you visit the institution? Once a day, never before 11 in the morning and not later than 5 o'clock in the afternoon. I have visited Bayview House at half-past 11, 12, 1, 2, and 3 o'clock in the day.
5037. Had you every opportunity of studying Case No. 1? Yes.
5038. Are you satisfied that it was proper to put him to sleep in an isolated room? Yes; it was proper treatment.
5039. Why so? Because he was a destructive and restless patient. He slept but little. I think he was better in this room away from any noise and he was unable to do himself any harm.
5040. With regard to the patient's dress? It was good and clean.

Dr. E. P.  
Sinclair.  
4 Dec., 1894.

- Dr. E. P. Sinclair.  
4 Dec., 1894.
5041. Did you ever hear that the patient had a cold bath the first thing in the morning? Never. I understood he always had a tepid bath. I did not see him have his bath, but I was told this by the attendant.
5042. Who was the attendant that told you this? A man named Mackenzie.
5043. Have you ever had a conversation with this attendant about this case? Nothing beyond talking about the patient's food and his sleep.
5044. Did Mackenzie ever make any complaint to you about his treatment? Never.
5045. What was your impression of Mackenzie's character? I thought he was a careful man, or he would not have been in the position he held.
5046. Was he the sole attendant on the patient, then? Yes.
5047. Was there any provision for a night attendant? I always understood that he had a night attendant.
5048. Did you ever see him in his sleeping-room? No.
5049. Did you ever examine this room? Yes, on two or three occasions.
5050. Have you been in it? Yes.
5051. Did you notice any swell in it? No; it was always clean.
5052. Was it well ventilated? Yes.
5053. Was there any air-brick over the door? I do not remember; but I know there was a large ventilating window.
5054. Did you notice if there was any ventilation in the ceiling? Yes, there was.
5055. Was there any ventilation to provide for the access of air under the floor? I do not know.
5056. Do you know if the floor was on the ground? I cannot answer that question.
5057. How many times were you in that room? Twice, at all events.
5058. During the time it was occupied by Case No. 1? Once then, and once since he was removed.
5059. Was the patient a robust man, or did you notice if he had any difficulty in walking? He always had a tremor, and required aid when walking.
5060. We have had it in evidence that when he was taken out of his room the first thing in the morning that he shivered very much;—what would you attribute that to? I think it would be tremor caused by his ailment. I do not think he would shiver from the cold.
5061. Do you think he would feel cold? No; I think he had sufficient clothing and covering, and was warm.
5062. If placed in a room like that would he be perfectly warm and comfortable? I think so.
5063. Did you notice whether this room had a wooden lining? Yes, it was lined. There were also means of ventilation through the observation holes in the doors.
5064. Have you observed him in the day-time, and had a conversation with him? Yes.
5065. Was he dirty in his habits? I never saw him dirty.
5066. When talking to you was he offensive in his language? Yes; he used several oaths, and sometimes he would quote Bible names. On one occasion he made some remarks about a pair of plaid trousers I was wearing.
5067. Did you approve of his being put in this isolation room? Yes.
5068. Why? Because he was destructive, and liable to do himself harm. He was also sleepless, and I was told that he was filthy in his habits. I, on one occasion, saw him undress himself. He pulled the pockets out of his trousers, and tore the buttons off his coat. His hat was also perforated.
5069. During the five weeks you were there had you every opportunity of seeing the food? Yes; I visited the institution during the meal hour on several occasions.
5070. Was there always sufficient food? Yes; the food was adequate, well cooked, and sufficient in every way for an institution of that kind.
5071. Some of the witnesses have said the food was badly cooked, and not of good quality;—what would you say about that? It is not true. I heard of a complaint once about some beef-tea. There was no foundation whatever for the complaint.
5072. Did the wardsmen complain to you? No.
5073. Did one of the female nurses complain? No; I always had conversations with the matron.
5074. Did anyone ever make any complaint to you concerning the food? No.
5075. Did you ever see any of the patients inadequately clothed? No; never.
5076. *Dr. Garran.*] During the five weeks you visited the institution was Alick Mackenzie the day attendant on Case No. 1? Yes.
5077. From him did you learn of the patient's habits? Yes.
5078. Was it from him that you learned that the patient was locked up in this isolation room at night? No; it was from Dr. Vause, who informed me at the beginning that the patient required such treatment.
5079. Are you quite sure you were told of this? Yes, certainly; otherwise I could not have known.
5080. Can you say whether Mackenzie ever said anything to you about night attendance? No; I cannot say.
5081. Do you think these isolation rooms across the yard are suitable rooms for patients of this kind? I do.
5082. Do you think the fact of these rooms being detached from the main building is an advantage? I think it is advantageous.
5083. In what way? Take the case like the one in question, who could not sleep. He was away from annoyance, and did not annoy others when in the single room. He was free from the sometimes annoying influence of attendants on duty. Furthermore, he in the single room was safer than in a dormitory—he could not fall out of bed. If put in an ordinary room he would fall out of bed.
5084. Do you think there is any disadvantage in taking patients from these rooms into the open air when going to their bath? There is scarcely any distance to take them, and I do not think there is much disadvantage if clothing is put round them.
5085. Do you see any harm in having these rooms detached from the main building? No; I think it is the proper thing.
5086. Would there be any necessity in stinting the supply, or by giving badly cooked and inferior food to the patients? No; certainly not. As far as Case No. 1 was concerned, he was well looked after;

- after; and he dined in Dr. Vause's private house. I have seen him throw the crockery about in Dr. Vause's breakfast-room. As for the other patients, I can say that they partake of the same kind as everybody connected with the institution—good wholesome meat and everything else.
5087. Have you seen the straw mattresses and rugs on which the patients sleep? Yes; the rugs are lined with blanket and quilted together.
5088. Have you noticed the blanket inside the rugs? Yes; and they are quite sufficient to well cover patients.
5089. Are they sufficient to keep them warm at night? Yes.
5090. *Mr. McGowen.*] Did you notice any sores on the persons of the patients? There were a few boils on one or two.
5091. Did Case No. 40 ask you about some sores on her body? She was pointed out to me. I think the matron directed my attention to the case. After seeing it, I came to the conclusion that her blood was out of order, because she would not eat sufficient animal food.
5092. Was it not caused by her eating bad food? No; it was not bad food, but want of food. She was suffering from religious mania, and refused to eat animal food.
5093. Did you make any alteration in her general diet? I recommended that she should have beef-tea and animal broths, and that her boils should be properly poulticed.
5094. Did she not get proper nourishment formerly? She would take everything but animal food, and that was what her system required.
5095. Do you know anything about the eleven or twelve rooms on the female side? I have seen them all.
5096. Do you know how many windows are in those rooms? I cannot answer that question. I know there are one or two in each, but I am not quite positive which.
5097. Have you seen those rooms lately? No.
5098. Has it ever been reported to you that they are all occupied at night? I saw in the morning, when making my visits, that most of them had been occupied.
5099. Do you know whether there was night attendance on these patients? Certainly there was.
5100. How do you know that? I was told so. I made inquiries, and the matron told me that there was always a night attendant on duty, and that visits were made every two hours at the longest.
5101. What matron told you this? The matron in charge at the time. I am not aware of her name.
5102. Was it Jessie Fuller? I think that is the name.
5103. Are you sure that you were informed by this matron—supposed to be Jessie Fuller—that through every night the patients in these single rooms were visited by an attendant? Yes; every two hours at the longest.
5104. Did you ever try to find out if this was correct? I had no possible chance to find this out, and I had no reason to doubt it.
5105. Was it ever reported to you that patients were placed in these rooms without clothes? They always had night-clothing and the rugs I have referred to.
5106. Was it possible for women to be put in straw in these rooms without your knowing it? I saw these rooms in the day-time. I never saw them at night.
5107. Was any complaint made to you to the effect that such things were done? No; never.
5108. *Dr. Vause.*] Subsequent to the five weeks' experience to which you have alluded, did you attend a patient at Bayview House described as Case No. 41? Yes; he was suffering from typhoid fever.
5109. How long did you attend on him? For about two months.
5110. During that period did you call on him at all hours during the day and night? Yes.
5111. Had you then ample opportunities of seeing the place and the way it was managed? Yes.
5112. Did you see anything wrong or suspicious? No.
5113. *President.*] When you visited Case No. 41 did you go direct to the patient? Yes; and to reach him I would pass through two long corridors and up the stairs.
5114. Had you, then, every opportunity of seeing the general regulation of matters pertaining to the institution at night? Yes; I saw where the patients slept.
5115. Were there any nurses about? Yes; there were always nurses. There was a specially-trained nurse for this case, who had not been in the institution previously.
- [Witness withdrew.]

WEDNESDAY, 5 DECEMBER, 1894.

[The Commission met at 11 a.m., in the Board Room, Chief Secretary's Office.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
Esq., M.D., INSPECTOR-GENERAL OF THE  
INSANE.

ANDREW GARRAN, Esq., LL.D.  
JAMES SINCLAIR TAYLOR MCGOWEN,  
Esq., M.L.A.

Dr. Vause was in attendance to hear evidence and examine witnesses in his own behalf.

Bessie Ann Simpson sworn and examined —

5116. *President.*] Are you matron at Gladesville Hospital for the Insane? Yes.
5117. Have you been there in that capacity for some considerable time? Yes; thirteen years, the 6th of last June.
5118. Previous to that were you one of the sisters in the Sydney Hospital? Yes.
5119. Did you come out to Australia with Miss Osborne? Yes.
5120. Were you some years as the Sydney Hospital? Two years, I think.
5121. Previous to that had you a good deal of hospital experience in England? Yes; I was trained at St. Thomas's Hospital, and was subsequently at the Derbyshire General Infirmary.
5122. Amongst others, were you one recommended by Miss Florence Nightingale to Miss Osborne? Yes.
5123. Had you a considerable amount of experience in general hospital work prior to entering a lunatic asylum? Yes.
- 5124.

Dr. E. P.  
Sinclair.

4 Dec., 1894.

Bessie Ann  
Simpson.

5 Dec., 1894.

- Bessie Ann Simpson.  
5 Dec., 1894.
5124. Have you found that some patients require careful watching, because of their occasional violence, even though they were highly respectable and brought up in refinement before being mentally disordered? Yes.
5125. When these unfortunate ladies become insane do they seem to change their nature altogether? Yes; they are altogether different.
5126. Are their habits quite altered? Their habits are just the opposite, as a rule, to what they were formerly.
5127. When you find it necessary to put such patients in a single room do you find any advantageous result? Yes; in cases of excitement the patients appear to become calm sooner by being alone.
5128. In some cases do these patients refuse to wear night-clothing? Yes.
5129. Are their habits dirty? Yes, very dirty.
5130. Do they lose sense of decency and propriety? Yes, they do.
5131. *Dr. Manning.*] Have you been anxious as far as possible, to apply hospital methods to the Gladesville patients? Yes.
5132. Do you find it quite impossible to do so in many cases? Yes, in many cases; but we try it as far as we can.
5133. Are there certain cases which you are obliged to put in single rooms without clothing? Yes.
5134. Also without chamber utensils? Yes; because these patients are so destructive and dirty.
5135. Do a good many of them refuse to wear clothes at all? Yes.
5136. Do some tear the bed-ticks? Yes, almost directly.
5137. Do they then lie in the straw? Yes, they do. Some seem to prefer the straw.
5138. As far as you know, from your large experience, is there any other possible treatment for this class of cases? I do not think so.
5139. If you had double or treble the number of nurses on your staff would you still be obliged to place some patients in single rooms? I do not think the size of the nursing staff would make any difference at all in this respect.
5140. If the staff were very much larger would you still treat these patients as you do now? Yes.
5141. Would having nurses with these patients prevent sleep and do them harm? Yes; it would irritate the patients.
5142. Are you sometimes obliged to keep these patients in these rooms both day and night? Yes.
5143. Is it a fact that you have to keep some patients in continually for a whole week at a time, because you dare not leave them out? Yes; in many cases.
5144. The only thing you can do with such a patient is to feed her and let her get as much sleep as she can? Yes; to feed her and keep her as clean as possible.
5145. How many nurses would it take to spoon-feed such patients? Sometimes three or four; and in some cases I have known it used to take more.
5146. Have you a certain number of patients who will always go without shoes and stockings? There are some who will not wear them.
5147. Have you others who will not wear petticoats? Yes.
5148. Do you think there would be any difficulty for an inspecting visitor to know whether a patient had petticoats on or not? It is easy to see. Some of the patients, on the other hand, have a mania for a great many petticoats.
5149. Is it the custom at Gladesville for the official visitor to make inquiries about patients from the nurses; or do they make inquiries from you? Sometimes from myself, and at others from the nurses; but chiefly from the head nurse.
5150. Do the official visitors speak to the ordinary nurses as a rule? No; I do not think they have done so.
5151. Is it different from a hospital nurse who has charge of a patient, inasmuch as you move about freely in an asylum? Yes.
5152. Do you run short of clothes or bed-clothes occasionally at Gladesville? No; we have sufficient clothes.
5153. But, occasionally, are you unable to get quite all you want from the store? Occasionally we cannot get them just at the time we want them.
5154. Are they always supplied to you later on? Yes; and the longest we have had to wait is not more than a week or two.
5155. Would that often happen in any large household? Probably so.
5156. Have you much difficulty as regards verminous patients? We rarely have anything of that kind. Sometimes when a patient is in delicate health she seems to breed vermin; but we have but few cases of the kind.
5157. Have you many patients in regard to whom it would be unsafe for one nurse to open the door of a single room at night? Yes.
5158. Is it your system in night-watching to send two nurses? Yes.
5159. Are there patients whose doors it would be quite safe for one nurse to unlock in the day-time but not at night? Yes. In some cases one nurse might take a patient away from the room in the daytime, and it would take two or three to move her at night.
5160. Do you superintend the passing to and fro of patients to the visiting-room? Yes.
5161. Is it one of your duties to see that these patients are properly dressed on these occasions? Yes.
5162. Do the friends of patients expect to see them properly dressed? Yes.
5163. Is this dressing looked upon as one of the ordinary rules of the asylum? Yes; I have to see that she is tidily dressed and in every way comfortable.
5164. In the case of quiet patients do they wish it themselves? Yes.
5165. In the case of dirty patients is it advisable for many reasons to do so? Yes.
5166. Do the friends of patients wish it? Yes.
5167. Do they supply you with clothes for the patients to wear in the visiting rooms? Yes; a great many of the friends do supply clothes for this purpose and for Sunday wear.
5168. Do you, with Dr. Sinclair, have the selection of cases which you send from Gladesville to Cook's River Asylum? Yes.
5169. Will you tell me what kind of cases some of these are;—I will ask you what is Case No. 33? A very bad case—a single-room case. 5170.

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5170. Do you remember Case No. 19? No.
5171. What have you to say about Case No. 42? She was a refractory case, and very troublesome indeed.
5172. Is one of the first inquiries you make, when you know patients are going to Cook's River, whether you can send single room cases? Yes.
5173. Is that because you are short of single rooms at Gladesville? Yes.
5174. So that the class of patients you send to Bayview House is not your best? No.
5175. We have had it in evidence that at Cook's River it has been the habit for the attendants to have ten minutes, a quarter of an hour, and even twenty minutes' notice of the arrival of the official visitors, so that they may prepare the patients for inspection;—how much preparation do you think could be made by five nurses amongst fifty patients? Not much; it would take that time with one alone in some instances.
5176. With the class of patients I have been mentioning could much preparation be made? No; not much.
5177. Would it be possible to do a little tidying amongst the patients? You might get a clean dress, but the difficulty is that the patient might object to wear it.
5178. Would any changes that could be made in the dresses of fifty patients in ten minutes or a quarter of an hour be very few indeed? Yes.
5179. Would it be possible to change the dresses of the whole fifty and tidy them up generally? Certainly not.
5180. *Dr. Garran.*] You say you like to dress up the patients tidily before they are inspected;—do you find it difficult to keep some of them tidy during the day? Yes.
5181. Have they lost all sense of female delicacy and taste? Yes.
5182. Have they lost all interest in looking smart? Yes.
5183. And are you obliged, as a matter of treatment, to leave them alone? Yes; in many cases we are.
5184. Do you wait upon these patients all day long? Yes; they are always under observation all day.
5185. Must you clean them up a little when their friends come to see them? Yes; they must be made presentable.
5186. When a patient becomes violent, and you think it necessary to put her in a single room, do you do so on your own authority? If a patient becomes so violent as to be unsafe to herself and to others, I put her in a single room, and report the circumstance at once to the doctor.
5187. Do you ever put a patient in without the doctor's knowledge? No; the doctor always knows.
5188. What degree of violence or noisiness induces you to put a patient in a single room? If it amounts to just a simple quarrel with another patient I would not do it, but if a patient becomes very violent, and dangerous to herself and to others, I do not hesitate.
5189. If a patient gets out of bed at night, is that a sufficient reason for removal to a single room? Not unless she continued to do so, and became violent.
5190. Do patients sometimes get out of bed at night and pull other patients about? Yes; but I would not put her in the single room for that if it were done casually. The next night the same patient might be quite good.
5191. What amount of light is there in these single rooms? They are lighted from the dormitory. There is no light in the rooms themselves.
5192. Are they rather dark? Yes.
5193. Is not that a disadvantage? I think it is an advantage, because they sleep better, and are more likely to be quiet.
5194. Would the light wake them? In the associated dormitories the light keeps some of them awake.
5195. Do you darken the windows in the associated rooms? Yes; we pull the blinds down.
5196. Do you not throw the light in early in the morning? No.
5197. Is it your opinion that a highly excited patient is better by herself than with anyone with her? I think so—much.
5198. Do you think a nurse or nurses sleeping in the same room would be disadvantageous? I think the patients are better alone.
5199. Have you a night nurse on duty patrolling the asylum? We always have three night nurses.
5200. Are any of the patients in these single rooms left all night without being seen? No; they are seen every two hours, and oftener if necessary—sometimes every half-hour.
5201. Are all these ordinary nurses, or are they under a chief nurse? They are under a senior nurse, who is stationed in the observation ward.
5202. The three, then, are not all of the same status? No; one is a senior nurse; the next is a second senior, and the third is a junior.
5203. Have you many violent patients at Gladesville at present? Yes; a good many just now.
5204. Do you send them to Bayview House now? No; I wish we could.
5205. Does one violent patient cause you more trouble than half a dozen quiet ones? Yes.
5206. *President.*] Referring to these single rooms, are there a number of them in a row, with a corridor on the outside, and is that corridor lighted at night? Yes.
5207. So that although the rooms themselves are dark, a light is easily thrown on the patient if necessary? Yes; there is a light in the corridor, and the nurses are supplied with lamps.
5208. Concerning this tidying of patients, say there are fifty patients to be seen, and there are two nurses to attend to them, that a large proportion of this number are clean and the smaller number have to be attended to, could that be done in a few minutes? No, not if they are at all troublesome.
5209. Does it always take some time to persuade these patients that it is right they should look tidy? Yes; they object to being dressed, and you have to coax them.
5210. Do you make it a strict rule to tidy up the patients when their friends come to see them? Yes, always.
5211. Are the quiet patients always pleased to be tidied up? Yes, and when well enough they tidy themselves, and take a pleasure in doing it.
5212. Is there any provision for the three night nurses to obtain any little comforts that patients may require? Yes.
5213. What provision? We classify the patients, and those requiring night attention of this kind are placed in the observation ward.

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5214. Can you get tea or cocoa during the night? Yes, when it is required.  
5215. Were are these things kept? The senior nurse has them in the observation ward.  
5216. Is there always an ample supply there? Always for those who want it. Generally milk is the drink given, and there is always milk.  
5217. Do these patients always get milk, cocoa, or tea when ordered by the doctor? Generally they are ordered milk or cocoa, and they get it.  
5218. Generally speaking, are these patients on milk diet, and is milk always available? Yes, and there is no difficulty in getting it.  
5219. Have you a gas-stove at which you can heat these drinkables? There is a Sicc stove in the observation ward, and it can be used whenever it is required.  
5220. *Dr. Vause.*] How many patients have you under the three night nurses? The whole of those on the female side.  
5221. How many are there? About 300.  
5222. Is that 100 patients to one nurse? Yes.  
5223. If you require anything heated on a summer night do you have to light a fire before you can get it? We keep the stove alight summer and winter in the night nurses' room.  
[Witness withdrew.]

Eric Sinclair, Esq., M.B., C.M., M.D., sworn and examined:—

- Dr. E. Sinclair.  
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5224. *President.*] Are you Medical Superintendent at Gladesville Hospital for the Insane? Yes.  
5225. How long have you held that position? Since January, 1882.  
5226. Had you any previous experience in lunacy work? None.  
5227. Have you any medical attendants except yourself? Yes, two others.  
5228. How many patients are there at Gladesville? Eight hundred and fifty, 550 males and 300 females.  
5229. How often do you make your round personally? I generally go round every day. If possible I go over the whole of the house every day, but it is not always possible to do that. When I do not one of the other medical officers completes the inspection.  
5230. Are there a good number of refractory patients in Gladesville Asylum? Yes. I presume that we have the usual proportion, at all events.  
5231. What is the rule in regard to the treatment of refractory patients at Gladesville when the occasion becomes necessary for nurses or attendants to put them in the single room; must this fact always be immediately reported? There is no such things done at Gladesville as the nurse in charge placing a patient in the single room without reporting it till the next day. If a patient is in the habit of sleeping in a single room the facts in connection with the case are reported when I make the usual medical round. If patients become suddenly violent and in consequence are at once placed in a single room the fact would be reported without delay.  
5232. When cases have become chronic do you get the report on your ordinary medical round? Yes, that is customary.  
5233. Have you a regular time of visitation? Yes.  
5234. Have the other medical gentlemen in connection with the institution a fixed time in connection with their visits? Yes. There is a fixed time.  
5235. Do you keep notes of all the cases? Yes. Everything to do with the cases is set down in the case-book.  
5236. With regard to the male patients put into the single rooms have you a night-watch? Yes, we have more than one night attendant on duty. There are three in the main building and one in the branch building.  
5237. Do you find that to be a sufficient number of night attendants for nearly 600 patients? Yes.  
5238. Would that be more than 150 patients to one attendant, or about that number? We do not count it in that way. If patients require special attention, care is taken that they shall have it irrespective of the ordinary attendants making their usual round.  
5239. While on a visit at Gladesville I observed that the single cells are lighted from the corridor, there not being any light in the single rooms themselves;—is that the case? The light thrown into the single cells is entirely from the corridor, where there are gas lamps alight throughout the night.  
5240. Does the light being thrown into the cells affect the patients at all during the night? We find from experience that it is not advisable to have too strong a light.  
5241. Is there an observation hole in the doors of these single rooms? Yes.  
5242. How often is the night watch supposed to go round? The watch is supposed to make a visit every hour.  
5243. Have you any check to show that this is done? Yes; there is a tell-tale clock which marks every time the night attendant makes his round.  
5244. Are some of the patients kept in these single rooms filthy dirty in their habits? Yes.  
5245. It has been given in evidence before us that in certain cases a particularly strong urinal smell cannot be got out of the rooms for days together;—is it a fact that in certain stages of insanity it is not possible to get rid of this smell? No. In certain classes of insanity it is very strong, but it can be removed.  
5246. What are your floors;—wooden or asphalt? We have wooden floors.  
5247. Can these always be made sweet under ordinary circumstances, even with this particular class of insane patient? Yes.  
5248. Do you think asphalt would retain the smell long? With this class of patients it is likely that it would dry quicker, and if that were so the smell would not last as long. It would smell quiet as bad though the first thing in the morning.  
5249. Do you think asphalt would suit the associated dormitories, where demented and old and feeble patients sleep? Yes, perhaps so.  
5250. If an experienced person who knew nothing at all of these matters, except by casual examination, offered an opinion, do you think he would be in a position, by going into one of these places, where the floor was of wood or asphalt, before it had been cleaned, to state authoritatively whether the smell was from stale or fresh urine? I am afraid he would not.

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5251. *Dr. Manning.*] Have you paid a considerable amount of attention to the treatment of wet and dirty patients of late? Yes, of late years I have.
5252. Does the number of wet and dirty patients at Gladesville compare favourably, *pro rata* of course, with other institutions of similar size? Yes.
5253. We have had it in evidence from Professor Anderson Stuart that patients should be roused from their beds two or three times a night, if necessary, for the purpose of cleanliness, and to support his contention he quotes "Mercier" on this subject;—do you think a patient should be roused, say every four hours;—would that be proper treatment of acute mania in general paralysis? No; certainly not. Such experiments might be tried with advantage on demented, but certainly not on a paralytic.
5254. Would it be decidedly wrong treatment if applied to an acute maniac? Yes. On no account should these patients be roused. Interference in this direction would involve great danger of a falling off in general health, owing to want of continuous rest.
5255. Would rousing up as suggested interfere with his recovery? Yes.
5256. When quoting from "Mercier," Professor Stuart gave this extract: "Patients who are dirty from sheer malice, and from a desire to give trouble, are a very different class to deal with. This category of patients is the most objectionable of all. Such patients are always made the tenants of single rooms, in which they are for the most part left during the night to their own devices, and discovered in the morning in a condition of indescribable filth, and this cause is in many asylums unavoidable. But in an ideal asylum in which the number of attendants is not limited by necessary considerations of economy, such patients would have a special attendant to remain with them at night and to prevent their indulgence in such practices. With the first of the two classes into which patients of his category have been divided the prevention would then be very easy, and with the second it would not be difficult. Whatever the cause of this uncleanness may be, every dirty patient should be trained into habits of cleanliness by being compelled to attend the closet not only at frequent intervals, but what is most important, at regular times. The nervous system as a whole, and any special nervous mechanism of these particular functions, is much the creation of habit, that when once by persistent training the habit is established by exercising these functions at fixed intervals and at regular times, the nervous system will be broken into conformity, and the habit will at length become unmodifiable by the individual. For this reason patients who are wet or dirty at night should be taken up at least three times, and always at the same time every night, and given the opportunity of evacuating. Besides taking these patients out of bed, which should be done every three or four hours, the night attendant should at each visit, that is to say, every hour, examine their beds to see if they are dry, and if they should be wet they are to be at once changed, dry macintoshes and dry sheets placed upon the bed. Every such patient should be examined by the night attendant before he goes off duty, and every bed should be dry and clean when the day attendant comes on." Do you believe that "Mercier," when writing as quoted above, meant what he has written to apply to acute cases of mania? No; certainly not to acute cases.
5257. To which classes then do you think he makes reference? To imbeciles, to demented, and to old and feeble patients who might remain in bed from sheer indolence or weakness.
5258. If Professor Anderson Stuart applies this opinion to the treatment of acute maniacs, do you think he has altogether mistaken his case? Certainly he has.
5259. Have you at Gladesville, or have you seen anywhere else in Australia, these single rooms artificially heated? No.
5260. Do you find it necessary even in winter-time that these rooms should be so heated? No; not in this climate. The patients never suffer from cold, neither in the night-time nor in the daytime.
5261. What are your instructions to the matron and chief attendant as regards the tidying of patients when they are taken to see their friends? The instructions are that patients when taken to see their visiting friends shall be dressed as they are when going to church.
5262. Will you give the reason why this is a strict rule of the public hospitals for the insane? One would, in the first place, naturally do so if he went to see his own friend. We do the same with the patients. We see that their hands and faces are washed, and that they are dressed in decent clothes. A man might be working outside in the grounds, and common decency demands that he should not go to his friends as he comes from work, probably with wet trousers and a dirty coat.
5263. Do the quieter patients dress themselves? The patients who understand what is intended frequently grumble if they are not allowed to dress themselves. If they are in the garden and are informed of the arrival of friends, some patients will straightaway wash and dress themselves and proceed to the visiting room.
5264. Do the friends of the patients expect to see them tidy? They do, indeed, and would very soon grumble if they did not. We frequently get letters of complaint if the clothing and the patients are not as tidy as the friends expect them to be.
5265. Do they supply clothes for this purpose? We always ask them if they can afford to do so. If they can we get special clothes from the friends for Sunday and visiting wear. We keep these clothes for such occasions, and dress the patients in house clothes for ordinary work.
5266. Are you obliged to treat a number of patients in single rooms? Yes.
5267. Are a certain proportion of these put in single rooms at night without clothes? A certain proportion are in these rooms both day and night without clothes.
5268. What are they supplied with? With a canvas rug lined with blanket, and straw mattress. In some cases where patients destroy the mattresses they are supplied with straw without the tick.
5269. Since you have visited the Medical Superintendent at Gladesville have you had an opportunity of visiting most of the large asylums in England, in Scotland, and in other parts of the world? Yes.
5270. Have you visited the best both in England and Scotland? Yes.
5271. Did you find similar customs observed at these as those you observe in the treatment of such cases at Gladesville? Yes.
5272. Do you know of any other effectual way of dealing with this class of patients? No; you might keep an attendant in the room, but that is not a way I should recommend.
5273. If you had a larger staff of attendants than you have now would you still be of that opinion? Yes; I should still think it better for the patient if he had to be in a single room, to put him there with straw mattresses rather than with an attendant.
5274. In part of that quotation from "Mercier" it is said: "But in an ideal asylum in which the number of attendants is not limited by necessary considerations of economy such patients would have a special attendant

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attendant to remain with them at night to prevent the indulgence in dirty practices"; do you think the presence of an attendant would stop patients in their dirty habits? No; it would not.

5275. If you had such an increase of staff as would enable you to place an attendant with each dirty patient of this class would you still be of the same opinion and object to make any change? Yes; it would, for a change in this direction would do harm to the patients. It would interfere with their rest; it would keep them from sleeping; it would keep them in a constant state of irritation, and result in increased excitement.

5276. What is the usual custom when the official visitors are going through the asylum in regard to making inquiries about the patients? Inquiries while making the rounds are made from the medical officer or officers accompanying the visitors. In the ward the visiting doctors speak to the patients themselves.

5277. Do they also occasionally speak to the matron? Yes.

5278. And very occasionally to the chief nurses? Yes; but not to the other nurses.

5279. Why is that? Because the chief nurse is supposed to know all about the ward and the people in it. The other nurses are under his or her direction.

5280. During the last ten years have you made great improvements in the single rooms? Yes.

5281. In the way of providing extra light and extra ventilation? Yes.

5282. Have you been doing this gradually? Yes.

5283. Have some alterations been made within the last six months? Yes; and some still require to be altered.

5284. Have you been unable to complete the necessary alterations for want of funds? Yes.

5285. Have you still a number of rooms which you do not consider to be sufficiently lighted or ventilated? Yes.

5286. Are some of the patients in these single rooms in such a condition that you can, with safety, give them chamber utensils? Yes. In most of the cases utensils are placed in the rooms. They are put in wherever the patients do not make a noise. In some instances it would be useless to put utensils in the room.

5287. Is that because patients would not use them? Yes.

5288. Or put them to a bad use? Yes.

5289. Have you seen Case No. 1? No.

5290. Have you heard a good deal about him? Yes.

5291. Do you know something of the nature of his affliction? Yes.

5292. In dealing with cases of that kind would you think it advisable to consult me, and inform me freely of the condition and difficulties of the case? I always make a point of doing so.

5293. Partly as a matter of consultation and partly because of my share in the responsibility? Yes; but mainly the latter.

5294. Have you had patients transferred to you from Cook's River Asylum? Yes, occasionally.

5295. Have you heard any complaints about the food at that institution? No.

5296. Or as regards the clothing? No. We have no complaints. The people usually spoke very well of the place. If we have heard complaints we have invariably told you.

5297. We have had it in evidence that sometimes patients have died in the single rooms at Bayview House;—is it so at Gladesville too? Yes.

5298. Have you had a considerable number of deaths in the single rooms? Yes; we frequently place patients in these rooms when they reach a low condition. We purposely put them in these rooms by themselves, for it is anything but pleasing to the other patients to see anyone approaching death.

5299. Have you had cases of a violent and noisy patient suddenly collapse and die in a single room? Yes; in the daytime.

5300. In your English and Scotch experience did you learn what was the custom with regard to attendants sleeping in the dormitories with patients? In some of the asylums I made inquiries on this point, and found that in the public asylums it is not the custom for attendants to sleep in the dormitories with patients.

5301. Is it the custom in private asylums for the nurses to sleep with the patients? Yes; but not in the public asylums.

5302. Have you transferred patients from Gladesville to Cook's River? Yes.

5303. I will mention the names of some of them, and will you tell me the nature of some of the cases—first, Case No. 33? A violent case, in the refractory ward as a rule; slept in single room.

5304. Case No. 43? I do not remember much about her case.

5305. Case No. 42? She was a single-room case.

5306. Were a fair proportion of the patients sent to Bayview House single-room cases? We tried as far as possible to send single-room cases. We were glad to get rid of them as we were short of single rooms.

5307. Did you always ask if you could send single room cases? Yes; and we were told sometimes that we might and sometimes that we might not.

5308. We have been told in evidence that notice was given, some ten or fifteen minutes, and sometimes more, of the arrival of the official visitors at Bayview House, and that in the interval between the arrival of the visitors and their going round the wards, a considerable amount of preparation was made by changing the dresses of the patients, do you think that with fifty patients and five nurses a considerable amount of change could be made in that time? With patients inclined to be violent you could not do much, if anything at all in the time.

5309. What is it usual for nurses to do when they ascertain that the official visitors are in an institution? They take the towels away and make the wards tidy. But they have no time to change dresses. They might put dresses straight or arrange neckerchiefs; then they would assemble the patients so that they can be easily seen.

5310. When the official visitors enter a ward at one end is it often half an hour before they reach the other? Yes; it is so at Gladesville.

5311. Do you think it would be impossible to make elaborate preparations and redress the patients as stated in from ten to twenty minutes? It could not be done, and if it were attempted on some patients the first thing they would do would be to tell the visitors.

5312. Have you at Gladesville a number of women always without shoes and stockings? Yes.

5313. Are there some without petticoats? Yes.

5314. Is it easy for official visitors of experience to see whether patients have petticoats on under their dresses or not? Yes, quite easy.

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5315. *Dr. Garran.*] Where you have a dirty patient in a single dormitory do you sometimes clean it up during the night and sometimes leave the room alone? The patient may be roused to make water in the earlier part of the night and it does him no harm. If it happens late at night sometimes the room is left till morning.

5316. Is it an uncommon thing if feces becomes desiccated to leave it there till morning? No; not if deposited early in the night.

5317. Does it often happen that ordure is found on the floor of the room and on the pyjama trousers of the patient? This happens always with certain patients.

5318. Can this be avoided? No.

5319. Do you think it a good thing to turn patients out of bed unnecessarily for the purpose of attempting to keep them clean? No; interference of this kind makes them excited and stops their night's rest.

5320. Is it better to leave them in their dirt than to constantly insist on cleaning them? Yes; always in these particular cases of acute mania.

5321. Is it desirable to have more light in these rooms;—do you think patients should have the sunlight as soon as it is available in the morning? No; if so the patients would get up so early; hence we have a shutter to keep out the light.

5322. Do you pull that shutter up at night? Yes.

5323. Does it rest with the warder to pull it down again in the morning? Yes.

5324. If a patient goes to sleep late after a restless night do you get him up at the usual time for his bath? No; in certain cases we leave him to sleep.

5325. Practically do you get them up so soon after daylight that it is not worth while to trouble whether there is light or not in the room? We do not consider that light makes much difference.

5326. Do you find any difficulty in getting these rooms dry after they have been scrubbed? No.

5327. Are your single rooms outside and detached from the main building? No; they are off a corridor.

5328. Do they get as much fresh air as they would if they were outside? Perhaps not; but they get sufficient.

5329. Do you use any chemical in scrubbing out these rooms? We use Sanitas soap and carbolic. We could not get the smell out without using these.

5330. I desire to know if you can distinguish between a strong urinous smell—do these rooms when they are opened in the morning emit a strong urinous smell? It is a strong smell of fresh urine. The urine of these patients smells more or less strong from the moment it is passed.

5331. We have it in evidence that when a certain room was opened early in the morning at Bayview House there was an abominable smell of stale urine? I can quite understand there being a strong smell, and much of it might depend upon the amount of ventilation during the night. These patients throw off from their own bodies perspiration that smells strong and that in itself would cause a room to be stuffy.

5332. Would these exudations from a man's body give the smell of stale urine? The first thing in the morning the smell of these rooms meeting anyone coming from the fresh air would be sufficient.

5333. If the floor of the room had not been properly cleaned could this stale urinous odour arise? It is quite possible. The smell comes back. The urine sometimes soaks into the boards and its smell comes back as the room gets dry.

5334. Supposing the floor is of the ordinary kind, such as the urine could pass through the cracks, what would be likely to happen? There would be the greater likelihood of the smell coming back, in the way I spoke of.

5335. Have you many cases of general paralysis at Gladesville? A considerable number.

5336. Is it, as a rule, a disease with well-marked stages? Yes; there is at first the stage of excitement, then the stage of quietness, and it generally ends in the stage of dementia.

5337. Does the latter always come after the other? The stages are not particularly well-marked.

5338. In the highly irritable stage are these paralytics very troublesome patients? Yes.

5339. Is that the most dangerous period? Yes.

5340. Is there any stage where you have to put these patients in a single room at night? Yes; in the first stage. It is absolutely necessary to do so, as the patients then are extremely destructive.

5341. Is that any uncommon form of treatment? It is not at all uncommon.

5342. Do you give any special attention to these patients while in this stage? Yes; the attendants have to visit them more frequently.

5343. Do the attendants on these occasions look through the observation holes, or do they open the room door? They do not open the door unless they are specially told to do so. They open the door only when a patient is greatly excited, or when anything specially requiring attention renders it necessary for them to go inside the room.

5344. Do you think these patients feel the cold? I do not think so. If we saw that they did we should take extra precautions. We do not often ascertain that the skin gets a chill.

5345. Do not these patients seem to physically suffer from cold? No; if they feel the cold they lie down in the straw; for often, in the morning, they have been found buried in the straw, with the rugs pulled over them.

5346. When these patients become violent, on winter nights, and denude themselves, have you found them to be cold in the morning? No.

5347. Have you any idea of the temperature of these rooms? No; but they and the patients are warmer than the outside air.

5348. Would it be a good thing to reduce the ventilation? On very cold nights in the winter-time we do reduce it with the aid of small shutters.

5349. Do you ever shut the ventilators? We shut them when it is exceptionally cold.

5350. When you take them out to go to the bath do they shiver? No; except when taken from one end of the ward to the other. They are always covered with blankets, and one does not notice the shivering.

5351. Is it any distance from the rooms to the bath? In some wards there is some distance to go; in other wards the baths are close beside the rooms.

5352. Do the patients have to go outside on the verandahs to get to the bath? Yes; except they are taken a long way round.

5353. Practically do they go into the outside air when on their way to the bath? Yes; but under the verandah all the time.

5354. For what distance? It looks about 60 feet.

5355.

- Dr.  
E. Sinclair.  
5 Dec., 1894.
5355. Do any go quite into the open? No; they are under a verandah, free from draughts.
5356. Do you see any objection in those patients going into this half open air? No.
5357. Have you noticed any patient get a chill from this practice? No; nor have I heard any complaint to that effect.
5358. *Mr. McGowen.*] Do you know of any better method than putting these patients in the cells naked;—is it not possible to make some canvas shirts, which they cannot destroy? No; not when in that stage. No thickness of canvas is too strong for them. The heavy rugs are destroyed in a night.
5359. Is it not possible to make some garment without arms, wearing which they would be unable to destroy it? We tried some combination things, but they would not answer. We have tried all things that have been thought of, and we find the best garment is the one we have adopted.
5360. Is there no way of fastening some garment at the waist or back, by which the patient might remain clothed during the night? You have no idea of what these people are like in this stage of insanity, You could not keep clothing on these patients except by tying it, so that it would be painful to the wearer.
5361. Do you use any implements of coercion, such as camisoles and muffs? Yes.
5362. Do you make any entries in certain books when these are used, so that they can be seen by the visiting doctors? Yes; I have to record the use of these things, and the entries are seen every time the official visitors come to Gladesville.
5363. Supposing an attendant desired to make a complaint, regarding the treatment of a patient, would he make it to you, to the chief attendant, or to the matron? It would be made to me as a rule. If not, it would be made to the senior attendant, and that attendant would be in fault if he did not come to me with it immediately.
5364. What is the usual custom followed when a complaint is made? The usual custom is to complain to the senior attendant, in minor matters of routine, but if there is anything serious to complain about I should expect the complaint to be made direct to me.
5365. Since you have been at Gladesville have any outside physicians consulted with you and attended patients for physical and surgical ailments? Yes.
5366. Have you had any consultations on mental matters? Only with Dr. Manning.
5367. Have medical men on their travels visited Gladesville? Yes.
5368. Have they expressed favourable opinions as to the working of the institution? Yes.
5369. In case it becomes necessary to administer drugs to patients, is it the invariable custom for the medical officer to look fully into the matter? Drugs are always ordered by the doctor, and only after he has seen the patient.
5370. Are drugs administered by the attendants? Yes.
5371. Are they mixed by the dispenser? Yes.
5372. *Dr. Vause.*] What would be the effect on an irritated and excited patient of fastening on a canvas jacket by mechanical means, especially where there was a tendency to remove clothing? It would make him more excited when necessary to keep him as quiet as possible.
5373. Would you do such a thing at night time? I would not.
5374. Would you have brass fastenings on any article of clothing in a single room, while occupied by a patient of this class? No; we do not even use a camisole at night.
5375. *President.*] Do you think moving about either inside or in the vicinity of a single room at night would tend to excite a patient in this stage of the disease? Yes.

[Witness withdrew.]

Kate Brennan sworn and examined:—

- Kate  
Brennan.  
5 Dec., 1894.
5376. *President.*] Are you nurse at Bayview Asylum? Yes.
5377. Are you engaged there now in that capacity? Yes.
5378. How long have you been there? About two years.
5379. Were you engaged on December 2nd, 1892? Yes.
5380. Did you then sign a book containing a list of your obligations and duties and the regulations of the institution? Yes.
5381. Have you always endeavoured to obey those instructions? Yes.
5382. What are your particular duties now? At present, and since January, I have been in charge of the Government patients' dining-room.
5383. Had you any previous experience in this particular work before going to Bayview House? No. Formerly I was a house and parlour maid at Stanmore, and I took certificates of character with me when I was engaged by Dr. Vause.
5384. Now that you are in charge of the dining-room have you every opportunity of seeing that the food is well-cooked and of good quality? Yes; and it is always good.
5385. Have you ever heard any complaints from any of the nurses on this score? One or two of the nurses did grumble about their food.
5386. Do they get the same kind of food as the patients? Yes.
5387. What was the nature of their complaint about the food? They said that the meat was not tender, that it was too tough.
5388. Did they say it was too fresh? It was always fresh. Sometimes the steaks for breakfast were rather hard.
5389. Was it because they were a little too fresh for use? I never found it so.
5390. Was there always an adequate supply? There was always plenty of meat.
5391. Did you sleep in the dormitories? Yes.
5392. With how many patients? There were fourteen when I went there, but there are not as many now.
5393. Was it the custom to change the sheets in your dormitory at night? I never did it, but I believe it was done last winter-time.
5394. Do you mean that the sheets were put on in the daytime and taken off at night? In one of the dormitories they were taken off—in the dormitory next the single rooms.
5395. Was that on account of the patient being dirty, or was there any other express reason for that being done? The nurse used to take the sheets off.

Kate  
Brennan.  
5 Dec., 1894.

5396. What nurse was that? It was Maggie Macleod; she always had clean sheets in the day.
5397. Do you know the number of single rooms there are on the verandah on the female side? I think there are ten.
5398. Have you seen patients put in them? Yes.
5399. Have you assisted to take patients out in the morning? Yes.
5400. Were there some of them put in naked? There is one patient who sleeps in straw.
5401. What is her name? Case No. 15. I have seen her take off every stitch of clothes. She is a very destructive patient.
5402. When the official visitors came to the institution to see the patients did you always get warning, so that you might make them ready? No. We never knew more than ten minutes or a quarter of an hour of the arrival of the visitors before we saw them in the wards. We could not do much in making patients ready in that time. The patients were tidied, just the same as they are when Dr. Vause comes his rounds.
5403. Was there any difference made at all in the patients when the visitors came? Sometimes if a patient had on a specially untidy dress it was changed.
5404. Did you ever take the clothes off one patient and put them on another? No, never; and I never saw it done.
5405. Was there always a good supply of clothing for the use of the patients? Yes.
5406. It has been told us that there were patients who had no stockings on, and that some of the stockings had no feet;—is that so? Nurses could get everything they wanted in the way of clothes by going to the laundry.
5407. Have you ever been on duty as a nurse at night? Yes, for one week.
5408. How long is that ago? Some months ago.
5409. Is there a nurse on night duty now? Yes.
5410. Do the nurses take this night duty in turn? Yes, once a fortnight; it used to be once a week.
5411. Do you remember Case No. 17? Yes.
5412. Was she a delicate patient? Yes.
5413. Did she always have a nurse in attendance on her at night? Yes; two nurses slept in the dormitory where she was.
5414. Do you know that Case No. 20 broke her arm? Yes.
5415. Were you on night duty then? She was in the dormitory where I slept, and Maggie Macleod was in my place during the week I was on night duty.
5416. How did this accident occur? We cannot exactly say when it was done or how it was done. We found her with her arm broken.
5417. Did she tumble out of bed? I do not know. The patient while in the dormitory was restless, and wandered about the room. She was pulling the bed-clothes off the other patients, and Nurse Macleod asked me to remove Case No. 20 to a single room. I would not do so at first, but at half-past 10 o'clock, after mentioning the case to the matron, Macleod and myself moved her from the dormitory to a single room.
5418. Was it not until morning that you discovered the patient's arm broken? Yes.
5419. When you removed her and left her in the single room, was her arm broken? No.
5420. Did you visit one of the patients every hour? Yes; Case No. 23.
5421. Could you see into these rooms? I saw Case No. 20 standing at the door asking for her clothes. She wanted her clothes to get dressed.
5422. Did you ever go into the single rooms while on night duty? No, only to Case No. 23.
5423. Did you ever hear of the doors or these rooms being opened between 10 o'clock at night and 6 o'clock in the morning in consequence of some disturbance in one of the cells? No, I never heard of it.
5424. When you go round, do you just look in on the patients? Yes.
5425. Supposing a patient to be in great distress, what do you do then? We can always see the patient, and we open the doors if they are noisy. If they are quiet we do not open the doors.
5426. Did you always go round every two hours? Yes.
5427. How long ago is that? I think it was in August.
5428. Is it the custom now for the nurses on night duty to go round every two hours? They go round every hour now.
5429. Is there a tell-tale clock kept to record these visits? Yes.
5430. What was the reason Lizzie Verity was discharged? Because she left the patients for too long.
5431. Was that neglect of duty? Yes; it was against the rule to leave a patient alone. She left a patient and went into the dining-room to get a cup of tea.
5432. On the whole, are you satisfied that everything possible is done for the care of the patients? Yes.
5433. Is Dr. Vause attentive to his patients? Yes.
5434. How often does he make his rounds through the institution? Sometimes twice and at other times three times a-day.
5435. Has he a regular hour for making these visits? Yes, at 12 o'clock.
5436. When does he make the other rounds? In the morning at breakfast-time, and in the evening.
5437. In cases of sickness is he always available? Yes.
5438. Do these separate rooms smell badly in the morning? Yes.
5439. A very strong smell? Yes.
5440. Do they get fresh and sweet before night-time? Yes; they are well washed, and we always use chloride of lime.
5441. How many utensils are there in these separate rooms? There is one in each cell.
5442. Of your own knowledge is there one in each cell? Yes.
5443. Do you know there are ten of these rooms? Yes.
5444. And in these ten rooms are there ten india-rubber utensils used? Yes; I have seen one in each cell.
5445. Are any patients sufficiently intelligent to make complaints about the institution, if necessary, to the Medical Superintendent? Yes.
5446. Have you ever known them make complaints? No.
5447. If anything went wrong had you an opportunity of reporting to Dr. Vause? Yes.
5448. Could complaints be made direct to him? Yes.
5449. What matron was there then? Bridget Morrissey.

Kate  
Brennan.  
5 Dec., 1894.

5450. Did Bridget Morrissey ever tell you that complaints must be made through her? Yes; I made a mistake; it was to the matron I used to complain, but if she happened not to be there I always went to Dr. Vause and made complaints of that kind.
5451. *Dr. Garran.*] When Maggie Macleod told you that she took the sheets off the beds did she do it of her own free will? She never told me she took them off; I saw her doing it myself.
5452. Why did she do it? She said she could not get sheets from the laundry in the morning, and that it was not necessary to leave them on the beds.
5453. Was any order given for her to take these sheets off? I never heard of it. I was in the same dormitory and I never had any such order.
5454. Has there been a night-nurse on duty all the time you have been at the asylum? No; the night-nurse began duty last year.
5455. At about what time of the year? I do not remember exactly, but I think it was sometime during the winter.
5456. Was it about last May? I do not know.
5457. Do you think that there is a night-nurse on the men's side? I do not know if there is one there.
5458. Is there only one nurse on night duty? There is one on regular night duty, but there is more if a patient is in the hospital. A nurse is always on night duty if a patient is in the hospital.
5459. Supposing you are on night duty and want to get a cup of hot tea or cocoa, can you get it? Yes.
5460. Where do you get it? In No. 1 dining-room.
5461. Are the materials for making these warm drinks kept in the cupboard there? Yes; there have always been materials of this kind there since I have been at the institution.
5462. If we have been told by other witnesses that it is impossible to get these things on the female side is that a mistake? I always found them there, and I know one nurse who got tea for me.
5463. Is there a fire kept in that room? Yes; I think so.
5464. Could you always get these things without any difficulty? Yes; whenever I wanted them.
5465. Were there always sufficient materials in the cupboard? Yes.
5466. As far as you know is the bedding at night the same as is shown to the visitors in the day-time? Exactly the same, except in cases of very dirty patients.
5467. Have sheets been taken off the beds of very dirty patients? I think they have been taken off some of the beds in the bottom dormitory.
5468. With those exceptions, is the bedding and are the bed-clothes as we see them in the day-time the same as are used at night? Yes.
5469. As far as you know are the sheets taken off in any other dormitory? No.
5470. *President.*] Are you in charge of the dining-room? Yes.
5471. Do you say that there is an adequate supply of food for the patients? Yes.
5472. Is there more than is necessary? Yes.
5473. What do you do with what is left? We send what is not wanted back to the kitchen, and the scraps are put in the waste box.
5474. *Mr. McGowan.*] With regard to these single rooms, do you say there is only one patient, Case No. 15, put into them at night in a nude condition? Yes.
5475. Are you sure there are no more? She is all.
5476. Are all these rooms occupied every night? Not always. I think there is one vacant now.
5477. Usually are there nine or ten patients in these rooms every night in the week? Yes.
5478. Have any alterations taken place in the single rooms lately? None that I know of.
5479. Are they just the same now as they were before Case No. 1 was removed? Yes, they are the same now as they were when I first went there.
5480. Have no improvements been made in these rooms since he was there? No.
5481. None at all? None that I know of.
5482. Is there not a window in the wall opposite the door—a window that is covered by a shutter? There are two windows.
5483. Were they always there? Yes, they have been there since I have been there for the last two years. Those two windows—I mean in the centre room—have been there ever since I have been there.
5484. Why was Case No. 15 put in that room naked? We always tried to put clothes on her but she would not keep them on.
5485. Does Dr. Vause always make three visits to the asylum each day? Not always.
5486. Did he do so before the trouble about Case No. 1? He visited the institution regularly once a day and sometimes twice.
5487. Did you ever have more than ten minutes' notice when the visiting doctors arrived? We might have had a quarter of an hour, but certainly not more.
5488. Were any of the patients got ready on these occasions? They were hurriedly tidied, such as putting on a handkerchief, or fastening up their boots and stockings.
5489. Did you ever see Government clothes put on private patients? Never.
5490. Did you ever see them put on a patient (Case No. 44) who slept in the square room occasionally and who was a private patient? Yes, I think I have seen a winsey dress on her.
5491. Was she a private paying patient? Yes.
5492. Did you ever see Case No. 45? Yes.
5493. Did you ever see her amongst the Government patients? No, never.
5494. Did you ever know of her being locked in a room and having a fit while in the room? No, she was always in the dormitory with the nurses.
5495. Was she in the habit of having fits night and day while she was in the asylum? Yes.
5496. Do you mean to say that she was never locked in a room and while there have a fit? No, she always used to sleep in the dormitory.
5497. Was she never locked up in a room the key of which was kept by a nurse? No.
5498. Did you know Case No. 46 who died there? Yes.
5499. Do you know if there was any request made to Mrs. Gilchrist for a cup of tea just before this patient died? No, I do not know.
5500. Was Case No. 47 there and ill for a few weeks? Yes.
5501. Did the doctor visit her and prescribe for her? Dr. Vause did not; he was not there then. Dr. Ramsey was there then and he did.

5502. Supposing you wanted it could you get a cup of tea or cocoa for the patients during the night? Yes.
5503. Could you have got a cup of tea during the night previous to the trouble about Case No. 1? Yes.
5504. Did any other nurses know where these materials for making tea or coffee were? Yes, they always had a key and could get at the cupboard.
5505. Was Bridget Morrissey matron at the time? Yes.
5506. Ought she to know about these things? Yes, she must have known it.
5507. Supposing she said she did not know of it? I do not know how she could say that. I knew these things were in the cupboard. We have been there and got bread, butter, and milk from the cupboard.
5508. Supposing Annie Marshall did not know of it? She might not, she was only there for a very short time.
5509. Supposing Josephine Mackay said she did not know of these things? She must have known, and other nurses knew they were there. I always made tea the first thing in the morning, and tea was left in this cupboard all through the night before.
5510. Did you put Case No. 20 in a single room at half-past 10 at night? Yes.
5511. And what time was she taken out in the morning? Between half-past 5 and 6 o'clock.
5512. At 12 o'clock at night when you were passing the cell did you see her? Yes, at the cell-door.
5513. How did you see her? I had a lantern in my hand.
5514. Did you look at her through the observation hole? Yes, and she then asked me for her clothes, for she wanted to get dressed.
5515. Was she naked then? No, she had a night-dress on.
5516. When did you see her again? I saw her about 5 o'clock in the morning, when I unlocked the door and went in. She was lying on the bed covered up with blankets.
5517. Was anything said about the broken arm then? No.
5518. Did you notice any nurse acting cruelly towards her? No.
5519. Have you heard any complaints to the effect that Nellie M'Bride used a scrubbing-brush on Case No. 23? I never saw it done.
5520. Do you know Case No. 12? Yes.
5521. Was she a private patient at the institution? Yes.
5522. Was she placed in a single cell? Yes.
5523. Do you think her friends knew of this? I do not know.
5524. Was she put in in a nude state? No, she always had a night-dress and plenty of blankets.
5525. Did you ever see a nurse give her medicine? Yes, she got a draught occasionally.
5526. Not very often? No.
5527. Two or three times a week? No.
5528. Did she refuse to take these draughts? She did not like them.
5529. Did you have to resort to any subterfuge to get her to take them, such as putting them in her food or in milk? No, I never saw anything like that in regard to that patient, but I have put medicine in another patient's tea.
5530. Did you get these medicines from the doctor? Yes.
5531. Were they administered under his directions? Yes, the directions were always stated on the bottle.
5532. *Dr. Manning.*] Do you know whether in Case No. 44, a private patient, Dr. Vause finds her in clothes? I do not know.
5533. *Dr. Vause.*] Was it customary to remove the sheets at night in any other ward than that where Macleod was? No, doctor.
5534. Was this done by any other nurse in the place? No, I never saw it done except by Macleod.
5535. How many windows are there in these single rooms—I mean openings for the admission of light? One at the back; I do not think there is another.
5536. *President.*] Have you been round the place lately? Yes.
5537. Have you not noticed the carpenter at work? Yes, but only in one room.
5538. What about the glazed windows over the doors? Oh, I forgot about them. There is a window over each door.
5539. Were these windows put in lately? Yes, since the gas was laid on.
5540. Did you not forget this fact when you were questioned by Mr. McGowen about improvements being made in the single rooms? Yes, I never thought of it then.
5541. Do you still say there were always two windows there? I did not think of this then.
5542. But do you remember now that windows have recently been placed over the doors? Yes; but when I spoke about seeing two windows, I meant I had seen two windows.
5543. Which are they? There are two in the middle cells, where the lattice work is.
5544. *Dr. Vause.*] How long was Annie Marshall acting as nurse? I cannot say; not very long. Not more than a fortnight or three weeks.
5545. Did Macleod have difficulties in getting through her work before she left? Yes, she used to make difficulties. There were a couple of patients in bed in the morning—Case No. 47 and Case No. 48. Nurse Macleod was supposed to come and fetch their breakfast, and then she grumbled to me about it.
5546. *President.*] Did she grumble about any other portion of her work? She always said there was a lot of work to do.
5547. Did she grumble at the character of the institution? She was always grumbling.
5548. Did you ever hear her complain that the patients were not properly treated? No; she always said that the patients had too much their own way. I have not heard her say that the patients' food was bad, but I have heard her grumble about the nurses' food.
5549. Have you heard her say that the patients on the Government side were not supplied with proper clothes? Yes; I have heard her say so.
5550. Do you agree with her views on this subject? No; I could always find whatever clothing I wanted.
5551. *Dr. Vause.*] Did Macleod write to Henry Gearey while you were at Bayview? Yes.
5552. Who posted the letter? Kate Kennedy.

Kate  
Brennan.  
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- Kate Brennan.  
5 Dec., 1894.
5553. Do you know if Macleod visited Gearey while she was at the institution? Yes, Jessie Urquhart told me that she did.
5554. Have you heard anyone at the institution express any opinion about the truthfulness of Macleod? Everybody was always complaining about her being untruthful.
5555. From the time you knew Macleod was in communication with Gearey did you notice any change in her demeanour? Yes; she seemed to do as she liked.
5556. Did she try to upset the work of the establishment? I do not know.
5557. Do you know if she kept the clothes back from the laundry? Yes, she did.
5558. *President.*] Did you report that matter to the doctor? No; I had nothing to do with reporting to the doctor while the matron was there.
5559. Did you complain to the matron about it? I think I said something to the matron, who often spoke about Macleod, saying she could not see why that girl was always grumbling.
5560. Do you know if anyone acquainted the medical superintendent of the fact? I do not know, I never did.
5561. *Dr. Vause.*] Have you known anything to complain of? No.
5562. Were the complaints made by her groundless in your opinion? Yes.
5563. Did Macleod's manner imply that she did not care whether she was discharged or not? Yes.
5564. *President.*] Did you ever hear her say that? I heard her say she only wished she would be discharged.
5565. *Dr. Vause.*] Why did she say that;—did she say she could get another billet? Yes; she said that Gearey had promised her that he would get her a Government situation.
5566. Do you know if Mackenzie wrote a letter to Macleod? Yes.
5567. Did Mackenzie say in his letter to Macleod that she was a fool for not getting to see Gearey as requested? I do not know whether it said that. She told me she did go and see Gearey.
5568. Did Annie Marshall give you a letter for Macleod? Yes, and I gave it to Macleod, and she said it was a letter from Goulburn from Mackenzie.
5569. Did this letter say that Gearey would get Macleod a good billet? Yes; she told me so.
5570. Did Macleod endeavour to get other nurses to keep the clothes back from the laundry? I do not know. There were two nurses in the dormitory.
5571. Do you know if the laundress had some words with Macleod on this account? Yes, I have heard them.
5572. Do you know why Macleod was dismissed summarily? I only know that I reported her to Mrs. Gilechrist for abusing me on the day she was discharged.
5573. Do you know anything about nurse Urquhart? I know that Macleod ran into the ward, got hold of nurse Urquhart, called her names, said she would murder her, and struck her with a key.
5574. Did she leave the same day? Yes.
5575. Was not Macleod particularly engaged in bed-making? Yes.
5576. Is not this work considered less responsible than the immediate supervision of patients? Yes; I always found it was so.
5577. Was she ever head nurse on the Government side? No; she was in charge of the dining-room.
5578. *Mr. McGowen.*] Do you say that everybody complained about Macleod being untruthful? Yes; Lizzie Verity, the laundress, Ada Simpson, and Jessie Urquhart.
5579. Have you noticed any great addition to the bed-linen and the clothes of the patients since Case No. 1 was there? No; we always get new bed-linen every summer.
5580. Has there been any extra amount purchased since last May? Not as I know of.
5581. Did you ever see any of the Government patients scrubbing the floors? Yes.
5582. Were they scrubbing them with lime? No; with sand.
5583. Did they ever use lime and burn their hands? No; I have seen them scrubbing the floors with sand.

[Witness withdrew.]

Maggie Kennedy sworn and examined:—

- Maggie Kennedy.  
5 Dec., 1894.
5584. *President.*] Are you a nurse at Bayview House? Yes.
5585. When were you engaged to occupy that position? I went there on the 30th of July.
5586. Did you sign the ordinary obligation book? Yes.
5587. Did you keep a copy of the rules and regulations in connection with the institution? Yes.
5588. Do you remember a nurse named Macleod who was at Bayview House? Yes.
5589. Had you a good deal of experience of her? I think I had about two months.
5590. Was she a truthful girl? No; she was untruthful.
5591. Can you mention any specific cases in which she was untruthful? Yes; I could in many ways. She was in the habit of carrying yarns down to other girls, which were anything but the truth.
5592. Had she a general reputation of being untruthful? Yes.
5593. How long were you there before you found out that she was untruthful? I do not know exactly. First of all I was warned by other girls, and then I found it out myself.
5594. Did she ever tell you that she was in communication with a man named Gearey? No; but she gave me letters to post to him.
5595. Had you conversation with her on many occasions? No.
5596. Have you ever been on night-duty while at Bayview House? Yes.
5597. While on that duty did you always go round to the different wards? Yes; I went through all of them.
5598. Did you also go round to the single rooms? Yes.
5599. How often did you go round to the single rooms? Every hour, and every half hour if necessary.
5600. Was the time of your attendance always marked out? Yes; it was every hour of the night.
5601. Were any of the patients noisy? Yes; a few of them were troublesome.
5602. Was it necessary on any occasion to open those rooms at night, in order to see what was the matter with the patient? Yes.
5603. Did you do so between 10 o'clock at night and 5 o'clock in the morning while going on your regular rounds? Yes; with ordinary patients.

5604.

5604. Was that between 10 at night and 5 in the morning, while you were on your ordinary rounds? Yes.
5605. Do you ever go into any of the cells in company with other nurses? Yes; I had to with very troublesome patients, such as Case No. 33. I went in by myself in ordinary cases, but where patients were violent I would go in with another nurse.
5606. What for? To see whether they were all right. I would open the door and ask if they were all right. If the patient was awake she would say "Yes"; if she was asleep that was quite sufficient. I was provided with a lantern.
5607. Did you ever go in a room occupied by a troublesome patient? Not alone after 10 o'clock at night when there were no other nurses about.
5608. Would you go into the rooms to see the quiet patients but not the noisy ones? Yes.
5609. Would you question the noisy ones? I would look at them through the observation hole in the door, but I would not go in.
5610. Was there an ample supply of provision for tea, cocoa, and milk, and so on, through the night, if such things were required for the use of the patients? Yes; any amount.
5611. Where were these provisions kept? In No. 1 dining-room.
5612. Was there always a fire there? Yes; always while I have been at the institution.
5613. *Dr. Vause.*] Would there have been any danger in going into the room of Case No. 33 alone? Yes; I would have been afraid to have gone in there by myself.
5614. Was there any necessity to go into her room? There was no necessity, doctor.
5615. Were the patients you visited in the manner you have described more or less sickly? Yes.
5616. *President.*] Was the reason why you went in because the patients you saw were quiet and in delicate health? Yes; I used to go in for fear they wanted a drink during the night.
5617. Were they really sick patients? No; they were not what you might call hospital patients, but we always visited them in case they wanted anything.
5618. *Dr. Vause.*] Have you had to deal with sick patients at times? Yes, now and again.  
[Witness withdrew.]

Maggie  
Kennedy.  
5 Dec., 1894.

Mr. Alfred Barden sworn and examined:—

5619. *President.*] Are you, Mr. Barden, engaged in the butchering business? Yes; I used to be a squatter, but I now buy and sell cattle. I buy meat on commission for Dr. Vause, to be consumed by the patients of Bayview House.
5620. Do you not supply him with the meat? No, I merely buy it.
5621. Where do you get your supplies from, then? From Glebe Island, Darling Harbour, where I obtain the best I can buy.
5622. Do you always make a personal inspection of the meat before you purchase it? Yes, always.
5623. What commission do you get for your trouble? It amounts to about £1 per week.
5624. Is the supply generally about the same in quantity week by week? Yes; as a rule it amounts to 200 lb. per day. On some days, however, the quantity may be a little less than this. I purchase mutton one day and beef the next.
5625. In purchasing the meat in this way do you buy it in joints or how? Beef I take by the quarter and mutton by the sheep. In hot weather I buy it and put it in the freezing house, sometimes as much as half a bullock at a time.
5626. Do you buy in this manner for any other institution? No.
5627. Supposing you purchase a larger quantity than is necessary for consumption in one day, what do you do with what is left over? Return it to the freezing house.
5628. Do you make a point of always selecting the best meat available? Yes; Dr. Vause always told me to buy the best meat possible, and I always buy it.
5629. *Dr. Garran.*] Do you get your commission on the cost of the quantity you buy? Yes.
5630. Have you any interest, then, in getting the meat cheap? No.
5631. Do you always get the best you can? Yes, always. I get the best I can in the market, no matter what price.

Mr.  
A. Barden.  
5 Dec., 1894.

[Witness withdrew.]

TUESDAY, 11 DECEMBER, 1894.

[The Commission met at 11 a.m., in the Board Room, Chief Secretary's Office.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
ESQ., M.D., INSPECTOR-GENERAL OF THE  
INSANE.

ANDREW GARRAN, ESQ., LL.D.  
JAMES SINCLAIR TAYLOR MCGOWEN,  
ESQ., M.L.A.

Dr. Vause was also in attendance to hear evidence and examine witnesses in his own behalf.

Johanna Dwyer sworn and examined:—

5632. *President.*] Were you at one time an attendant at Bayview Asylum? I was, about six years ago.
5633. What position did you occupy? I first went as an attendant on the Government side, and afterwards I was on the private side of the institution as attendant on the female patients.
5634. Had you any experience in lunacy work before you went there? Yes; I was at Parkside Lunatic Asylum for two years.
5635. Were you engaged at Bayview House by Dr. Vause, and at the time of your engagement did you sign a book? Yes.
5636. Did this book contain the obligations under which you placed yourself—the rules and regulations of the institution—and were they all carefully explained to you? Yes.

Johanna  
Dwyer.  
11 Dec., 1894.

5637.

Johanna  
Dwyer.  
11 Dec., 1894.

5637. During the time you were there had you every opportunity of seeing the working and management of the institution? Yes.
5638. Were you satisfied with the management? Yes; I never had any complaints to make during my time, and I certainly have none to make now.
5639. From your experience at Parkside Lunatic Asylum, and contrasting it with what you saw at Bayview House, is there any particular point in the management of the latter institution to which you would like to call attention? In the matter of management one is equally as good as the other.
5640. Would you say that Bayview House, as an institution for the insane, is more homely than the Parkside Asylum? Yes; if anything it is. Dr. Vause himself is more homely in his treatment of patients.
5641. Was every little possible comfort provided for the patients, and was the medical superintendence satisfactory? Yes; perfectly so.
5642. How long is it since you left Bayview House? Three years.
5643. Were the patients at night-time carefully watched and attended to? Yes, while I was there.
5644. Do you know whether a night-nurse went round among the patients every night? We always went round at night just before going to bed. If anything occurred during the night we were always handy, and could see at a moment's notice what was going on. We slept in a room with a number of patients.
5645. Did you sleep in the associated dormitories? Yes.
5646. Do you remember the single rooms on the verandah? Yes.
5647. When patients were placed in these rooms were they put there on the authority of the matron, the doctor, or whom? When a patient became noisy she would be put in the single room by the matron, acting under the instructions from the doctor.
5648. Do you know from experience that patients are very often very destructive with their clothing? Yes.
5649. In your time was particular attention paid to the patients placed in these single rooms in regard to night-dresses, and so on? Yes; they were always supplied with everything they wanted, and if a patient was sick the attendants were ordered to see that they were not allowed to want anything.
5650. If any patient has become destructive, torn her bed-clothes and everything else, has she been allowed to lie naked in the straw? Yes; we have taken out the clothes at night if we have heard a patient very noisy and violent. We have gone to the cell and removed all the torn clothing for safety's sake.
5651. Was the watching of these particular cells, in ordinary circumstances, confined to nurses sleeping in rooms at each end of this row of single rooms, or was there any night-watching besides that? No; only when a patient was sick.
5652. Supposing any disturbance occurred during the night, would it be heard by the nurses sleeping at each end of these single rooms? Yes.
5653. Would such an occurrence be heard without difficulty? Yes.
5654. Was there any necessity for a nurse to be walking about the whole of the night to keep watch over the patients in these single rooms? No.
5655. How was it when patients were sick at night? There was always a nurse sent off to attend on a sick patient.
5656. In your time at the institution was ample provision made to supply any necessary comfort in the way of nourishment to patients at night? Always. Supplies were kept in the different wards, or rather off the different wards. If a patient were sick on the Government side, the necessary comforts could be obtained in that part of the building, and it was just the same in regard to the private side.
5657. Was there any special place where these supplies were kept on the female side? Yes; in a large cupboard in No. 2 dining-room. I have known occasions on which jellies were made for a sick patient by Mrs. Vause herself.
5658. Was there a fire available at which you could make a cup of tea, cocoa, or coffee? Yes.
5659. Was there a fire kept in this No. 2 dining-room night and day? Not always. In the day-time the fire was always alight, and it was always laid for use in the night-time if necessary. If a fire was wanted there was no difficulty in making it.
5660. Did you ever know of any patient suffering from want of nourishment during the night? No.
5661. Do you know of any nurse or nurses behaving cruelly to the patient, such, for instance, as scrubbing them down with a brush instead of washing them in the proper way? No; I never heard of any such things.
5662. Did many patients die while you were in the institution? I think there were three or four.
5663. Prior to their death were they always properly attended to? Yes.
5664. When drawing near to death was a clergyman sent for, so that he might attend at the right time? Yes.
5665. Did official visitors come to the institution occasionally? Yes.
5666. Were you warned of their arrival before they came through the wards? No; not until I saw them myself.
5667. Do you know a man named Henry Gearey? Yes.
5668. Have you had any conversation with him in regard to the state of affairs at Bayview House? Not much; he certainly came to see me.
5669. Where did he see you? At the "Native Rose Hotel," Darling Harbour.
5670. Did he give you this card [*produced*]?

HENRY GEAREY,

At the side of Mark Foy's—1 door.

9, Brisbane-street, Surry Hills.

Yes; he gave me that card.

5671. Do you know what his object was in having communication with you? I can only say he wanted to know what I knew about Bayview House and its management, and he wanted me to give evidence upon this subject. Personally I have not seen Dr. Vause for six years; therefore I said to Gearey, "I have nothing to say either for him or against him." I also told Gearey that, in my opinion, Dr. Vause was always extremely kind to the patients.

5672. Did he ask you anything about a man named Alexander Robinson, who previously had been an attendant at Bayview House? Yes.

5673.

5673. What did he ask you about Robinson? He said Robinson said I could give certain information about the place.

5674. Do you think that he meant you could substantiate certain accusations against the place? I think so.

5675. Did he hold out to you any promise of advantage to yourself personally if you gave certain information relative to the management of Bayview House? No; all our talk amounted to a general conversation.

5676. Did Gearey appear to be persistent in his endeavours to find out anything he could against Bayview House? He did at first; but he did not want to hear much after he saw I was favourably inclined towards Dr. Vause and the management.

5677. From the nature of his conversation with you did you understand that he had some prejudice against the institution? I thought so at the time.

5678. Did you give to Mr. Gearey your opinion about the man Robinson? No; he never asked me.

5679. Do you think from your own experience in the institution that Dr. Vause always behaved kindly to the patients? I do not think Dr. Vause could be unkind to the patients. I never saw him unkind, and I can say, from personal experience, that both Dr. Vause and Mrs. Vause were always most anxious that the patients should receive every comfort. Although Dr. Vause discharged me at a minute's notice I say what I have said.

5680. From your experience in the institution do you believe that Dr. Vause always took a deep interest in the welfare of the whole of his patients? Yes, I do.

5681. Why did Dr. Vause discharge you? I had a quarrel with one of the attendants, the result being that the doctor called me in and I was dismissed.

5682. Did Dr. Vause give you any reference of character when you left? No.

5683. When you are giving evidence to-day, therefore, you are speaking the whole truth and in a strictly impartial manner? Yes; all I say is quite true.

5684. Do you wish to say anything further about the institution, except that you were satisfied with the management and the general conduct of affairs while you were there? No; I do not. I never knew of anyone leaving the institution who did not express satisfaction of the way in which patients had been treated.

5685. *Dr. Garran.*] Which was the ward you took charge of while you were at the institution? I forget the number of the ward.

5686. Was a nurse named Maggie Macleod there then? No.

5687. During the time you were at the institution did you ever receive instructions to take the sheets off the beds at night-time? No, sir.

5688. Did you ever do that, or know of it having been done? No, sir.

5689. While you were there was the general clothing of the patients insufficient? No.

5690. On any occasion did you ever ask for additional clothing for the patients and meet with a refusal from the person or persons in charge? No; I could always get what clothes I wanted.

5691. Am I to understand that there was never an insufficiency of clothing providing an attendant would go for it when required? No; there was always a plentiful supply.

5692. Was the supply of food at all times sufficient? Yes.

5693. Was the food good in quality? Yes; we and the patients got the same kind of food as Dr. Vause had at his own table.

5694. Was the food fairly well cooked? Yes, it was.

5695. Was a nurse named Nellie McBride there while you were there? No; she was not.

5696. Did you ever see any female patient put in the solitary bed-rooms unnecessarily? No; and some of them have often expressed a desire to be placed in these rooms.

5697. As far as your experience goes, was it always necessary for a patient, whether on the Government side or on the private side, to be confined in the solitary rooms when they were placed there? Yes, certainly.

5698. Was Case No. 17 there during your time? No.

5699. *Mr. McGowan.*] At the time you refer to, when Mrs. Vause made jellies, and so on, was that in Dr. Vause's first wife's time? Yes.

5700. Was she very kind. Yes.

5701. How many of these single cells for separate treatment were there in your time? I think there were between eight and twelve.

5702. Were they always filled every night? If patients were quiet they were left in the bed-room. If they got rowdy during the night they would be removed from the associated dormitory and put in the single rooms.

5703. Was there a patient in each room on every night? No; often there were rooms empty.

5704. How many, on an average, were in these rooms at night? I should say four or five and six.

5705. When patients were put in these rooms were their clothes taken away from them? Yes; their day-clothes.

5706. In some cases did patients have nothing at all in the room but straw? No; in my time they always had a good covering in the single rooms. Some of the patients, the most violent, would tear up the tick, and after doing so, cover themselves up with the straw.

5707. Do you admit that unless patients in a single room at night-time became noisy none of the attendants would go to look at them? The matron, and perhaps one of the nurses as well, always went round the last thing at night before going to bed.

5708. At what time? Nine, or half-past 9 o'clock at night.

5709. Would anyone see these patients during the night-time unless they made a noise sufficient to wake up the attendants sleeping in the dormitory—what I mean is, would the patients be seen between the time they were placed in these cells at night and taken out in the morning? No, sir.

5710. Was a similar system carried on as far as you know at the Parkside Institution? No; there was a night-nurse there.

5711. But still do you say that the patients at Bayview House are treated as well as they were at Parkside? They were whilst I was there; in fact the patients were more kindly treated: for instance, the Government patients were not forced to do anything they did not want to do.

5712. Did you ever see Government clothes put on private patients? No; private patients always had their own clothes.

5713. Do you mean to say you never knew that official visitors came to the institution until you saw them yourself? No; never.

5714. Did any time elapse from when the official visitors arrived at Dr. Vause's office until they came through the asylum? I cannot say.

- Johanna Dwyer.  
11 Dec., 1894.
5715. How long would it be after the visitors reached the office until they came through and saw the patients? I cannot say.
5716. Do you think five minutes would elapse? I cannot say; I never knew when the official visitors came to the office.
5717. Did you never get any intimation announcing that the doctors were there? No.
5718. *Dr. Manning.*] Do you say that the food was good and plentiful? Yes; certainly. Dr. Vause was always there every morning at breakfast-time to see the food go out, and Mrs. Vause superintended affairs on the ladies' side.
5719. As far as the Government patients are concerned, was the supply of food plentiful? Yes.
5720. Was there more bread than you would be likely to use? Yes, and other food, too.
5721. What was done with the food left over? It was thrown out into a box—a refuse box.
5722. Was there always more food than was required by the patients? Yes; there was always food enough and to spare, and that to spare was sent to the box.
- [Witness withdrew.]

Henry B. Hetherington, Esq., M.D., sworn and examined:—

- Dr. H. B. Hetherington.  
11 Dec., 1894.
5723. *President.*] Are you a legally qualified medical practitioner? Yes.
5724. Were you in medical charge of Bayview Asylum for some considerable time? Yes, for twelve months.
5725. Do you remember the date relating to this occasion? Yes; it was from April, 1891, to April, 1892.
5726. Was that during the absence of Dr. Vause from this Colony? Yes.
5727. While there were you in full charge? Yes.
5728. Who was acting as attorney for Dr. Vause in the way of proprietorship? The Hon. Edward Greville, M.L.C.
5729. Did he give you a free hand in regard to the expenditure and general management of the institution? Yes.
5730. While you were there was there any difficulty in obtaining an ample supply of food, clothing, and everything else necessary for the comfort of the patients? Not the slightest.
5731. Did you reside at the institution? Yes.
5732. How often did you make your rounds through the place? I always went round twice a day, and very often more than that.
5733. If you had any sudden call were you always available? Yes.
5734. While you were in charge was the placing of female patients in separate rooms dependent upon your authority;—was it done by the order of the matron, or how? There were very few cases whatever; but there was a general order to put patients into seclusion, supposing they had a sudden attack of violence. In all these cases a report was made to me immediately afterwards.
5735. Supposing a case of this kind occurred during the night, would the nurse in charge of an associated dormitory have full power to remove a patient to a single room? Yes.
5736. Have you had frequent opportunities of personally observing patients placed in the solitary rooms? Yes.
5737. Are you aware that many of these patients are destructive and dirty in their habits? Yes.
5738. Was the usual practice in placing these patients in these single rooms to supply each with a night-dress? Yes; it was the rule to provide each with a night-dress.
5739. Were they supplied with a sufficient amount of bed-clothing? Yes; they always had a canvas rug with a blanket between.
5740. Was this a sufficient supply of covering to keep the patient from feeling cold? Yes.
5741. During your time at the institution were there some patients so destructive in their habits that it was impossible to keep them covered at night? Yes.
5742. With regard to the provision for night attendance on the patients in these separate rooms off the verandah, we have had it in evidence that the nurses went to bed at night at 10 o'clock, or about 10 o'clock, and that after this hour there was no provision for night-nurses;—was that so during your time at the institution? We had no general night-nurse during the night-time, because, as a rule, one was not necessary. In the event of a patient being particularly sick there was always a nurse in waiting to attend upon her.
5743. Are you of opinion that the nurses sleeping at the end of the single cells were in a position to hear any disturbance that might occur during the night? Yes; I am quite satisfied that they could hear.
5744. While you were at the institution did a lady patient break her arm? Yes; Case No. 20.
5745. In that case did you discover the fact until the following morning, before you were told of it by the nurse in charge? No.
5746. When did you discover it? In the day-time.
5747. Do you know of any case where a patient met with an injury during the night? No.
5748. Were you satisfied with the food supplied to the patients? Yes; it was the same kind of food that I had myself.
5749. Have you been to the institution at meal-times for the purpose of seeing if the food was good? Yes; I always went for that very purpose.
5750. In regard to the management generally, do you think it is as good as it possibly can be in the circumstances? Yes.
5751. *Dr. Garran.*] Did you, as a matter of course, take over and continue the same system of management you received from Dr. Vause? Yes.
5752. During your residence of one year at the institution did it ever strike you that if you had been Medical Superintendent yourself you would have made any great change in the management? Everyone has his own ways, I suppose, in matters of this kind.
5753. Did anything strike you as being at all defective, or was there anything that you would have altered if Bayview House had been your own place? I do not know. I cannot express any opinion definitely on that particular point now. It seemed to be, as an institution, quite adapted to the purposes to which it was placed. There was nothing particularly striking to convince me in any different direction.

Dr. H. B.  
Hetherington,  
11 Dec., 1894.

5754. With regard to the single rooms, did you see anything or any reason to disapprove of or condemn them? I like them better than padded rooms.
5755. What is your opinion in reference to the two solitary rooms on the male side? I think they are suitable for the purposes for which they are used.
5756. Are they sufficiently ventilated? Yes.
5757. Are they sufficiently lighted? Yes.
5758. Are they sufficiently airy? Yes; they are very high.
5759. Do you think it good management to put, say, as many as eleven patients in these single rooms to sleep, and to leave them all night without any observation? Yes.
5760. Taking this view of the case, do you not think it would have been possible for something to have gone wrong without the nurses hearing it? I think if anything did go wrong someone would very soon hear of it.
5761. Do you think, in regard to these single rooms, that a night patrol is not absolutely essential to good management? I think the circumstances hardly warrant it.
5762. We have had it in evidence that one patient was placed in a single room at half-past 10 at night; that her arm was broken, and the fact was not discovered until the following morning;—do you not think there should be some plan by which an accident of this kind could be discovered before the patient is removed from the cell in the morning? I cannot see how such an accident could occur unless there is some loose furniture about.
5763. If there is to be a night patrol, do you think one nurse would be sufficient? Yes; I think one would be better than two.
5764. Do you think it would be safe for one nurse to go into a single room during the night-time? No.
5765. Would one be sufficient to patrol the place providing she had power to wake other nurses in cases of necessity? Yes.
5766. Is it possible to look into the rooms and see what is inside without opening the door? Yes; you can look through the hole in the door.
5767. How can you see through this observation hole what is inside a dark room? You cannot see very well.
5768. That being so, if you want to see a patient must you open the door? Yes.
5769. Would it be safe for one night-nurse to do this with some patients? I do not think it would be.
5770. Would she, therefore, have to call up another night-nurse before she could enter the cell or open the door? Yes; in some cases it would be necessary to do so.
5771. Do you know whether at Callan Park there is not a small grating in the bottom of the door to which may be placed the lantern carried by the attendant? Yes; I think it is so.
5772. Would this throw a light over the floor of the room which would enable the attendant looking through the observation hole to see what is inside? Perhaps so.
5773. But if you at Bayview House desire to see a patient must you open the door? Yes.
5774. Is one nurse in the night-time safe in opening a door in the case of this class of patients? I would not like to trust one nurse to do it, and I should not like to do it myself.
5775. Would you attempt it in the case of a person suffering from general paralysis in the acute stage? Certainly not.
5776. Is it necessary to confine such cases in single rooms at night? Yes.
5777. In these cases are the patients destructive? They generally are.
5778. Are they particularly dirty? Yes; they generally are.
5779. How would you treat these patients when putting them to bed at night;—would you dress them in pyjamas? Yes; until they tore them or showed some indication that they would not wear them. They invariably tear them, and then the clothing is removed.
5780. Is there a fresh lot of night clothing given to them? No; they are just left to roll themselves up in their blankets.
5781. When a patient voluntarily takes off his night clothing and remains in a nude condition through the night, do you think he suffers from cold? As a rule, no.
5782. If he did suffer, would his general bodily health show the result of this suffering? Probably it would in the shape of an acute attack of pneumonia.
5783. If none of these symptoms are visible, do you arrive at the conclusion that the patient although denuded at night has not suffered from a chill? Yes.
5784. With regard to patients of extremely dirty habits, would you have either them or their room cleaned up frequently during the night, or would you leave them alone until the morning? I should leave the room alone until the morning.
5785. In the case of a patient suffering from general paralysis, would you say whether it is a good thing to have an attendant in the room or not? It depends very much upon the state of the patient. If the patient is sleeping all right, an attendant in the room would not make any difference, but if a patient is at all inclined to be wakeful I should certainly say leave him alone as much as possible.
5786. From your experience is the presence of an attendant irritating to a patient? Yes.
5787. Do you think that the one great requisite in cases of this kind is sound and uninterrupted sleep? Yes.
5788. Is anything in the treatment of these patients that will promote sleep beneficial? Yes.
5789. Is everything that prevents sleep injurious to the patient? Yes.
5790. Do these patients sleep better at the latter part or in the first part of the night? I think they sleep better towards morning, when they have become tired.
5791. Am I to gather from your experience, that it is on the whole more in the interest of the patient to leave him with as little interference during the night as possible? Yes.
5792. Is it not a most disagreeable thing for the friends of patients either to know or to see to what straits some of the patients are reduced by their malady? Yes.
5793. Are these circumstances distressing to the patients themselves? No; they are quite unconscious about these matters.
5794. Is the distress confined exclusively to the spectator? Yes.
5795. Considering this question from a purely medical standpoint, and in the interest of the patient, and putting sentimental feeling altogether on one side, is it best to leave these patients alone? Yes.

- Dr. H. B. 5796. Even if that patient strips himself? Yes.  
 Hotherington. 5797. Even if he dirties himself? Yes.
- 11 Dec., 1894. 5798. Is it your deliberate opinion in these circumstances that the patient should be left alone till morning? Yes; with a regular dirty patient. Supposing he made a mess early in the night, I think it might be better to clean him.
5799. If he made a mess at (say) between 12 and 2 and 2 and 3 in the morning, would you clean him, and then leave him alone until bathing time? Yes.
5800. Do you think there should be a night patrol and watch kept in a private bedroom? I do not think it is necessary.
5801. Do you think such a patrol would tend to disturb the patients in their sleep? Not if the attendant walked softly.
5802. At Bayview House on the male side is it necessary that there should be a night attendant when either or both of the isolation cells are occupied? No.
5803. Did you provide night attendants while there? Night attendants slept so close to the rooms that they would hear if they were required.
5804. Did they sleep 12 or 13 yards away? Yes.
5805. Could they hear if any noise were made in the isolation rooms during the night? Yes; I have known patients to be there and the attendants have got up to see them on several occasions.
5806. Were they on these occasions roused by the noise? Yes.
5807. For any patient you had in these rooms did you provide a night attendant? No; not on the male side. There was one case where an attendant slept in the room.
5808. During your time at Bayview House were the Government patients fairly well clothed? Yes.
5809. Were they well fed? Yes.
5810. Did they fall away in physical condition? No.
5811. Did you ever hear any complaints from the patients? No.
5812. Nor from their friends? No.
5813. Were you so satisfied with the system that you would not make any change in the management? Yes.
5814. *Mr. McGowen.*] Have you had any complaints from the attendants in regard to the treatment of the patients? No.
5815. Do you say you had no night attendants either on the male or female sides at Bayview House? Not as a rule; I did occasionally put one on for special cases.
5816. If you had two patients in the two isolation cells on the male side did you put on a night attendant? No; not if the patients were confined because of their mental troubles. I should in cases of physical illness.
5817. Supposing moans, as if from a man in pain, came from one of these single rooms, would the attendants get up to see what was the matter? Yes, certainly.
5818. In the case of a patient breaking an arm during the night, would such a patient manifest any symptom of pain? Sometimes he might and sometimes he might not.
5819. Therefore, if a patient did break his arm during the night, is it possible that the attendant would not wake up and see it? The probability is that the patient would make a considerable noise before he could break his arm. There must be some considerable disturbance in a room such as these before a patient can break an arm, and an attendant would be sure to hear that.
5820. As a rule, do these noisy and destructive patients bump themselves against the sides of the cell and tramp up and down? Yes.
5821. In cases like these is it possible for a patient to break an arm or leg without the attendant noticing the accident? I have never known it done.
5822. Were you satisfied with the mode of conducting the institution while you had charge of it? Yes.
5823. Are the single rooms on the female side sufficiently lighted? Yes.
5824. If a fresh window has been put in each of these rooms since you were there in charge do you think it was unnecessary trouble and expense? I did not see any necessity for them.
5825. If the gas has been laid on so that it can be turned into these cells every night do you think that was necessary? Perhaps it would be an advantage if the gas could be turned on when required; but to keep the gas alight would most likely cause patients to remain awake, and I thought these rooms were suitable to the cases for which they were used.
5826. Had you anyone subject to fits in these rooms during your time? Yes; I think so.
5827. Would it possible for a patient to have a fit at any time without the attendant knowing of it? Yes; very likely. It might happen that a patient lying in the next room would have a fit without anyone being aware of it. Epileptics frequently have fits in bed without anyone knowing anything about them. Nothing much can be done in these cases. The great thing is to place them beyond the possibility of danger from falling out of bed, or from hurting themselves in other ways.
5828. Has anyone complained to you to the effect that he or she could not get nourishing food for patients during the night? No.
5829. When the visiting doctors came to the institution did they go to the office first? No; not always.
5830. What time would elapse between their arrival at the institution and their going through the asylum? It might be three or four minutes.
5831. Was there any intimation sent to the nurses that the doctors had arrived? No; when the bell rang the servant would go to the door, and let them in, and she might say who had arrived.
5832. Might she not tell the other attendants that the doctors had arrived? Very likely.
5833. *President.*] With regard to these single rooms in which, in answering Mr. McGowen, something was said about additional windows being put in over the doors, do you think the placing of a small glazed window over the door in each of these rooms was absolutely necessary? No.
5834. As rooms were they satisfactory from an hygienic standpoint? Yes.
5835. Another point in regard to fractures;—could a fracture of the long bones or the flat bones occur without blood being shown upon the floor or clothing? Yes.
5836. As a matter of fact, did one case of this kind occur in the cells, and how it happened no one could tell? Yes.
5837. *Dr. Manning.*] What would you think of putting an epileptic in a single room without removing the iron bedstead? I should think it would be a dangerous thing.

5838. Would you be surprised at a fracture occurring in such circumstances? No.
5839. Do you remember Case No. 34? Yes; she died at Bayview House.
5840. We have had a good many complaints from Mrs. \* \* \*, a cousin of hers, relative to the treatment of the patient;—do you remember Mrs. \* \* \*? No.
5841. Her complaints, speaking in general, were—that Case No. 34 was neglected; that her relatives were not allowed to see her; and that you were rude to her;—do you remember any of these things? I do not remember having been rude to anybody.
5842. Do you remember anything about this case;—can you give me any details? I believe the patient was in a state of exhaustion; she was in a very weak condition.
5843. Have you any actual remembrance of the case? I do not remember it particularly.
5844. Do you remember the mortuary in Bayview House grounds? Yes.
5845. Did it appear to you to have been built for this purpose? Yes.
5846. Was it sufficient as a building for mortuary purposes? Yes.
5847. Do you remember what order it was kept in? It was kept as it should be.
5848. Mrs. \* \* \* complains that the body of her cousin was laid out in a place like a stable—a building altogether unfit for the purpose of receiving the dead;—is that true? The place where the bodies are placed is very fit for these purposes. Mrs. \* \* \* never complained to me about it.
5849. Do you remember any complaints being made to you on this subject? I do not remember.
5850. Do you remember Case No. 29? Yes.
5851. Were legal proceedings taken in that case? Yes.
5852. Do you remember the point raised in this case—the right of the two brothers to the custody of the patient, the father, who signed the request for her admission to the asylum, being dead? Yes.
5853. Do you remember that, after the decision of the Court, fresh certificates were obtained by the trustees of the deceased parents to meet this point? Yes.
5854. Were those certificates obtained while you were acting medical superintendent at the asylum? Yes.
5855. Was Case No. 29 formally discharged and formally readmitted on these fresh papers? Yes.
5856. Had you any special experience in lunatic asylums in England? Yes; at St. Luke's.
5857. Is that one of the largest asylums in London? Yes.
5858. In the time that elapsed between the arrival of the official visitors and the visitation of the wards, could any special preparations have been made as far as the patients are concerned? It would be utterly impossible to do so.
5859. Was it possible to tidy patients up to a certain extent? Aprons might have been put straight, and that sort of thing; but to put on any additional clothing to effect the change inferred would be impossible in the time.
5860. Do you think the patients would have complained to the official visitors if they had been skurried about in putting on a change of clothing? Yes, certainly.
5861. Did the official visitors take any interest in the complaints made? Yes.
5862. Did they occasionally see patients in a private room by themselves in consequence of complaints having been made? Yes.
5863. Are patients always ready and eager to complain if they have, or fancy they have, any cause? Yes.
5864. Are the official visitors always ready to listen to complaints? Yes; they did listen to complaints, and enter fully into the cause, when necessary.
5865. Mrs. \* \* \*, in the course of her evidence, referring to the mortuary, says: "I call it a stable. There was fodder under my feet and a couple of bags of fodder in the place. There was no window even, but only an aperture containing iron bars. I call it disgraceful. I spoke to Dr. Vause about it later on. I asked him to sue us for the money and we would expose it. He said he would not sue us;"—do you remember the mortuary being like that? I never saw anything of the sort.
5866. The other complaint is that she was not allowed to see her relatives when she was dying;—Mrs. \* \* \* evidence on this point is: "Dr. Vause was not there when I paid my first visit after my cousin was admitted. Dr. Hetherington was there. On the following Friday morning I and my mother called to see my cousin. We went back again at 9 o'clock at night and saw Dr. Hetherington, who was rude to us. I said that my cousin was dying then. He said she was not dying. I then said that her mother had come 102 miles to see her daughter. Dr. Hetherington objected to anyone seeing the patient at that time at night. I, feeling sure that my cousin was dying, insisted that her mother should see her, and we were allowed in. She was nearly blind, and we were taken into a dark room, and had some difficulty in seeing the patient. I saw then that the end was near, but Dr. Hetherington said she was not dying. She died on Saturday night, or early on Sunday morning. What I complain of is what I consider to be the harsh treatment;"—do you remember the case at all in this light, or the details to which reference is made here? I am afraid not.
5867. How long was Case No. 29 a patient—a fortnight? About ten days, I think.
5868. *President.*] Have you any recollection at all in reference to the matters spoken of by Mrs. \* \* \*? I only have a hazy recollection of the case. It struck me that at night it was better she should not see her friends, especially as she was in such an exhausted condition. As a rule, I did not allow people to see their friends at night.
5869. Did you express any opinion to Mrs. \* \* \* that her cousin had no business to be there at all? No.

[Witness withdrew.]

James Kingsbury, Esq., M.D., sworn and examined:—

5870. *President.*] Are you a fully qualified medical practitioner, named James Kingsbury, and practising J. Kingsbury at Newtown? Yes.
5871. Have you visited Bayview House somewhat frequently in the past? Yes; I have done so on several occasions.
5872. During the time Dr. Vause was absent from the institution were you in the habit of occasionally going there? Yes.
5873. Was it your custom to go to the institution during the illness of Dr. Vause after he had met with a certain accident? Yes.

Dr. H. B.  
Hetherington.  
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Dr.  
Kingsbury.  
11 Dec., 1894.

- Dr. 5874. Did you receive any remuneration for your services on these occasions? Nothing whatever.
- J. Kingsbury. 5875. Did you, when making these visits, have every opportunity of observing the working and the management of the institution? Yes; I think I have had a fair insight into those things.
- 11 Dec., 1894. 5876. Have you seen other and similar institutions in England, America, and on the continent of Europe? Yes.
5877. Having seen these, do you consider Bayview House to be a well-managed institution? Yes; quite equal to anything I have seen of a similar kind elsewhere.
5878. Of course, in many minor details, the larger institutions may possess conveniences not to be found in a place like Bayview House, but still, as a private asylum, is it more homely and more homelike, and more satisfactory in the manner of comfort and treatment, than the larger public institutions you have seen? Yes.
5879. Supposing you had charge at Bayview House, and taking into consideration the experience you have gleaned by travel, are there any suggestions you can make that you would carry into effect? I cannot say that there are.
5880. Is there anything of material importance wanting in Bayview House, as compared with the other institutions? There is nothing that I could suggest.
5881. When you have been visiting Bayview House have you seen a separate building on the male side in which two cells are set apart for the solitary confinement of patients, one of which I may say was occupied by Case No. 1 for a considerable time? I know the building to which you refer.
5882. Have you been in it? Yes.
5883. What is your opinion as to its adaptability for this particular purpose? I think it is quite suitable.
5884. Do you know whether this room was properly ventilated? If it be the one I refer to it is ventilated by means of louvres on the top, outside.
5885. Do you know if the floor of the building is well ventilated? Yes; I think it is.
5886. Did you see a window high in the wall, opposite to the door, as you entered the room? It is some time since I was there, and as a consequence I cannot speak quite definitely.
5887. Taking this room as a whole, did your examination of it satisfy you that it was well adapted for the purposes to which it was put? Yes.
5888. Have you seen the other isolated rooms off the verandah on the female side? Yes.
5889. Are you satisfied with them? Yes.
5890. Recently has there been an additional window put in these rooms, over the doors, so that the gas can be thrown in, and by this means give full opportunity of observing patients? I do not know.
5891. If it has been done, would you approve of it? Yes; but if it has been done, it is since my visitation.
5892. Supposing this to have been done, would it amount to an additional improvement? Yes.
5893. Did you ever hear any patients complain of the food or clothing supplied? No; not all all. I visited the institution from the 15th August until the 27th of September. I saw the patients almost daily; in fact, I think I may say I saw them every day. They had ample opportunity of making any complaint if they wished so to do, but during my visitation I never received a complaint from any patient.
5894. *Dr. Garran.*] Were your visits made mainly in the day-time? Yes.
5895. Did you make any visits to Bayview House at night? No.
5896. Did you see the patients washed? No.
5897. Did you see the clothing worn by the patients? Yes.
5898. Was it satisfactory? Yes.
5899. Did you see the food also? Yes.
5900. Was it good in quality, and well cooked? Yes.
- 5900½. *Mr. McGowen.*] Was it in August or September of this year that you visited the institution? It was in 1893, during Dr. Vause's illness.

[Witness withdrew.]

Samuel T. Knaggs, Esq., M.D., F.R.C.S.I., sworn and examined:—

- S. T. 5901. *President.*] We, as a Royal Commission, understand that you have sent several patients to Bayview House;—is that so? That is true. I remember having sent four.
- Knaggs, Esq. 5902. What was the result of the treatment of these patients? One died in the hospital, and three were discharged.
- M.D., 5903. Were the three cured? Yes.
- F.R.C.S.I. 5904. Did the patients who were cured express to you any opinion as to the manner in which they had been treated? Yes. One in particular, who was there for five months, spoke most highly of the management.
- 11 Dec., 1894. 5905. Did you ever visit the patients while they were at the institution? Yes.
5906. When visiting them had you every opportunity of going round the buildings? Yes.
5907. Did you take any interest in the management of the institution? Yes.
5908. Were you quite satisfied with the management? Yes.
5909. Did you ever visit the institution at night? No.
5910. Did you ever look at the isolation cells while you were there? No; I had no opportunity.
5911. Were you ever there at mealtime—for instance, when patients were having their dinners? No.
5912. Taking a general survey of the institution were you perfectly satisfied with its management, and of the way in which the patients were treated? I was quite satisfied.
5913. *Dr. Garran.*] Have you ever seen a patient suffering from acute mania? No; not from acute mania, I mean not while in Bayview Asylum.
5914. If you were told that a patient was extremely noisy and violent would you have any hesitation in putting him in a separate bedroom? No; not if it were well padded.
5915. Supposing there were no padded room would you place a patient in a single room? That would depend upon the violence of the patient.
5916. Would you approve of such a patient being separate from others? Yes; I rather think I would; if he could have the services of an attendant.
5917. Would you have this attendant inside or outside of the room? I would have him on the outside, watching.

5918. Supposing the patient were to tear up his bed-clothes, and also strip himself of night-clothing, what would you do? I think I would let him tear them up and leave him alone.
5919. Do you think it would be better to take this course than to go into the room and attempt to re-clothe him? I think it would be better to leave him alone.
5920. In regard to personal cleanliness, supposing a patient to be an exceptionally dirty one, do you think it would be better to clean him during the night, or to leave him in his dirt? It would all depend upon the patient, or greatly depend upon the patient. If a patient became excited through the interference necessary to clean him, I think it would be more judicious to leave him quiet.
5921. Would you, therefore, study the temperament of each case? Yes.
5922. With an amenable patient would you interfere? Yes; I think so. But I would not interfere with an unsuitable subject.
5923. Take Case No. 1, for instance;—what would you do with that? From what I have heard of this case I think it would be much better to leave him alone.
5924. *Mr. McGowen.*] In the event of patients being secluded and denuded of clothing, do you think it absolutely necessary that an attendant should look into the rooms occupied by such patients during the night? I think so. I think it would be well to have these patients watched, or seen at stated times during the night.
5925. How often would it be necessary to see these patients? I think that is a question that would greatly depend upon the nature of the case. I think, as a rule, they ought to be seen every hour.
5926. Do you consider it wrong treatment to put patients in the single rooms and leave them for at least six or seven hours without observation? I would not call it wrong treatment exactly, but I think it would be injudicious treatment.
5927. *Dr. Manning.*] Have you sent patients to Cook's River since Case No. 1 was removed from that asylum? I really forget the date when I sent the last, but I believe it was on the 3rd of September of this year.
5928. Did the patients whom you sent and were subsequently discharged complain to you of want of food or any other attention? I never heard of any such complaint.
5929. *Dr. Vause.*] With regard to the visiting of patients during the night-time in these single rooms, would not the degree of excitement in which the patient happened to be guide you very much? Yes; that is what I meant when I answered Mr. McGowen.
5930. Would you rouse a patient suffering from acute mania to whom sleep is of paramount importance? Certainly not.
5931. Would you rouse a physically healthy patient? I say, let him sleep by all means, for sleep is of the greatest importance in these cases.
5932. Is it not reasonable to suppose that a medical officer would know during the daytime of the previous day whether or not it was likely that a patient would require attendance during the night? One generally knows the approach of excitement for some hours before the excitement really appears.

[Witness withdrew.]

William Henry Crago, Esq., L.R.C.P., M.R.C.S., sworn and examined:—

5933. *President.*] Do you remember sending Case No. 49 to Bayview House? Yes.
5934. Did you visit her regularly while she was in the institution? Yes; from May, 1892, to April, 1893.
5935. Did she speak to you afterwards with reference to her residence in the institution? Yes; on several occasions.
5936. Did she always express herself as being satisfied with the treatment she received while there? I cannot say that she did. She had certain delusions while an inmate which I think have remained with her ever since. For a time while I visited her she spoke to me continually, saying she was under the impression that someone desired to drown her. Although well, she has not quite got rid of that idea.
5937. Do you mean to say that she still has that idea? Well, not exactly to the same extent, but still she has told me that someone tried to drown her, and I am sure it is a pure delusion.
5938. During your visits to the institution, had you a full opportunity of seeing the system of management? I think I have been right through the wards, but I have not visited the dormitories or single rooms.
5939. *Dr. Garran.*] Did you ever hear Case No. 49 state that she was put into a single room or dormitory? No.
5940. Do you think her delusion arose through being detained at Bayview House? No; certainly not.
5941. *Mr. McGowen.*] Did this patient ever complain to you about having been put into a single cell? No; but she told me, in the presence of a nurse, that she had been held under water, and that she had been placed in a room that turned round.
5942. Have you sent any other patients to the institution? I think I have, but I cannot call to mind the names at present. I think I have signed a certificate for someone else.
5943. Do you know whether the other patients you sent to the institution have recovered? I cannot say for certain, but I am under the impression I have sent other cases there that have recovered.
5944. *Dr. Vause.*] Had Case No. 49 delusions of persecutions freely marked in her case? Yes.
5945. Do you remember Case No. 50 being sent to the institution? Yes.
5946. Did he make a good recovery? Yes.

[Witness withdrew.]

James Edward Ramsay, Esq., M.B., sworn, according to the Scotch form, and examined:—

5947. *President.*] Do you remember taking charge of Bayview Asylum for a short time? Yes; for about two months, at the beginning of last March. I was not exactly in charge. Dr. Vause was ill at the time, and I was acting under him. He was ill, but not incapable.
5948. Did you have every opportunity of going through the wards, and seeing the manner in which the institution was conducted? Yes.
5949. Did you see the isolation cells? Yes.
5950. Did you see the patients in them? I did not inspect the patients at night.

5951.

S. T. Knaggs,  
M.D.,  
F.R.C.S., J.  
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Dr. Crago.  
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Dr. Ramsay.  
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- Dr. Ramsay. 5951. Did you live in the institution? I lived in Dr. Vause's house; but I did not go round the whole of the place at night.
- 11 Dec., 1894. 5952. Do you mean to say that you did not make a medical round in the night-time? No; I did not.
5953. Did you go to a case if you were actually needed? Yes; I went to see cases when I was wanted.
5954. Regarding the food supplied to the patients—was it improperly cooked? No; it was very good, and well cooked.
5955. It has been stated in evidence that it was insufficient in quantity;—is that so? I never noticed it, and there were plenty of patients sensible enough to know if there was anything wrong in that direction. They always seemed to be pleased with the arrangements as far as the food was concerned.
5956. Were you present at meal-times? Not always; but I walked through the rooms and have seen the patients at their meals.
5957. Judging from what you saw on the tables on these occasions, was there an ample supply? Yes; much more than was wanted, and the food was very well cooked.
5958. Was there an ample supply of clothing for the patients in the institution? Yes.
5959. Was any complaint made on this score? No; if patients wanted clothing they always had a supply which could be obtained at once.
5960. Were you there while Case No. 1 was an inmate? Yes; and while I was there I saw him every day.
5961. Do you know where he slept at night? Yes.
5962. Did you ever see him placed in his sleeping-room? No.
5963. Did you ever see him taken out of it in the morning? No.
5964. Did he ever make any complaint to you as to the manner in which he was treated? No; none whatever.
5965. Did he ever complain about being put in the place where he slept? No; he has told me, "I sleep over there," but I never regarded that as a complaint. He would volunteer this statement as part of his general conversation.
5966. Do you know what arrangements were made in that room for the comfort of the patient? It was scrubbed out every day. The patient was in the habit of soiling the room and his clothes, and it had to be cleaned out every day.
5967. We have had it in evidence that there was a strong odour in the room, undoubtedly the smell of stale urine, arising owing to the room not having been cleaned out properly;—is that the case? I am sure it was scrubbed out every day. I saw it wet every morning. If I went to the room at 9 o'clock in the morning it was wet as the result of having been scrubbed out, and the doors were wide open.
5968. Was there any smell in the room? No; not after it had been cleaned.
5969. Did you ever notice any smell of the kind I have described? None whatever.
5970. Were you ever present when Case No. 1 was taken out the first thing in the morning? No; I was never there.
5971. Was it only reported to you that he was a dirty patient? I could always see that the room was wet, and that the bed-clothes were being dried.
5972. On the whole, is Bayview House as well managed as similar institutions of this kind? Yes.
5973. Is every care and attention shown to the patients? Yes.
5974. Is there any neglect in the way of supplying food and clothing, or in any other matter which might be remedied? No.
5975. Are you aware if there is a supply of tea, coffee, cocoa, milk, and so on, kept for the night nurses and the patients? I think so, but these things are in charge of the lady superintendent. I do not know exactly where they are kept. There was a safe where the men could get temporary supplies. It was on the verandah, under lock and key. There were sugar, tea, bread, and butter, and such things, in a safe made of wire netting.
5976. While Dr. Vause was ill, and you resided at his house, must you not have known everything that was done for the comfort of the patients at night? I did not go looking about in order to spy into these matters. I took for granted what the attendants told me when I asked them, for I understood them to be trustworthy and decent men.
5977. Do you know whether the nurses on the female side took night-nursing duty in turns? I had nothing to do with these arrangements. I think the matron and the senior attendant on the male side made all arrangements for night nursing.
5978. Was Doherty the name of that senior attendant? Yes.
5979. Dr. Garran.] Did you say in answer to the President that you had seen the night-clothes of Case No. 1 hanging out to dry? I think I said I saw the bed-clothes.
5980. Do you know if the patient wore personal clothes at night? I do not remember seeing them.
5981. What did you see, then, in the way of bed-clothes? I saw blankets, sheets, and a rug.
5982. Were there sheets? Yes.
5983. Are you quite sure of that? Yes.
5984. Were there blankets? Yes.
5985. Was this during the months of March and April? Yes.
5986. Was Doherty the chief attendant there then? Yes.
5987. Was an attendant named Mackenzie there, too? Yes.
5988. Do you know whether anyone attended to Case No. 1 at night during that time? Yes.
5989. Whom? I do not know. I made Doherty responsible for that.
5990. Do you mean to say that there was some one whose duty it was to be up and awake and to go periodically during the night to see the patient? Yes.
5991. To the best of your belief was that done during the two months you were there? Yes; because I asked the chief attendant how Case No. 1 had slept, and I received a report every morning as to how he slept the previous night.
5992. Did you get a daily report? Yes.
5993. If we have it in evidence that no one was there at night, is that a mistake? It is, unless the head attendant misled me.
5994. Mr. McGowan.] Are you quite sure there was an attendant who periodically, at stated intervals, looked into the patient's room during the night? Yes.
5995. Are the females put into secluded cells in the same manner? Yes. 5996.

5996. Did you make similar inquiries to ascertain if a night attendant looked in upon them? No, I do not remember that I did. Dr. Ramsay.
5997. Did you only ask about the night attendance upon Case No. 1? Yes, on account of him sleeping in that particular room. 11 Dec., 1894.
5998. But would it not be necessary to have a night-attendant to see every case sleeping in these isolated rooms? I do not think so, for there was no other person sleeping in that way on the male side.
5999. Are there ten or dozen rooms on the Government side for the use of female patients? Yes.
6000. Are these rooms very often fully occupied? Yes.
6001. Are there any night-attendants to look after those rooms and patients? I do not remember.
6002. Did you ever make any inquiries to ascertain whether there were or not? No.
6003. Have you seen these rooms in the day-time? Yes.
6004. Do you remember how many windows were in each room? I think there was one window well up in the wall, facing the door as you go in.
6005. Did you think that was quite sufficient while you were there? Yes; there was also a ventilator under the floor.
6006. Do you think these rooms require more light? No. The patients were not put into these rooms until sleeping time, and then it was dark.
6007. Have you seen the asylum since last May? No.
6008. Have you any complaints to make with regard to the treatment of the patients? No.
6009. Did you receive only reports about night affairs, or do you know of them of your personal knowledge? I did not go into the institution at night unless some patient was ill and required special attention.
6010. *President.*] While you were there was Dr. Vause ill? He was not in very good health.
6011. What was the matter with him? He had met with a serious accident. One of the patients had stabbed him in the face, and it was during his weakness after this accident that I was there.
6012. It has been reported that Dr. Vause is not quite a teetotaler;—is that so? I know he is not a teetotaler. He asked me in one evening, and in the small dining-room we had a glass of whiskey together.
6013. Have you ever seen him under the influence of liquor? No.
6014. Have you ever seen anything suspicious that would lend a colour to such a rumour? Never.
6015. While you were at the asylum did you have full opportunity of seeing Dr. Vause at all hours of the day? Yes.
6016. Did you see anything at all that would lead you to believe there is any truth in a statement of this kind? No; such is not the case. I saw him at all times.
6017. Did you see him in the management of the institution when looking after the patients at all hours and under all circumstances? I did.
6018. And did you ever see him under the influence of liquor? I never saw him in any way under the influence of liquor.
6019. We have it in evidence from a witness named Macleod that the food was bad, that Dr. Ramsay gave orders to have it changed, and that in consequence it was better;—did you do so? I never remember having done so. The only remarks I have made, I think, were to the effect that the attendants were getting a little too much bread. I told them to take only what was necessary, as that which was not used became dry and almost unfit for use.
6020. Was the food supplied to the patients sufficiently varied? I think so.
6021. Can you tell us what joints of meat you saw while you were there? I cannot remember now.
6022. If a witness says that there were no joints except necks of mutton, would that be true? No. I am certain I have seen legs of mutton and different joints of beef—in fact, there is a dietary scale made out for every day in the week.
6023. Is there a variety of joints of beef and mutton? Yes.
6024. Was the supply of vegetables sufficient? Yes; I think it was. Whenever I asked the patients if they had plenty to eat, they always said they were well treated. Even those who wanted to get away from the institution never complained about the food or anything being left undone for their comfort. The one cry used by them was they wanted to get away, as they did not like being cut off from the world.
6025. When the official visitors arrived at the institution, did they go first to Dr. Vause's house or to the office? They used to go to the office first and see the books; then they would go round the asylum. I think they visited the place twice while I was there. The first time they went to the office first.
6026. What time elapsed between their going to the office and their entering the ward? About 10 minutes.
6027. What were they doing in that time? I think they were waiting for the matron to take them round.
6028. Do you know whether there were any changes made in the patients' dresses when the official visitors arrived? I never heard of such a thing. I have heard, however, that patients are dressed in their best suits and dresses when they are taken to see their friends, but this is not done for the official visitors.
6029. Have you had any asylum experience before? No.
6030. *Dr. Vause.*] Were ever any restrictions placed upon you in regard to visiting the establishment? No; I could obtain access whenever I liked.
6031. Was the key of that safe on the verandah in the hands of the attendants? I think Doherty kept it.
6032. Did this safe contain stores of tea, sugar, milk, &c.? Yes.
6033. Are the patients in the female single rooms chronic cases and accustomed to this treatment? Yes; nearly all of them.
6034. Was your attention directed towards them as much as it was towards acute cases like that of Case No. 1? Certainly not.
6035. When the official visitors paid their visit to the house in the first instance, do you remember whether it was for the purpose of making a special investigation of the books about some transfer or something rather unusual? I do not know what they were doing.
6036. Did you make any entries in a book for special diet while you were at Bayview House? Yes.
6037. Do you remember Case No. 46? Yes; she was suffering from diarrhœa.

- Dr. Ramsay. 6038. Was she ordered milk, cornflour, milk and bread, ground rice, custard pudding and nothing else? Yes.  
 11 Dec., 1894. 6039. Is it not important that nothing else should be given to a patient suffering from this complaint? Yes.  
 6040. If tea had been given to her would it have been contrary to your instructions? Yes; most certainly.  
 6041. Is this your handwriting [*the entry in the diet-book above referred to produced*]? Yes.  
 6042. Did Case No. 46 die some time afterwards? Yes.  
 6043. It has been stated that Mrs. Gilchrist refused a dying patient a cup of tea—that statement refers to this case;—can you give any explanation upon this point? Yes. I can say that Mrs. Gilchrist acted quite right in refusing this tea, and she acted under my instructions in that case.

[Witness withdrew.]

Mr. \* \* \* sworn and examined:—

- Mr. ——— 6044. *President.*] Had you at one time a relative at Bayview House? Yes.  
 11 Dec., 1894. 6045. What relative? A nephew.  
 6046. What is his age? Thirty-four years.  
 6047. How long is it since he was admitted to the institution? He was admitted on the 7th of October, 1886—that is, eight years and nearly three months.  
 6048. From what was he suffering that it became necessary to place him there? From melancholia, and he became very excited and threatened to take my life several times.  
 6049. What doctors attended him during thy earlier stage of his affliction? Dr. Crago and Dr. Muskett saw him and signed the necessary certificate.  
 6050. Did these doctors examine him, and after their examination issue a certificate in the terms of the Lunacy Act on which he was admitted as a patient to Bayview House? Yes.  
 6051. And was this on the 7th of October, 1886? Yes.  
 6052. Has he remained there pretty constantly ever since? He remained there until 1st March, 1888, and I have a note in my diary which says he spoke very highly of the place. He went back a second time, and when he was in the acute stage I used to visit him constantly.  
 6053. How often? At first, before he came out in 1888, always threetimes a week.  
 6054. When you saw him there did he ever make any complaints about the manner in which he was treated? Never.  
 6055. Did he ever say that he was at all dissatisfied in regard to his treatment at the institution? No, quite the contrary.  
 6056. After a time did you take him home? Yes, for six months.  
 6057. How did he get on while at home? Very well at first. I took him to \* \* \* and kept him there for a month with two of his sisters.  
 6058. Did he get ill again? Yes. He was not right until he went to \* \* \*, and then I could not see anything particularly wrong with him. Then when we came down again there was a great change in him and a month did not elapse before he became very much worse.  
 6059. Did you have to return him to the institution? Yes.  
 6060. Has he been there ever since? Yes.  
 6061. Did I not see you there the other day when we were paying an official visit to Bayview? Yes.  
 6062. Are you perfectly satisfied with all the means adopted in the hope of bringing about a cure? I think they could not be better. I had a prejudice against the place before I went out there. I thought there was no doctor and I have a great prejudice against unqualified men, but by my own experience I have learned that the prejudice was unfounded as far as Bayview is concerned. I have never met nor never seen the slightest sign of unkindness. On the other hand I have met with every courtesy from the doctor and likewise from the lady superintendent. My nephew, too, speaks very highly of his treatment.  
 6063. Does he speak highly of the institution, comparatively speaking, when he is in sane moments? Yes, as he was on that day when you saw him. I have every confidence in the place; so much so, indeed, if it were ever to be my lot or misfortune to go off my head, I say now "Take me to Bayview House." If it should become necessary for me to leave this country I could with the greatest confidence leave my nephew where he is.  
 6064. Is your own impression favourable, and not only so have others conveyed their favourable impressions to you? Yes.  
 6065. Have you ever had any fault to find with the institution? No; never one fault to find.

[Witness withdrew.]

The Hon. J. M. Creed, M.D., M.L.C., sworn and examined:—

- Hon. J. M. Creed, M.D., M.L.C. 6066. *President.*] Have you visited Bayview Asylum on various occasions? Yes.  
 11 Dec., 1894. 6067. When you have visited the institution did you at any time see Case No. 1? Yes.  
 6068. In the day-time? Yes.  
 6069. Did you ever visit him at night? No.  
 6070. Do you know where he was in the habit of sleeping? No.  
 6071. Was that place where he slept latterly shown to you? Yes.  
 6072. Do you know its condition as to air space and ventilation? Yes.  
 6073. Are you satisfied with both? Yes.  
 6074. Did you take particular note of the mode of ventilation? Yes; the chief means is through a louvered window in the wall opposite the door.  
 6075. Was there any smell in the room? Not the slightest.  
 6076. Have you had any experience of insane patients? Yes; I have had a little in my time.  
 6077. We have had it in evidence from a medical witness that the smell in this room on a certain morning, immediately after the door was opened and the patient taken out, was of a stale urinous kind;—are there not certain cases of insanity in which the urine of the patient smells very strongly? Yes.

Yes. I had one special case where it did, and there are many cases in which the urine smells strong. I think this is very likely to occur in cases of great nervous disturbance.

6078. Do you remember Case No. 6? Yes.

6079. Was he in a delicate state of health? When he was sent to Bayview he was in a most delicate state of health. How he has lasted so long has been perfectly surprising to me.

6080. Has he been there for nearly eight years? Yes. His living for a certain number of years was, at the time to which I have referred, of great pecuniary importance to his friends.

6081. If he had not been well cared for, it is probable that he would not have lived sufficiently long to fulfil this particular interest? I am quite certain about that, and it seems to me little less than a miracle that he has lasted as he has.

6082. Did you ever know any patients to be neglected while at Bayview House? No.

6083. Were you ever there during meal-time—dinner, for instance? Yes.

6084. Did the food seem to be good and well cooked? Yes.

6085. In going through the institution, did you, as a man of large experience, have every opportunity of seeing whether or no the place was managed on right lines? It is managed on such right lines that I have never hesitated to send patients there.

6086. *Dr. Garran.*] Do you regard these single dormitories as an absolutely essential adjunct to lunatic asylums? There are cases in which you must use them.

6087. In this particular institution these two isolated rooms on the male side are said to have been built for the special purpose, and they are detached from the main building;—do you see any disadvantage in that? It might be a disadvantage when removing patients on a wet day, but, on the other hand, being detached is an advantage, as it ensures greater quietude for the patient himself, and prevents him from annoying others when in a noisy mood.

6088. Do you think the objection to removing patients in wet weather could be obviated by constructing a covered way from the isolated dormitory to the main building? Yes.

6089. Would that improve the advantage of having these isolation cells detached? Yes.

6090. If you had a patient who became noisy at night would you object to put him in this room? No.

6091. Supposing you—if a medical superintendent—had a patient who disliked wearing his clothes, who tore them off and destroyed them, what would you expect to be done? I should expect a patient of this nature to be provided with covering not easily torn, and that the best provision possible should be made to keep it on.

6092. Do you think that three canvas rugs lined with blanket are sufficient covering for this class of patients? Yes, quite.

6093. When patients voluntarily denude themselves, do they feel the cold? In insanity the sensations alter altogether. The patient strips himself, he may knock himself about, and all the time be under the impression that he is hurting somebody else.

6094. If he gets injuriously chilled while naked would the effects soon show themselves? Yes.

6095. If you had a patient destructive and dirty in his habits, what would you expect his attendant to do in the matter of night treatment? If a patient of this character were awake and in a dirty condition, and if it could be done without violence or struggling, I should expect this patient to be cleaned. If cleaning him, however, involved violence or the use of force, I should leave the patient alone until morning.

6096. Is that your choice of two alternatives? Yes. I know of no physical injury that can accrue by allowing the patient to lie for twelve hours covered with his own dirt.

6097. In a case of that kind would a patient be more distressing to an observer than to himself? Yes; it would be wholly to the observer. A patient could neither feel it, nor realise his condition.

6098. If you thought he would suffer from interference would you leave him alone? Yes. If I thought it would injure the patient to disturb him I should certainly leave him alone. I cannot conceive how it could injure the patient to leave him in his faces, but I know it might be most injurious to use force in cleaning him.

6099. We have been told that sleep is the one thing most needed;—is that so? That is my opinion.

6100. One witness is inclined to the opinion that if a patient were dirty early in the night, and were still awake, he would interfere and clean him;—would you make that distinction? There might be two classes of patients—one to whom it would be comparatively harmless if he were cleaned. But there might be another to whom it would be necessary to give a narcotic, and it would be most inadvisable to interfere with him.

6101. If you gave a patient a narcotic would you leave him alone during the night? Yes, certainly.

6102. Do you distinctly believe that to be the proper treatment? Yes.

6103. Did you pay any special attention to the ventilation of that isolated room in which Case No. 1 slept? Yes; I examined the ventilation, and I considered it to be sufficient.

6104. Do you think it is a suitable room for the purposes to which it was put? I think it is a suitable room.

6105. When people are confined at night in an asylum in solitary rooms of this kind do you think it necessary that a night patrol should be on watch? I think it would be advisable to have one.

6106. How often, in a case like Case No. 1, should the attendant visit the patient? If it could be done without disturbing the patient, I should say every couple of hours.

6107. Would you insist on a visit being made every hour? No.

6108. Have you heard of any complaints from patients who have been at Bayview House? No. I know several patients who have been discharged cured, and they have never complained, but, on the other hand, have always appeared to be contented with their treatment while there.

6109. *Dr. Manning.*] We have had in evidence from an attendant that Case No. 6 was neglected, that he never got a bath, except once a week, on Saturday afternoon;—do you think that probable in a case of this kind? I really cannot say.

6110. Do you not think that if this man had been neglected it would not have materially shortened his life? Yes.

6111. Still was not his life prolonged beyond expectations? Yes; far beyond all expectations.

6112. Have you seen case No. 6 on several occasions? Yes; when on visits to the institution.

6113. Did you always find him to be properly dressed and comfortable? Yes.

6114.

Hon.  
J. M. Creed,  
M.D., M.L.C.

11 Dec., 1894.

Hon. J. M. Creed, M.D., M.L.C.  
 6114. Was he brought to you or did you go to where he was? I went to him. I do not remember a single occasion when a patient was brought to me. I have on many occasions gone direct to the wards without a minute's interval.

11 Dec., 1894. 6115. Do you know that persons in a state of insanity not infrequently refuse medicines? Yes.

6116. Do you consider it quite right to give medicines to patients in their food and drink? Yes; it is a proper and legitimate thing to do. Giving it to them in the ordinary form makes them nauseous, and if you can administer it without their knowledge so much the better.

6117. In cases of insanity is not medicine constantly given in the food of the patients? Yes, and thereby distress is avoided.

[Witness withdrew.]

Mr. \* \* \* sworn and examined:—

Mr. \* \* \* 6118. *President.*] Were you at Bayview House for some little time? Yes, I was; from the 31st of March, 1887, till the 29th of December in the same year.

11 Dec., 1894. 6123. Are you satisfied of the way in which the patients were treated, and was everything comfortable and nice? Yes.

6124. While you were there under treatment in 1887 did you occupy a single room? Yes.

6125. Was it one of the two isolated rooms in the small courtyard away from the main building? Yes.

6126. Which was the one you occupied, the easterly or the westerly? The westerly one.

6127. In what time of the year—winter or summer, I mean—did you occupy this room? In both times.

6128. Did you go to this room by preference to a great extent? Yes. I wanted to run away, and Dr. Vause put me there for safety.

6129. On your own desire, to a certain extent? Yes.

6130. Was there anything uncomfortable in the room? Nothing at all.

6131. Did you ever suffer from cold while there? No.

6132. Was the heat excessive during the summer months? No.

6133. Was the ventilation perfect? Yes.

6134. Were you satisfied with that particular room in all these respects? Perfectly.

6135. Did you also sleep, at one time, where Case No. 8 was? Yes.

6136. Did Case No. 1 sleep upstairs on the same landing? Yes.

6137. Was he at this time a troublesome patient? Yes; he was noisy, as far as I know.

6138. Do you know much about what happened in the room he occupied? No.

6139. Was the isolated room you occupied the same that was occupied by Case No. 1 later on? Yes, the very one.

6140. Have you any complaint to make about that room? No.

6141. Would Case No. 1 be put to bed about 7 or half-past 7 at night? Yes.

6142. And would an attendant, or attendants, take him out in the morning to his bath? Yes.

6143. *Dr. Garran.*] In going across the yard from the isolated room to your bath early in the morning did you ever catch cold? No.

6144. Did you ever feel crossing the yard to be a disagreeable thing? Not in the slightest.

6145. Usually, did you talk to Case No. 1 in the daytime? Yes; when he was able to speak.

6146. Did he ever complain to you about being put into this place to sleep? No, not in the slightest; he never mentioned it.

6147. Did you ever see him brought out of the room in the morning and taken to his bath? I cannot remember. I saw a good many patients come across the yard; I do not know if Case No. 1 was one of them.

6148. As far as you are concerned, have you any fault to find with the management of the institution? No.

6149. On the other hand, have you every reason to be satisfied with the treatment? Yes.

6150. Were you satisfied with the food supplied? Yes.

6151. Was it well cooked and of good quality? Yes.

6152. *Dr. Manning.*] Can you describe to the Commission the ventilation of that room? Yes. There is an opening, about 6 or 8 feet from the floor, in the wall to the outer air. If the weather is cold, a shutter is put over this opening. There is also ventilation in the door through the observation aperture.

6153. And what about the ceiling? I think that is perforated; at all events the ventilation always struck me as being good.

6154. As a man of practical experience, do you say you found it good? Yes.

6155. Did you carry out certain additions to the female patients' corridor and verandah? Yes.

6156. Did you, while doing so, have a constant opportunity of seeing the Government patients? Yes; I saw them every day.

6157. Did you see them at all times and in all kinds of weather? Yes.

6158. Did it ever strike you that these patients were insufficiently clothed? Never.

6159. Did you ever see any unkindness on the part of the nurses? No, sir.

6160. *Dr. Garran.*] Did you ever suffer from cold while in that room? No.

6161. Did you feel it stiflingly hot in the warm weather? No, sir.

6162. Would your attention have been immediately directed to the cause if the place were badly ventilated? Certainly.

[Witness withdrew.]

Mr.

Mr. \* \* \* sworn and examined:—

Mr. —

11 Dec., 1894.

6163. *President.*] Were you for a short time an inmate of Bayview Asylum? Yes, I was.
6164. Do you remember the date? I cannot recollect it definitely.
6165. Was it in 1885—eight or nine years ago? It would be somewhere about that time.
6166. Subsequent to that time were you engaged at Bayview House as an attendant? Yes.
6167. Do you remember what time you were engaged as an attendant? About a year after I recovered.
6168. Were you there about six months as an attendant? Yes.
6169. Were you engaged again last year in this capacity? Yes.
6170. For how long? About five months.
6171. Why did you leave on the first occasion? I left to go into business with my father.
6172. Why did you leave the second time? I left to go up country.
6173. On the last occasion when you left did you get a certificate of good character? Yes.
6174. Did you sign the book generally signed by attendants leaving, affirming that the asylum was carried on properly? Yes.
6175. Were you satisfied with the way in which the attendants were treated? Yes, perfectly.
6176. Did you ever see any attendant acting cruelly to a patient? No.
6177. Did you ever hear anything of that kind? No.
6178. What were your particular duties there? Attending to the patients.
6179. Did you go about the grounds with them? Yes.
6180. Did you sleep upstairs in an associated dormitory? Yes.
6181. How many patients were in that room with you? Only one.
6182. Who was he? Case No. 1 on the last occasion.
6183. Was he a quiet and orderly patient? By no means.
6184. Was he very troublesome? Yes.
6185. How did he cause you trouble? He was very noisy, very destructive, and created a great disturbance during the night.
6186. How were his habits? Very dirty.
6187. Was he ever put in a separate cell while you were in charge of him? Yes; on one or two occasions.
6188. By whose orders? By the order of Dr. Vause.
6189. On these occasions was he very much disturbed? He was exceedingly troublesome.
6190. Did he on these occasions seem to be the better for being placed there? Yes.
6191. Did you put him in the separate cell? Yes.
6192. Did you take his clothes off? Yes. I put pyjamas on him, and he always had a flannel singlet.
6193. Did he ever tear that off? Generally he did.
6194. Did he make any mess while he was put in this room? Yes; when I left he was getting very bad.
6195. Did he object to going to sleep in that room? By no means. He did not say whether he liked it or not. He was taken to the room, and slept there without saying anything at all in the way of objection.
6196. When you opened the room in the morning did you find it dirty? I used to find it dirty; the blankets and sheets were torn to pieces. There were three mattresses on the floor; the ticking had been torn open, and the straw emptied out and scattered all over the place. I would find other mess, too; and sometimes the patient would be quite naked.
6197. Did he ever say to you, as his attendant, that he carried on in this way out of spite, because he was placed in that room to sleep? No.
6198. Are you quite sure of that? Yes.
6199. Was there any utensil left in the room for him? There was no utensil left in the room, because he was so destructive that it would have been dangerous to leave it. He used to be seen every two hours, and the utensil was taken in the room on each occasion.
6200. Did he ever assault you? No.
6201. When you have taken him out in the morning in a naked condition, when all his clothing had been torn up, was there a very bad smell in the room? Sometimes, and sometimes not so very bad.
6202. Who visited him during the night? O'Brien would be on night duty.
6203. Was there always an attendant waiting on him? Yes; there were two attendants, one by day and one by night. Sometimes he would have as many as three attendants in the course of the day. From May to October, 1893, he had one attendant in the morning, one in the afternoon, and one at night.
6204. Are you perfectly certain on this point? Yes.
6205. Did you accompany Case No. 51 to Bayview House? Yes.
6206. Did he die there? Yes, about four months after.
6207. Was he suffering from epilepsy? Yes.
6208. Where did he die in the institution? I do not know; I was not there then. We took him there as he was a friend of mine and my wife.
6209. Do you remember an attendant named Robinson? Yes.
6210. Was he discharged in 1890? Yes.
6211. Did he visit you while you were residing at Kogarah? Yes. He came and asked me if I knew where the wife of Case No. 51 lived, as he wanted to see her. He added that there was some examination going on about Bayview House, and I came to the conclusion that he wanted to get hold of Mrs. \* \* \* with a view of obtaining evidence to give before the Commission. I said to him, "It is not worth your while to make any false statement." I did not give him any further information.
6212. Did he say that the information that he could give about a *post-mortem* examination would be damaging to Bayview House? He said something of that kind. I did not take notice of what he said. The conversation took place in the chemist's shop at Kogarah, and it was of such little interest to me that I went through the shop into the dining-room and left him standing there.
6213. Did he get any particulars in regard to complaints he intended to make? No. He said something about this *post-mortem*, and I think it was that it was made without the wife's permission.
6214. Were the patients always well treated at Bayview House? Undoubtedly.
6215. Was the food always good in quality? Yes.
6216. Was there always plenty of clothing for the patients? Yes.
6217. When the Government visitors came round were the patients got ready? No. We never knew when they were coming round. They would come right in without anybody knowing anything of it.
6218. Did the official visitors ask questions of you about the patients? Yes. 6219.

Mr. \* \* \* 6219. Did they ask you directly? Yes.

11 Dec., 1894. 6220. Did Dr. Vause accompany the visitors when they were making their inspection? Generally he did, but he was not always with them, and when he was not the official visitors would ask questions of the head attendants.

6221. Had the patients every opportunity of making complaints to the visitors if they had any cause? I was about eight or nine months a patient myself; I could have complained if I wished to, but there was no cause. While an inmate I received the best possible treatment, and under it I made a full recovery.

6222. *Dr. Garran.*] Were you ever in night attendance on Case No. 1? No, sir.

6223. Where did the night attendant sit while he was on duty when looking after Case No. 1? He generally sat in the dining-room within hearing distance of the isolation room.

6224. Had this attendant anything to do between the times he visited Case No. 1? I do not think so.

6225. Is it not possible that sometimes he might fall asleep and miss his visit? Of course it is possible, but I never knew it to happen.

6226. Was there a "tell-tale" clock to record all these visits and the times at which they were made? No, not then.

6227. Was the door locked after the patient was put into this room? Yes.

6228. How long after he was put in? Almost immediately.

6229. Did you remove the patient from this room in the morning? Yes, to give him his bath.

6230. Was he shivering when crossing the yard from the single room to the lavatory? No.

6231. Did he ever complain to you of being cold when taken out of the room? No.

6232. Did you always give him a warm bath? Yes, all the time I was there.

6233. Did he ever complain, on his way across the yard, that he did not want to go to his bath? No; not to me.

6234. Whose duty was it to scrub the floor of that room? Mine—part of the time I was there.

6235. Did you ever notice how long it took this room to dry? It all depended on the weather. On a fine day it would dry quickly; on a wet or muggy day it would take longer.

6236. When you scrubbed this room did it smell very strong? No.

6237. Did you ever notice a smell, stale and foul, when you put the patient in at night? No. If the room had not been swept I should soon have reported it to the Doctor.

6238. Did you ever so report it? No; I never had occasion.

6239. Were you able to get cocoa, tea, or other warm nourishment for the patients at night? Yes. There was a fire in the kitchen, and we could always get milk, cocoa, sugar, and so on.

6240. Was any ever given to Case No. 1? Yes, so the man in charge reported in the morning.

6241. Do you know an attendant named Mackenzie? Yes.

6242. If Mackenzie says the kitchen was locked up all night, and every night, and that there was no means of getting a warm drink, is that true? No; that is not true evidence.

6243. He also says that no one saw Case No. 1 after 10 o'clock at night until the next morning. He said he was sure about this;—is that true evidence or not? All I can say is it was Dr. Vause's particular order to the attendant to visit the patient every two hours.

6244. Did you ever undress the patient at night? Yes; would put on his singlet and pyjamas, and see that his bed-clothing was right.

6245. Mackenzie, in his evidence, says the patient was left in the room without night-clothes; that he saw nothing of the kind except on about half a dozen occasions;—is that true? If he did not see the clothes, and if he did not put them on, it was negligence on his part. The clothes were there, and could be obtained.

6246. He was next asked, "On the half-dozen occasions did he wear night-clothes?" Mackenzie replied: "He wore on these occasions a singlet, or small flannel shirt, which I left on of my own accord, for mere pity's sake, as he asked me to leave it on because he felt so cold." In answer to further questions he said: "I never supplied him with pyjamas. I am quite certain of that fact. He was put into that room quite naked." He was next asked, "Do you mean to say it was always so, except on exceptional occasions, when you took pity on him and left his singlet on him?" And he answered, "Yes, I do." I now ask you was anything of that sort done while you were there? No, never. Case No. 1 had pyjamas and woollen clothes.

6247. Do you know whether Case No. 1 was ever put in naked? No, certainly not.

6248. Did he ever complain to you of his treatment? No.

6249. Did he ever complain about being put to bed in this single room? No.

6250. Do you remember when he was sleeping in the little room upstairs? Yes.

6251. What degree of violence had he reached when he was removed from that? He would not sleep; he removed his bedstead; he put the night commode against the door; he tore his mattresses to pieces and threw the fibre and feathers over the door.

6252. Was that reported to Dr. Vause, and was it in consequence of this restlessness that he was removed? Yes.

6253. Would he get up and walk about and make a noise during the night? Yes.

6254. Were other people sleeping in an adjoining dormitory? Yes.

6255. Did he ever sleep there while you were there? No; he was in a private room off that dormitory.

6256. *Dr. Manning.*] Do you remember Case No. 6? Yes.

6257. Was he at Bayview House on both occasions while you were there? Yes.

6258. On the last occasion you were there had he become a very dirty patient? Yes; very dirty indeed.

6259. Was he passively dirty, leaky, and unable to go to the closet? Yes.

6260. How was this patient cared for? He would be given a warm bath the first thing every morning; then he was put in a chair and wheeled about. After breakfast he was removed from the chair and taken to the closet. He would be taken to the closet a second time at about 10 o'clock. He would be brought into dinner and taken again later on. Sometimes he was bathed twice a day when his bowels were very loose.

6261. It has been stated in evidence that in the case of this dirty patient, who could not help himself, he was bathed only once a week, every Saturday afternoon;—is that true? No. We had to bathe him when he required it. He had a bath once every day and sometimes twice, according to how he was.

6262. Were his clothes kept clean? Yes; he had plenty of clothes.

6263. Were his clothes occasionally wet with urine? Yes.

6264. On these occasions were they changed? Yes; his legs would have been sore if they had not been echanged.

6265. Evidence has been given to the effect that his trousers, although in a filthy condition, were put on him in the morning without anything having been done to them since the night before;—is that true evidence? No such thing occurred in my time.

6266. Have you seen any of the friends of Case No. 6 or Dr. Creed on visits to the institution? Yes; his wife came to see him occasionally. Dr. Creed saw him too. I have seen his wife two or three times at the institution, and I have taken him to see his wife in the reception-room.

6267. Where did Dr. Creed see him? He has seen him in the building, and he has seen him on the lawn.

6268. If Dr. Creed saw him on the lawn would he then have an opportunity of seeing the patient in his ordinary condition? Yes; it may have been that he had dirtied himself, and then Dr. Creed could see him in the condition that was of every-day occurrence.

6269. Where was the material and food for the use of patients at night generally kept? It was in the dining-room cupboard. There were always two plates of bread and butter, some cheese, milk, jam, and plenty of tea.

6270. Were all these things accessible to attendants on duty during the night? Yes.

6271. Speaking of Case No. 1, was he quieter during the day than in the night? He was, occasionally.

6272. What was the general rule in this respect? He was generally quieter during the day.

6273. Was he one of those cases in which a patient is more troublesome at night than during the day-time? Yes.

6274. Was he so bad that he could not be trusted to remain in bed in the dormitory in the daytime? He could not be trusted in bed at all during my time.

6275. What I mean is this: Supposing he was put in an associated dormitory during the daytime, and an attendant with him, would it be possible to do the same thing during the night? No; it is a fact that he could be placed in a dormitory in the daytime, but he could not sleep there at night.

6276. Can you tell us how often Dr. Vause made his rounds of the institution? Regularly, once a day, and in the latter part of my time it was about lunch-time that he made this round. Formerly, sometimes he made his round in the morning, and sometimes in the afternoon. He made his round always once a day, and sometimes twice.

6277. *Dr. Vause.*] What do you think was Robinson's object when he desired to see the wife of Case No. 51? I think it was a vindictive object. I cannot think that there was any other reason. During my time he said he was treated well. He had no complaint to make; but after he left he came to my shop and told me by inference, if not in actual words, that he intended to damage the place if he could.

6278. Do you think that apart from Case No. 1 annoying other patients that he was sufficiently excited to warrant his removal to the single room at night? Yes; and he was much quieter at night after he was removed.

6279. Do you think it was beneficial to him quite apart from annoying anyone else? Yes; he got more sleep in that single room. He was not disturbed by the patients or attendants; he did not disturb the patients as he would have done had he remained upstairs.

6280. *Dr. Manning.*] After Case No. 1 had been one or two nights in the single room was he tried again in the associated dormitory? Yes; we had him down one night, and then put him back again.

6281. For how many nights? For two nights upstairs, then he went down again for a night.

6282. Was he sent down again after that? I do not know; I left about that time.

[Witness withdrew.]

Jessie Urquhart sworn and examined:—

6283. *President.*] Are you connected with Bayview House as a nurse? Yes.

6284. Do you remember the date on which you were engaged? Yes; it was on the 16th of April, this year.

6285. Have you been engaged as a nurse all the time you have been there? Yes.

6286. Have you been a nurse only since you have been there? Yes.

6287. Are you employed on the Government side of the house? Yes.

6288. Are you, as a matter of fact, in charge of the Government patients just now? Yes.

6289. Have you had any experience prior to this in asylums of this kind? No; before going to Bayview I was a housemaid.

6290. When you were engaged did you sign a book containing your obligations in looking after the patients and the rules and regulations of the institution? Yes.

6291. Have any patients made any complaint to you about their treatment? No, not one of them.

6292. Have you seen, while at the institution, any patients cruelly treated? Yes.

6293. Which of them? One—Case No. 52.

6294. In what way was she ill-treated? She was washed with a broom.

6295. Who did this? A nurse named Maggie Macleod.

6296. Did you see her doing it? Yes.

6297. At about what time did this happen? I think it was about a month before she left.

6298. Was it done early in the morning? No, between 2 and 4 in the afternoon.

6299. Was she a dirty patient? She was not dirty just then, she was just having her bath.

6300. Was she dirty enough to require washing with a broom? No; but the nurse used the broom to wash the patient.

6301. Why did she do so on this occasion? I do not know.

6302. Was the broom used on Saturday? Yes.

6303. Did she use this broom to this one and not to any other patient? I cannot say.

6304. Did you see her use it? Yes.

6305. Did you speak to her about it? I did not like to speak to her, because she always snapped me up when I did.

6306. Did you complain to the matron about it? No.

Mr. \* \* \*

11 Dec., 1894.

Jessie  
Urquhart.  
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6307.

- Jessie Urquhart.  
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6307. Did you complain to the Doctor about it? No.
6308. Was that the only time on which you saw a patient ill-treated? No; I saw the same nurse using a scrubbing brush on Case No. 23.
6309. Was that on the same Saturday or a different Saturday? Yes; I spoke to her at the time about it, and she said there should be other brushes in the bath-room.
6310. Did you ever tell her that you would report her or had reported her to the matron? No.
6311. Did you see her at any other time doing anything of the kind to any other patient? No; these are the only two cases.
6312. Do you think she had any grudge against these particular patients that would make her do so? All I can say is that they were more difficult than other patients to wash.
6313. Do you mean that they were troublesome and fidgetty? Yes.
6314. Was Case No. 23 a very dirty patient? Yes.
6315. Did you go with Maggie Macleod to see a man named Gearey? Yes.
6316. How were you induced to do so? Margaret Macleod asked me to go.
6317. Was that last August in the evening? Yes.
6318. Did you find Gearey at home on that occasion? No; I did not see him. I saw his wife.
6319. Did you see anyone else at Gearey's house while you were there? Yes; a man named Alick Mackenzie came in.
6320. Did he seem to know Macleod? Yes; and from the conversation that took place I understood that they were cousins of some sort.
6321. Was there any conversation about Bayview Asylum on this occasion? Yes; Maggie Macleod told Mrs. Gearey things about the asylum and how the patients were treated there.
6322. Was anything at all said about Case No. 1? Yes. Mackenzie told Maggie Macleod that he was the cause of Case No. 1 being removed from Bayview House. He said that he gave certain information which led to the removal. We were there from 7 o'clock to a quarter to 9.
6323. Did Mackenzie speak about Case No. 17? Something was said about it. Maggie Macleod, I think, said that Case No. 17 was treated very badly, that she was not properly looked after, and that she knocked her head against the stove, and other matters of a similar character.
6324. Have you ever been on night-duty while at Bayview House? Yes; for one week.
6325. When were you put on night-duty? A few months after I was there.
6326. Prior to that did you attend the patients during the day? Yes; and then I went to bed at about 10 o'clock at night.
6327. Did any other nurse see the patients after you went to bed? Oh, yes, if it was necessary.
6328. Are those the only cases of ill-treatment that you have seen while you have been at the institution? Yes.
6329. On both occasions was the ill-treatment caused by Macleod? Yes.
6330. Are you quite sure about that? Yes.
6331. Have you ever seen any other nurse ill-treat patients there? Never.
6332. When you had that long conversation at Gearey's house did you say anything about the ill-treatment of patients? Maggie Macleod did the talking to Mrs. Gearey. I had not much to say.
6333. Did you even suggest that Maggie Macleod did anything? No.
6334. Did you go to Gearey's house after that? No.
6335. Did you have any communication with Gearey afterwards? No.
6336. When patients were put to bed at night had they everything necessary in the way of bedding and night-clothing? Yes.
6337. Did you ever remove the sheets from any of the beds? Yes; I have done so in the bottom dormitory.
6338. Why did you do so there? Because the patients were very dirty.
6339. Who gave you instructions to do that? The matron told me to do so on account of the patients being so dirty.
6340. Was the same practice followed in any other ward? No.
6341. How many beds were in that ward? Fourteen.
6342. All occupied? Yes.
6343. From how many of these fourteen beds did you take the sheets? About five.
6344. And were these five patients dirty in their habits, and was that the reason why you removed the sheets? Yes.
6345. Did you take night-duty in turns with other nurses? Yes.
6346. When on night-duty how many times do you go round to see the patients? Every hour.
6347. Is there a tell-tale clock to mark the times at which you make your visits? Yes; it marks the time every hour.
6348. Is there an ample supply of necessary food and other nourishment for patients if they require it during the night? Yes.
6349. Where are these supplies kept? In a cupboard in No. 1 dining-room.
6350. Is there plenty of milk, tea, coffee, and so on, and a fire at which these can be made warm? Yes.
6351. How long have the fire and these other materials been there? Always since I have been at the institution.
6352. Are you quite sure on this point? Yes.
6353. Has there not been some change made of late in this respect? I have not known any change made.
6354. With regard to the clothing of patients, have you observed lately that a change has taken place, and that large supplies of linen have been bought to make up into clothes for the patients, and that there has been an extra supply of sheets;—since the month of June last has there been an extra supply of materials brought in to be made up into garments, and has every person available been set to work to make these things up? I do not remember anything extra.
6355. But were extra supplies brought in? Yes; there has been a little extra brought in.
6356. What were the extra things;—we have had it in evidence that there was a short supply, and that three or four months ago a considerable quantity of material was purchased for the institution;—is that so? I do not remember anything in particular beyond there being a few extra supplies now and then.

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6357. *Dr. Garran.*] What was the number of the associated dormitory you had charge of? No. 3.
6358. Was that the same dormitory in which Maggie Macleod was engaged? No.
6359. Do you know whether Maggie Macleod took the sheets off the beds in her dormitory? Yes; I think she did.
6360. Did you take them off the beds in your dormitory? Yes; some of them.
6361. By whose orders? By the matron's.
6362. Did you take the sheets off all the beds? No; only off about five, and they were dirty patients.
6363. If Maggie Macleod says that she took the sheets off all the beds in the dormitories;—is that true? I do not think she took them off all the beds.
6364. Were the patients in your dormitory always supplied with night-dresses? Yes, always.
6365. Do you know whether the patients in Maggie Macleod's dormitory had night-dresses? Yes.
6366. In the course of her evidence she is asked if the patients slept in night-dresses, and she said, "No, they do not; they never had a night-dress in my time." Is that true? She could always get night-dresses if she went for them.
6367. Could she get a night-dress for every patient if she wanted it? Yes.
6368. Does she make a mistake if she says she had never any night-dresses? Yes; that is not correct. I could always get plenty of night-dresses when I wanted them.
6369. Did all the patients have sufficient night coverings? Yes.
6370. Did they ever complain of being cold? No; not to me.
6371. The witness, Maggie Macleod, was asked with what the patients covered themselves, and she replied, "A small blanket if there is one, but very often there was only a bit of one, and they covered themselves with anything they could get hold of." Was that the case in your ward? No.
6372. If Maggie Macleod had wanted to get more clothing for night use could she have done it equally as well as you? Yes.
6373. *Mr. McGowan.*] Were you engaged as a nurse at Bayview Asylum before the facts about Case No. 1 became public? Yes.
6374. Why did you go with Maggie Macleod to see Gearey? Maggie Macleod asked me to accompany her.
6375. Did she tell you why she was going to see Gearey? No.
6376. Did you ever see Gearey at all? No.
6377. Were you surprised when you got to Gearey's house and heard what Maggie Macleod said to Mrs. Gearey about the goings on at Bayview Asylum? Yes.
6378. Did you remonstrate with her about her untruthfulness at this time? No.
6379. Did you go back to the asylum with her? Yes.
6380. Did you report the circumstances connected with your visit to Mrs. Gilchrist? Yes.
6381. Previous to the 20th of May, when Case No. 1 was removed from Bayview House to Callan Park, was there any night-attendant on duty on the female side? I cannot remember.
6382. I mean a night-attendant on duty like there is now—a nurse to go round every hour? I cannot say when that practice began.
6383. Do you know whether it began since or before that patient's time in the institution? I think it has been since.
6384. Have there been considerable alterations made in the single rooms since then—such, for instance, as putting fresh windows in? Yes.
6385. Has the gas been laid on? Yes.
6386. Previous to that time did you ever have any notice when Dr. Manning or the visiting doctors came to the institution? Sometimes we had about 10 minutes' notice, and at others we never knew they were there until we saw them.
6387. How would you get notice of their arrival? One of the nurses would come through and tell us.
6388. Supposing you had 10 minutes' notice would there be any alterations made in the appearance of the patients by changing their dresses, and so on? Oh, we used to put clean things on some of them.
6389. Did you ever know of Government clothes being placed on private patients? No.
6390. Do you know Case No. 45? Yes.
6391. Is she a private patient? Yes, and she had her own clothes too. She never had Government clothes on.
6392. We have had it in evidence that since the 20th of May last there has been an unusual quantity of wearing apparel, sheets, and blankets, purchased for the patients, and that the nurses were kept pretty busy during the latter end of May and the commencement of June in making up these things. Is that so? Yes, there have been a few new things purchased.
6393. How many patients, on the female side, were put in the single cells at night during the month before Case No. 1 became prominent? I cannot tell you exactly, but there were nearly always one or two cells empty.
6394. Were nearly all of them filled at night? Yes.
6395. Did you see them filled every night for a whole week at any time during the month of the removal of Case No. 1? Yes.
6396. In some of these cases were the clothes taken away from these patients by the nurses when they put them in the cells;—was this done in many cases? They always had night-gowns on.
6397. Was there ever any patient shut in one of these single cells without a night-dress? No.
6398. Not even Case No. 15? No.
6399. Have you known her put into these cells without a night-gown? No, I never knew of it.
6400. Are you quite sure of this? Yes, but I never put her in the cell.
6401. Did you ever know of Case No. 35 being put in the cell without clothes? No.
6402. Nor Case No. 53? No.
6403. Nor Case No. 32? No.
6404. Nor Case No. 54? No.
6405. Nor Case No. 23? No.
6406. Do you mean to say that you never knew that either one or all of these persons were placed in the single cells at night without clothes? I know I never placed them in, and I did not know of it.
6407. Is it possible that Case No. 15 could be put in the single cells without your knowing it? Yes.

- Jessie Urquhart.  
11 Dec., 1894.
6408. Previous to the 20th of May in the event of your wanting any nourishment for a patient during the night-time were you able to get it? Yes, always.
6409. Do you consider that the asylum has been carried on satisfactorily from the very first month you were there? Yes.
6410. Has everything been done for the patients that could be done? Yes.
6411. *President.*] Do you have anything to do with putting the patients in these cells at night? No.
6412. Have you had any opportunities of observing when and how they are put in at night? Yes.
6413. Have you ever seen a patient put in the cells naked at night? No.
6414. Now, about this clothing, do you remember when Case No. 1 was taken away from the institution? Yes.
6415. Do you remember, shortly after he had gone, having extra work to do in making bed-clothes and underlinen for patients? No, nothing particularly extra. We always have plenty of sewing to do.
6416. But at this particular time was it necessary to bring in extra hands to assist you in the work. No, it was always the same.
6417. Was there anyone else brought in to assist you at this particular time? No.
6418. Are you quite sure about that? Yes.
6419. *Dr. Vause.*] Have the people in the sewing-room been just as busy since Juno as they were before? Yes.
6420. Has the work always been about the same? Yes.
6421. During the time to which I refer, have you occasionally had the assistance of a sewing-woman? Yes.
6422. Is the coachman's daughter a dressmaker and has she occasionally assisted you? Yes.
6423. *President.*] Has anyone else been brought in to assist? Since the coachman's daughter has left there has been another woman.
6424. *Dr. Vause.*] Did the coachman's daughter also assist in making dresses for private patients and sometimes for the nurses? Yes.
6425. Was there sufficient covering left on the beds, after you removed the sheets from the beds, used by those five patients to whom you have referred? Yes.
6426. Do you know Case No. 16? Yes.
6427. Does she persistently refuse to sleep in sheets? Yes; she always objected to sleep in sheets.

[Witness withdrew.]

FRIDAY, 14 DECEMBER, 1894.

[The Commission met in the Board Room, Chief Secretary's Office, at 11 a.m.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
Esq., M.D., INSPECTOR-GENERAL OF THE  
INSANE.

ANDREW GARRAN, Esq., LL.D.  
JAMES SINCLAIR TAYLOR MCGOWEN,  
Esq., M.L.A.

Dr. Vause was in attendance to hear evidence and examine witnesses on his own behalf.

Joseph Lievesley Beeston, Esq., L.R.C.P., L.R.C.S., sworn and examined:—

- Dr. J. L. Beeston.  
14 Dec., 1894.
6428. *President.*] Have you had opportunities of making yourself acquainted with the internal working and management of Bayview House? Yes.
6429. At what period did you have this opportunity of becoming acquainted with the place? From the 18th of July, 1889, and from then till later on.
6430. While there did you have full opportunity of seeing the general working of the institution? Yes.
6431. Do you know, judging from comparison with other institutions, that Bayview House was conducted satisfactorily? Yes. I have had some experience with other institutions of this kind, and Bayview House is managed on the same lines as other large institutions.
6432. Which other institutions have you seen to enable you to make this comparison? The one at Newcastle, in this Colony, and the Richmond Workhouse at Dublin.
6433. Coming to the question of diet, is the food as well prepared at Bayview House as it is at other places you know? Yes, it is excellently-well prepared.
6434. Is it good in quality? Yes.
6435. Was the clothing of the patients always sufficient? Quite sufficient.
6436. Do you know if there are certain wards on the female side at Bayview House set apart for isolating patients? I do not doubt that there are, but I know the male side of the institution best.
6437. Do you remember a certain structure on the male side in which there are two rooms that are used for isolating patients? Yes, I do.
6438. Have you been in them? Yes; I have been in both.
6439. Is the ventilation good in these rooms? Yes.
6440. Can you say whether patients taken out of these rooms early in the morning suffer from cold to such an extent that they can be seen shivering? No. I remember one patient particularly who preferred to sleep there rather than anywhere else.
6441. Are the patients put into this isolation building always supplied with a sufficient amount of clothing? Yes; they get canvas rugs, a blanket, and the ordinary bedding used in these cases.
6442. Do you think the clothing they get is amply sufficient? Yes.
6443. Is the ventilation of the room sufficient? Yes; it is ventilated from the top by means of holes in the ceiling; there is a window, but I am not sure whether there is ventilation about the floor.
6444. Was there air space below the floor? Yes; I think there was.
6445. Do you mean that there was a proper mode of allowing the air to escape? Yes.
6446. Were these wards always kept clean? Absolutely clean, as far as I know.

6447.

Dr.  
J. L. Beeston.  
14 Dec., 1894.

6447. Did you ever notice any old and stale urinous smell about the room? I ascertained that these rooms were kept as clean as possible, and they were always scrubbed out as soon as the patients left them in the morning.
6448. During your visits to the institution did you have every opportunity of seeing the patients frequently? Yes.
6449. I suppose you would also see Dr. Vause frequently? Yes.
6450. Did he always appear to be attentive and kindly to his patients? Yes.
6451. We have heard some statement with regard to Dr. Vause's sobriety;—did you ever see him under the influence of liquor? He always conducted himself well; absolutely so. I never saw anything that would lead me to believe he could be charged with such an offence.
6452. Do you think there was sufficient variety in the food? Yes.
6453. Do you think there was always an ample supply of food? Judging from appearances there was as much as anybody wished to eat.
6454. In your opinion was there an adequate supply of nursing attendance at night? Yes; attendants slept in the wards with the patients.
6455. Was there any night round made by the Medical Superintendent? Dr. Vause always went round at night.
6456. Have you seen him yourself? Yes; he used to make his round just before 10 o'clock.
6457. Did you ever hear of the ill-treatment of patients at Bayview House? I heard something about Case No. 1. I saw an account of it in the newspapers, but I have no personal knowledge of it.
6458. When you saw these statements in the public press, and knowing Dr. Vause and something of the management of the institution, did you believe what you read? I did not. I thought it was a mere newspaper scandal, or the result of a conspiracy amongst those who wished to injure Dr. Vause and his institution.
6459. Had you ample opportunities of observing what improvements were made from time to time in that institution? Yes. Constantly improvements were going on. For instance, a billiard-room was built, the gardens were laid out, and there appeared to be a desire on the part of Dr. Vause to do all he could for the comfort of the patients.
6460. Did Dr. Vause do everything he could to make the patients as comfortable and happy as they could be in their unfortunate circumstances? Yes. Their feeding was right, and provision was made for their amusement. Cricket bats and other materials were bought, and they had the billiard-room, and all was done that could be done in that direction.
6461. *Dr. Garran.*] Have you, as a medical practitioner, sent patients to lunatic asylums? Yes; I have sent two to Dr. Vause at Cook's River.
6462. In regard to these patients, have you every reason to believe that they were properly attended to? From the reports of their friends I am satisfied that there is no fault to find. On the other hand the first patient I sent there was satisfied and pleased that she was sent.
6463. Did the two patients you sent recover from their mental malady? One was cured and the other died.
6464. Was it surprising to you that the one died? No; it was the result of bodily disease—nothing mental at all.
6465. Have you had an opportunity of studying the practice followed in cases of general paralysis in the acute mania form? Yes.
6466. Do you think it advisable that a paralytic in the acute stage should be placed in an isolation ward? Yes, most decidedly. There is no other form of treatment for cases of this kind. It is best for the patient and everyone else that he should be placed in seclusion.
6467. Do you regard these isolation wards as a necessary equipment to a properly appointed lunatic asylum? Yes; an asylum could not be worked without them.
6468. Do you think that the isolation wards at Bayview House were used without necessity? No; except in cases where patients themselves asked, and were anxious to sleep there instead of in their own ward.
6469. In the course of this inquiry one point, a medical question of great importance, has been forced upon my mind. It is, that in the treatment of these patients in isolation wards the first and chief requisite is sleep. From your experience do you support that view? Yes, most decidedly.
6470. Is that the established opinion of the best medical authorities? Yes.
6471. Is it desirable in the highest degree to avoid irritation of the patient? Yes.
6472. Either by interference in watching or restraint? Yes.
6473. Do you also approve of giving these particular patients narcotics occasionally to induce sleep? Yes.
6474. Supposing you give one of these patients a narcotic, that this patient is destructive, that he tears up his own clothes and the bed-clothing;—is it, in your opinion, better for attendants to go in and force the patient to wear a new suit of clothes, or is it better to leave him alone? I should certainly leave him alone, for it would be absolutely useless to attempt to force covering on him.
6475. Is there any risk of a patient in a naked condition becoming chilled, and as a consequence receiving harm? I do not think there is so much risk of doing the patient harm by leaving him alone, as there would be in attempting to force clothing on him.
6476. Do you think that the forcing of clothing on him, or any good that you might get by doing it, would not be compensated by the harm that would be done in irritating the patient? No, it would not.
6477. Do you base your opinion in this respect on your personal experience, and on the opinion of the best medical authorities? Yes; that is the result of my experience and my reading.
6478. Supposing the patient is exceptionally destructive and dirty, messes the room, his garments, his bedding, and his person, would you go in and force that man to be clean, or would you leave him alone? I would leave him alone in the hope he would get a good night's rest. It would be no easy matter to clean a patient of this kind in the night time. You would do more harm by irritating him than you would gain good by making him clean. These patients who resort to these dirty practices imagine, while engaged that way, that they are doing something altogether different. Some imagine, for instance, that they are mining for gold when they are actually plastering themselves with their own dirt. By taking it  
away

- Dr. away they will fancy they were being robbed, and would resist interference. In cases of this kind one must always be guided by what he thinks would be best for the patient. When a man reaches the filthy state in paralysis his whole individuality is lost; he neither knows nor feels what he is doing.
- J. L. Beeston, 6479. Do you think he is unconscious of the fact that he is putting his faces on his own person? Yes.
- 14 Dec., 1894. 6480. And do you think it is better to leave him alone until the following morning? Yes; to interfere with him would mean a constant source of irritation, and only make him mentally worse.
6481. If you had an asylum under your own management would you keep attendants to wait on patients for this purpose during the night-time? No; I should instruct them to see them at certain hours.
6482. Do you know whether these patients sleep better earlier or later in the night? I cannot say very decidedly; but, as a rule, I think they go off to sleep as soon as they go into the room and wake up early.
6483. Do you think it is a good thing to throw a full quantity of light into these rooms or to keep them dark? I think it better to keep the rooms dark. The patients sleep better then. If there were a light the patients would get up. I would keep them as dark as possible.
6484. Would you condemn a ward because of there being only one window in it? No; I think these isolation wards should be kept dark to suit the purposes for which they are intended.
6485. *Mr. McGowen.*] In the case of patients in the isolation wards do you believe you should have them under observation during the whole of the night? They should be seen at certain intervals, and there are observation holes in the doors for this purpose.
6486. How could you see inside these rooms if they were dark? By opening the door and looking in.
6487. How often do you think an attendant should look in to see if the patients were alright? Every three or four hours. If you go often you would disturb them.
6488. Have you seen any of the Government asylums? Yes, the one in Newcastle.
6489. Do you know whether in the Government asylums there is a sort of grating in the bottom of the door to which an attendant may place his lantern and thus throw the light into the room, and then look in through the observation hole to see the patient? I do not know anything about that.
6490. Do you consider it necessary that patients should be visited every hour;—do you know that this is done in some of the Government asylums? I do not know, but I think once in every three hours is quite sufficient.
6491. Would you put a patient of this description in one of the single rooms at night and leave him there till the morning without being seen? I would certainly have him looked at every three or four hours.
6492. Supposing you took every article of clothing and bedding out of the room, so that it would be impossible for patients to injure themselves with these things;—do you not think those patients should be under supervision throughout the night? They should be seen as I say. I do not think that patients would run against the walls or hurt themselves by tumbling about the floor if every other article were taken away to prevent them from hurting themselves.
6493. Supposing we have it in evidence that a patient broke his or her arm in one of these cells during the night, do you think it possible that a limb could be broken? Yes, it is possible.
6494. Would it not therefore be wiser to keep them constantly under supervision? The liability to accidents of this kind is so small that I do not think constant supervision is necessary.
6495. Are you satisfied that patients suffering from this form of insanity are not susceptible to cold? They are not so susceptible as ordinary patients are. The man in this state really has no sense, and is unable to recognise a feeling of cold.
6496. Do you think he feels hunger? Yes; and he eats mechanically and wolfs his food.
6497. Would a patient put in a cold bath feel the difference between it and a warm one? Yes, I daresay he could tell the difference; but he would not feel the cold like you and I would.
6498. *Dr. Vause.*] Would you regulate the visiting of patients by the condition of the patients? Yes, that is what I meant to convey.
6499. Would you visit during the night-time strong healthy patients? No.
6500. Would you rouse any patient out of his or her sleep? No, certainly not.

[Witness withdrew.]

Mr. \* \* \* \* sworn and examined:—

- Mr. \* \* \* \* 6501. *President.*] Where do you live, Mr. \* \* \* \*? I am a farmer, and reside at \* \* \* \*.
- 14 Dec., 1894. 6502. Had you a daughter named Case No. 12 at one time an inmate of Bayview Asylum? Yes.
6503. When was she admitted? About the 8th March this year.
6504. From what was she suffering that you were induced to have her removed to Bayview Asylum? She seemed to have no control over herself.
6505. Was she destructive in her habits? No, not exactly that. She tried to be, I think, once.
6506. Was she very depressed in her manner? Yes, she became very low in her spirits.
6507. Did you call in Dr. Cortis to see her? Yes.
6508. Did he recommend her removal to Bayview Asylum? No, not at first.
6509. What did he recommend? He wanted me to put her in the hospital at \* \* \* \*, and to get a nurse to look after her. I did not know what to do at the time, so I communicated with the parish priest, and in a letter he advised me not to have my daughter removed from my home until he came down and saw her. He saw her, and advised me to put my daughter in Bayview Asylum. I took his advice, believing that the change of air would do her good, and I placed her under the care of Dr. Vause.
6510. Did you visit her frequently? Yes.
6511. Were you satisfied that she was made comfortable? Yes. I got all sorts of civility from the doctor. I visited her exactly one month after putting her in. That was the first time I saw her, the doctor having told me I could see her in a month from the day of her admission.
6512. When did you make your next visit? I think it was early in June.
6513. Were you then told that she was placed in an isolation ward to sleep? No; I was not told that in June.
6514. Were you told that she had been put into a single room? No, I thought she was to be removed to No. 1. That was the last time I visited her before bringing her away in July.

6515.

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6515. Had she by this time improved in health? Oh, yes; she was very much better.
6516. Altogether, then, was she in the institution four months and three days? Yes; that was the time.
6517. When you took her out did she appear to be better, physically and mentally, than she was when she was admitted? Yes; very much so.
6518. Was she, in fact, quite right again? No; she was not quite right. She seemed to be very much depressed when she came home on account of where we had put her during her illness. She seemed to be greatly troubled at having been at an asylum.
6519. Did you hear anything about Case No. 1? Yes; and as soon as I did I went to Dr. Manning with a view of having my daughter removed from the institution.
6520. Did you hear about Case No. 1 through certain reports appearing in the newspapers? Yes; my family, as soon as they read these reports, were very much shocked, and urged upon me to remove my daughter, but I did not remove her for fully another month notwithstanding these reports. After making some enquiries, I was so satisfied that she was being well treated that I left her where she was. After making personal investigation and inspection, I did not place much credence in these reports.
6521. As a matter of fact, however, did these reports, when you first saw them, cause you and your family great distress? Yes; very great distress indeed.
6522. Did your daughter ever make any complaints to you while at the institution beyond expressing a desire to go home? No; almost every time I visited her she seemed to be very excitable.
6523. Did she ever say she was not properly treated? No; she always used to say, "Oh, father, take me out of this dreadful place, for there are some dreadful people here." That was usually the burden of her complaint.
6524. How is your daughter now? She is as well as ever she was.
6525. Does she ever make any reflection about her stay at the asylum? She does a little now and then.
6526. What does she say? She complains that she was put down among the Government patients to sleep, and she does not like that idea at all.
6527. Does she ever say that she was put in a single room to sleep? I think she says that she was put in a single room one night.
6528. Has she had any special medical treatment since she left Bayview? She has taken what Dr. Vause ordered in the way of a tonic and sleeping draughts?
6529. On the whole, are you perfectly satisfied with Dr. Vause's treatment of this case? Yes.
6530. When this complaint was made to you, by your daughter, do you think she was under some little hallucination? Yes, certainly.
6531. Are you aware that it is a common desire with these patients to get away from the institution in which they are placed? Yes; I suppose it is so.
6532. Have you personally any complaint whatever to make against the institution? No. At any time I went there I always met with the greatest civility from Dr. Vause and anyone else I saw there.
6533. *Mr. McGowan.*] Were you asked to come and give evidence before this Commission? Not directly asked, but I had a letter from Mrs. Gilchrist.
6534. Do you say that your daughter was four months in the institution, and that you removed her because of the publicity given to Case No. 1? I did not remove her. The statement in the papers caused some excitement in my family, who wished me to remove her, but I did not remove her, after satisfying myself by making personal enquiries.
6535. Had you any suspicion that your daughter was not being properly treated after you saw these statements about Case No. 1? At that time we could not tell. You can easily understand what people in the bush might think when they saw a statement like that concerning Case No. 1.
6536. Did you ever ask to see the sleeping apartment which was said to have been used by your daughter? I think two or three days after she was put in Mrs. Gilchrist took me round and showed me the room she slept in.
6537. Has your daughter told you anything which leads you to believe the room you were shown is not the one she used? Yes; she tells me that she never slept in that room that was shown to me.
6538. Does she make any other complaint—such, for instance, that she was denuded of her clothing, and put to sleep in a single room? No; she says that for three weeks she was in the Government Department, but always had bed-clothes.
6539. Did she tell you that she was placed in the single room and left in a state of nakedness? No, never.
6540. Did she ever complain about drugs having been administered to her? Yes; she complained that they had given her something which made her wheel round and fall.
6541. Did she say she refused to take them? She said the nurse told her that they were not good for her.
6542. Who was the nurse who told her this? Nurse Perrin, I think.
6543. When you put your daughter in there was there some suggestion made that another daughter should come too? No; I think I suggested that the sister should come down, but the doctor said he thought that would do more harm than good.
6544. Did you leave any money in the hands of any of the nurses to purchase things for your daughter? No; I got the bills for everything. I asked Mrs. Gilchrist to bring to me the nurse who would look after my daughter, as I wished to make her a present so that she would look well after the patient. Mrs. Gilchrist replied that no such thing was allowed there.
6545. After you got your daughter home did she continue to make good progress, or was she taken ill again? Well, she used to cry sometimes for hours without stopping.
6546. Did she have fits of melancholia? Yes.
6547. Did you write to Dr. Vause again concerning the state of your daughter's health? Yes, regularly.
6548. Did you ask his advice as Medical Superintendent of the institution? Yes.
6549. Did he send you any prescription? Yes.
6550. Have you got that prescription? Yes; here it is. [*Produced.*]

Rx Sp. Chlor.  
Tr. Opii.  
Eqre. Zingiberis aa 5 grs.  
Aq. ad. ʒ iii.

Sig.—One-third part three times a day.  
.21/7/94. A.V.J.

6551. When you got that prescription did you have it immediately made up? No.

6552.

- Mr. \* \* \* 6552. Why not? I took the prescription to Dr. Cortis, and he advised me not to get it made up.  
 6553. Did Dr. Cortis give you any reason why? No.  
 14 Dec., 1894. 6554. Besides yourself, did anyone else visit your daughter while she was at Bayview House? Yes; Dr. Bowker, of Sydney, did. He is a friend of mine and my family, and he went out to see her on one occasion.  
 6555. Was he satisfied with your daughter's treatment? I think he thought she should not have been there, and that she was right enough to come out.  
 6556. After having heard the various complaints from your daughter since she has recovered, are you still satisfied with the treatment she received at Bayview House? Yes; it would be very hard for me to come to any other conclusion, or to say anything in this way, because my daughter may be wrong in her statements to me. I know that when she was there she was not capable of looking after herself, and I know that now she is as well as ever she was.  
 6557. *President.*] Is she quite well? Yes; there is no doubt about that. She is as right as ever she was.  
 6558. *Mr. McGowan.*] Are you satisfied that the room she occupied was the room shown to you by Mrs. Gilchrist? She says so. I do not know. I cannot tell whether my daughter is telling me the truth, nor whether she actually remembers what happened while she was there.  
 6559. *Dr. Manning.*] Do you say that when you took your daughter home you followed Dr. Vause's instructions as regards a tonic and sleeping draught? Yes.  
 6560. Have you the prescription for these? No; Dr. Cortis has it.  
 6561. Did he make them up? Yes.  
 6562. Did you give a sleeping draught to your daughter every day? Yes; for three or four weeks.  
 6563. Did Dr. Cortis think that this was necessary? Yes; but he always told me to knock them off as soon as possible, as sleeping draughts are injurious.  
 6564. But did you find it absolutely necessary to continue the sleeping draughts for several weeks? Yes; she could never get any sleep without them.  
 6565. *President.*] When you took this prescription to Dr. Cortis and asked him to make it up, did he say he thought it was not necessary? He said, "If you take my advice, you will not give it to her," and I took his advice.  
 6566. *Dr. Vause.*] Did you sympathise with your daughter in her wish to return home? Yes, most certainly. She was a girl very fond of her home, and had never been away from it before.  
 6567. Did your daughter recover under my treatment? She is certainly recovered, and yours is the only treatment she used.

[Witness withdrew.]

Mrs. Annie Gilchrist sworn and examined:—

- Mrs. A. Gilchrist.  
 14 Dec., 1894. 6568. *President.*] Are you lady superintendent at Bayview House at the present time? Yes.  
 6569. How long have you occupied that position? Since the 1st of January of this year.  
 6570. What is the exact nature of your duties? I superintend the housekeeping, all the domestic arrangements, the catering, and the diets; and I also inspect the kitchen.  
 6571. Do you have to deal with the clothing? Yes.  
 6572. Are you responsible for the cooking? Yes.  
 6573. Do you give the necessary orders for bread, vegetables, fruit, and so on? Yes.  
 6574. Do you act on your own judgment in regard to these matters? Yes, in all ordinary matters, such as housekeeping duties; but if there is any special reason to do so I always refer to Dr. Vause.  
 6575. Does he make a periodical inspection of your accounts? Yes. I do not keep the housekeeping accounts; they are kept in connection with my purchases, and submitted to the Medical Superintendent.  
 6576. Do you make any regular rounds of the institution? Not regularly; but I go over the whole place, both amongst the private patients and the Government patients.  
 6577. Do you make a general inspection of the whole of the buildings in the different departments? Yes.  
 6578. Are the nurses in the different wards regulated in their work by you? No; by the matron.  
 6579. By the matron entirely? Yes.  
 6580. Are your duties, then, purely of a housekeeping character? Yes.  
 6581. We have it in evidence that the food is badly cooked, and that it is of inferior quality;—is that so? I have never noticed anything of the kind; the food is always good. I inspect everything, and from my experience there has always been an ample supply of good food; in fact there is more than an ample supply.  
 6582. If there is more than an ample supply what is done with the food left over from the table? It is disposed of in various ways. It is returned to the kitchen, and some of it is put on one side for future use, and the other is sent to the refuse box.  
 6583. When you give orders for extra clothing are those orders always attended to? Yes.  
 6584. Are they entered on a list and submitted to the Medical Superintendent? Yes.  
 6585. Are the supplies obtained as soon as possible afterwards? Yes.  
 6586. Do you remember in the month of June or July last an extra quantity of material being purchased to make up into night-clothing, sheets, and so on? No; not in June or July.  
 6587. Was there an extra supply purchased in May? At the beginning of winter there is always an extra supply of warm clothing purchased.  
 6588. Is that the usual procedure at the change of the seasons? Yes.  
 6589. Independent of that extra supply of warm clothing purchased at the beginning of winter is there always an ample supply of clothes for the use of the patients? Yes, always.  
 6590. Where do you keep the stock? In the store-room, and it is given out from there to the matron.  
 6591. Do you know of any complaint having been made by the matron or nurses of an inadequate supply of clothing? I am quite sure there has not been such complaint during my experience at Bayview House.  
 6592. Do you remember any recommendation made by you regarding clothing which has been refused by Dr. Vause? I have never been refused clothes, or any necessary articles of food or wearing apparel while I have been there.  
 6593. Have you had any experience in a similar establishment elsewhere? No.

6594.

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6594. When going amongst the patients have you noticed them to be imperfectly clothed? No.
6595. Have you seen any of them dirty? No; I have never seen patients dirty.
6596. Has there been a deficiency of stockings or have you seen stockings without feet on the patients? No; never.
6597. It has been given to us in evidence that such is the case;—is such evidence reliable? I should say it is untrue.
6598. Have you any knowledge about the sick-nursing arrangement on the female side? Yes; I have.
6599. Do you think the matron would have more knowledge on this subject than you? Perhaps she would, of detail; but still I know pretty well what is going on there.
6600. Did you ever hear of a nurse treating a patient cruelly? No.
6601. Do you ever hear of the use of a scrubbing-brush or broom on a patient? I never heard of any such thing.
6602. Have you received any complaint in this direction? No.
6603. Did you ever hear any gossip in the institution to that effect? No.
6604. Are you quite sure that everything in connection with the housekeeping arrangements is satisfactorily performed? Yes, certainly, as far as my experience goes.
6605. Who issues the stores? I do.
6606. Who issues the stores for night use? I issue all the stores used in the institution.
6607. Supposing there is a dormitory with twelve or fourteen beds, and that a nurse from that dormitory has not at her disposal sufficient bedding, owing to dirty patients, what does she do? She makes a request for more.
6608. Is she able to get what she asks for? Yes; all the nurses get what they require.
6609. Supposing this nurse in a dormitory of fourteen beds asks you for nine sets of sheets instead of fourteen, on account of dirty patients, is that any matter for surprise? No.
6610. A nurse in one of the associated dormitories containing fourteen beds says that she removed the sheets at night from some of the beds because of the dirty habits of the patients;—is that so? Yes. I know that was done without the permission and knowledge of the authorities. It was done in one ward.
6611. Which ward was that? The bottom ward.
6612. Who was the nurse in charge of that ward at the time? Maggie Macleod.
6613. Did this come to your personal knowledge? Yes.
6614. Did you speak to the Medical Superintendent about it? I spoke to the matron, and the practice was put a stop to at once.
6615. Did it occur on many occasions? Not that I know of.
6616. Do you give out the supplies in large quantities, and then does the matron distribute them? Yes.
6617. Did this fact of removing the sheets come under your own observation? No; I spoke to the matron about it. It was done without Dr. Vause's knowledge. It is the only case in which it was done, and I attribute it to the nurse wishing to save herself a little trouble.
6618. Have you known of any other instance of a similar kind? No.
6619. As far as you know, was there an ample supply of linen and bed-clothes for the different departments? The matron could obtain it when required.
6620. Who was matron at the time Maggie Macleod removed these sheets? Nurse Jones, who is since deceased, was matron at that time.
6621. *Dr. Garran.*] Did you ever hear of any other nurse taking the bed-clothes off at night? No.
6622. Have you any idea whether Maggie Macleod did it on her own accord? I believe she did it on her own accord, for, as far as I know, she received no instructions.
6623. Do you think it could take place without the matron being aware of it? I fully believe it could.
6624. For how many weeks did this practice go on? I really cannot say, but it was put a stop to as soon as it was observed.
6625. Do you feel reasonably sure that she was not told to do it? Yes.
6626. Did Maggie Macleod ever complain to you about the way in which things were managed in the institution? She did not complain. The only expression I heard her use in regard to the patients was that she thought that they were really too well treated. I have more than once heard her make that statement.
6627. In answer to Mr. McGowen, who asked her a question about her statement that they used to make up the beds, change the patients' clothing, and make the best of everything, she said she complained to Mrs. Gilchrist about this state of things, as she did not approve of such proceedings;—what have you to say to that? I say that it is utterly false; that she did not do so.
6628. I want to be particular about that supposed reclothing of patients when the visiting doctors came;—did you ever see new dresses put over old? No.
6629. Do you know whether it was ever done? No, not to my knowledge.
6630. Could the nurses go to the cupboard whenever clothing was wanted? In some particular case they might, but that was not the general way the clothing was obtained.
6631. Does the clothing given out come under your notice? Yes.
6632. Maggie Macleod said in her evidence that she had spoken about the state of the clothing and that she complained about the patients' clothing and food, which she described as shameful;—did she complain to you? She never complained to me.
6633. She was asked if the food was of fair quality, and she said it was as common as common could be; she also said that the meat was no good, that it was badly cooked;—is there any truth in these statements? They are not true.
6634. She further stated that they used to have nothing but rough chops or a sort of stew made mainly from necks of mutton; is that a true statement? We have chops occasionally, steaks occasionally, sometimes stew, and sometimes cold meat. This food is always of good quality.
6635. Does the witness Macleod then give a true statement of the case? No; it is not true.
6636. She was asked if the patients were supplied with bread and butter for their evening meal, and she replied that there was none left for the patients to have,—is that true? It is not true.
6637. She was asked if there was any change made so that the patients might have roast meat one day and boiled meat the next; she replied, "No; we mainly had boiled necks of mutton. I never saw any other joint there";—is that true? It is quite false.
6638. Do you remember Case No. 11? Yes.

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6639. Macleod says, in reference to this patient, that her daughter complained about the state of her underclothing; that her daughter gave her quite a trossau, but in a little while she had not got a good thing left; and that she had no underclothing fit to wear;—is that true? No; it is not true.
6640. She was asked whether the ordinary dress supplied to the patients was clean and suitable clothing, and in reply Macleod said, "Really and honestly, it was not. You must know there are some dirty persons, and if we took the soiled clothes off the patients there was nothing to put on them, and they would have to go about naked";—is that true? No.
6641. She was then asked if there was an inadequate supply of clothing; she replied, "Quite so"—is that true? No.
6642. She was then asked if she was referring to Government patients. She replied, "I refer to both. We used to change the clothes about. If a Government patient had no clothes, we would take them from the private patients and put them on the Government patients";—did you ever know of such a thing being done? Certainly not.
6643. Macleod was next asked if there was a room in which the surplus clothing of patients was kept; she replied, "There was supposed to be one, but there were only a few common print gowns in it, and they were mainly kept for show";—is that true? It is not true.
6644. She was asked if she changed the clothes of dirty patients when necessary. She said, "No; we could not, for they had no other clothes to put on";—is that true? No; it is not.
6645. She also stated that the body of Case No. 11 was frequently covered with vermin, that she was much neglected, that she was exposed to the rain;—are these things true? No.
6646. She was asked if a silk dress was put on Case No. 11 to cover her dirty clothes when her daughter visited her;—is that true? No; when that patient was visited by her daughters, very likely a silk dress was put on, but there was no reason to put it on over other clothes. She did not wear her silk dress all day long.
6647. Questioned about Case No. 12, the witness Macleod said, "This patient was given draughts which caused her to become very stupid";—do you know if this patient was made stupid in this manner? She was given medicine, by the doctor's orders, when necessary.
6648. Macleod says that she used to give this patient the draught in her tea every night;—is that so? That would be done if necessary. I never knew her to be stupid. She suffered very much from sleeplessness.
6649. The witness Macleod continued, in reference to this patient, that she was a private patient, but she never slept in the private ward until her father came to see her; that she always slept in the Government end;—is that true? It is quite untrue. During the early part of her illness this patient was only fit to be kept in a single room.
6650. If you wished to put her in an isolation ward would you have to use one of those on the Government side? Yes.
6651. Is that the only reason why this patient was put there? Yes.
6652. Are you quite sure about that? Yes.
6653. The witness Macleod says a private patient (Case No. 13) was put in amongst the Government patients;—do you know if that was the case? Yes; it was.
6654. Was it the same sort of case as that of Case No. 12? No. She was not fit to be put into a private place to upset the tranquility of other patients; she was amongst the Government patients because there was more scope, and she was removed from annoying the ladies in the ward she formerly occupied;—she always slept in one of the associated dormitories.
6655. Macleod also said that Case No. 14, another private patient, was put on the Government side; is that so? Yes. She is on the Government side and sleeps in the nurses' room. The reason is that the nurses pay her some personal attention during the night.
6656. The witness, Macleod, then goes on to say, "I never made any secret of the way in which patients were treated, and I said that if I were ever asked about the place I would not hesitate to say all that I have told you." Has she ever made any complaint to you? Never. Margaret Macleod has only said that the patients were treated too well. She has said so more than once, and added that they were too much humoured, and given into to a great extent.
6657. Would it have been according to the discipline of the establishment for her to have complained to you? It would.
6658. She was asked why these patients were put into the single rooms; whether it was for the sake of convenience or to save trouble. She said, in reply, that it was to save the expense of getting more attendants. Would there be any saving of expense in putting patients in these single cells? Not that I can see; certainly not.
6659. Do you have anything to do with ordering them to be put in? No, the doctors do that.
6660. The witness, Macleod, was asked if the women in her ward, fourteen in number, wore night-dresses. She replied, "There was only one wore a night-dress until some were made lately. Some coarse brown calico was bought, and Dr. Vause got the coachman's daughter to come in and make it up;—is that true? We have had night-dresses made, but I do not think the calico was particularly coarse.
6661. Is it true that the female patients are put to bed generally without night-dresses? No. A great many will not wear night-dresses; they are always tried, but they frequently take them off even in the associated dormitories.
6662. When these patients personally do that do you leave them alone? Yes.
6663. Would it be a saving of expense to deprive them of night dresses? No.
6664. Did you ever hear the patients complain of being cold at night? No; never. They are abundantly supplied with blankets.
6665. Is the covering of the beds sufficient, so far as you know? Yes. It often appeared to me that there was a superabundance of blankets.
6666. Was the same rule applied to the patients in the isolation wards, or, in other words were they supplied with night-dresses when they would wear them? Yes.
6667. Always? Yes.
6668. Were they never left without unless in cases where they would not wear them? No; not unless they tore them off or objected to wear them.
6669. If you could get patients to wear night-clothes would you do so? Yes.
6670. Are you quite sure there was no short supply? I am quite sure.

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6671. Do you remember Lizzie Verity? Yes.
6672. When giving her evidence she said, in regard to the Government patients, that she did not think the food was sufficient or good in quality;—is that true? I positively deny the statement. Such a state of things never existed while I have been there.
6673. She was asked if she could get clothes from the store for destructive patients. She replied, "Yes, when there were any to be had; and when we could not get any from the store we used to go to the laundry and get them there. There were times when there was no clothing in the store. There is a store now and more clothing in it than there used to be then." Do you remember any time when the store was much better or worse than now? There is no difference. There has always been an equally good supply of clothing in the store. There was quite as much then as there is now.
6674. The witness Verity said there has been a great deal of change, that blankets and rugs were supplied and new sheets came in immediately after the removal of Case No. 1 from Bayview House;—is that true? No; sheets and bed-clothing are being constantly supplied.
6675. Was there an unusually large supply brought in as soon as the removal of that patient was made public? No.
6676. Could this extra supply have been brought in without your knowing of it? No; it is my business to receive all new consignments.
6677. Was there any special increase in the supply about this time? There was nothing more than there is at any ordinary time, and that is sufficient to supply the usual necessities.
6678. Did you find Maggie Macleod to be a truthful person? No; her reputation in the establishment is that of a story-teller—very much so.
6679. Did you ever have any reason to doubt Miss Verity's truthfulness? No; but that statement you read just now is untrue.
6680. Did you ever hear of any patient being scrubbed with a broom or brush? I never heard of any such thing.
6681. Did you ever hear of a patient being hit with a boot? No; never.
- 6681½. Do you remember Annie Marshall? Yes.
6682. In the course of her evidence she said there was not sufficient clothing, and that she used to say to some of the attendants, "Why don't you ask Dr. Vause for more clothing?" but they did not like to do it. She was then asked if she ever spoke to the matron about it, and in reply she said, "I spoke to Mrs. Gilchrist once or twice, but she did not take any notice of what I said";—is that true? That is absolutely false. Annie Marshall was there only for a short time with a patient, and during that time such a complaint was never made by her. I deny that she complained to me. Such a statement is absolutely false.
6683. Do you remember Josephine Mackay? Yes.
6684. In her evidence she stated that the bread was often insufficient in quantity;—is that so? It is quite untrue; there has never been a short supply.
6685. Josephine Mackay was asked if the patients were always put into these single rooms naked. She replied that they were;—is that true? As far as my knowledge goes, it is not true.
6686. Were there any put in naked, except those who tore everything off? No.
6687. *Mr. McGowan.*] Do you say that you did not join this institution until January of this year? It was either on the 31st of December or the 1st of January.
6688. Were you engaged as housekeeper? Yes.
6689. Who engaged you? Dr. Vause, and Mrs. Vause was present.
6690. Were your duties laid down when you accepted the position? Yes.
6691. Will you tell the Commission what those duties were? To superintend the general domestic arrangements of the establishment.
6692. Had that anything to do with the attendance on patients? No, except that I contributed to their pleasure and amusement in any way I could.
6693. Had you anything to do, so far as the nurses and patients are concerned, with the treatment of the patients? No, not to any great extent. I had no supervision over the matron.
6694. Have you ever ordered the putting of any patient into the isolation room? Never.
6695. Have you had any talk with anyone regarding the evidence that has come out at this inquiry before you came here to-day? Not particularly.
6696. Has Dr. Vause told you anything? No.
6697. Have you heard anything in regard to what Maggie Macleod, Josephine Mackay, Bridget Morrissey, or Miss Verity have said in reference to this inquiry? The only thing that I have heard is to the effect that Margaret Macleod made certain statements in regard to a private patient.
6698. Have you heard anything in regard to what other nurses have said? Yes; I have heard that some of them have been asked to give evidence.
6699. Who are they? I have heard that Bridget Morrissey told Mary Doherty that Josephine Mackay made certain statements in reference to the treatment of private patients.
6700. Have you heard any of this evidence from Dr. Vause? No.
6701. Have you ever seen any of the evidence given before this Commission at all? No.
6702. Have you written to anyone who has given evidence before this Commission? Yes.
6703. To whom? I wrote to the father of Case No. 12.
6704. Was he the only one? Yes; that is all.
6705. You say in your evidence that you have to do with the internal arrangements of the institution—that is, that the domestic arrangements come under your supervision. Was it possible for the nurses to change the dresses of the patients without your seeing what was done? No; I am about the establishment at all times of the day.
6706. Have you ample opportunity of seeing how the patients are clothed? Yes.
6707. Have you ever seen patients wearing stockings without feet to them? No.
6708. How many of these single cells are there on the female side? Either ten or twelve.
6709. Are they fully occupied at night? Not always, but usually they are. Sometimes one or two are vacant.
6710. Have you ever known patients to be put in denuded of their clothing? Yes.
6711. Left without even a night-gown? Yes.
6712. How many of them are left in this condition? Two; Case No. 15 and Case No. 33.

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6713. Did it ever happen to Case No. 53? Yes.
6714. Did it ever happen to Case No. 19? She was not put in without clothing.
6715. Did it happen to Case No. 32? Not to my knowledge.
6716. To Case No. 54? No.
6717. To Case No. 23? I cannot say with regard to that patient. I know it is quite impossible to keep clothing on two or three of the patients at night.
6718. Did you ever see more than two patients in the single rooms without clothing? As far as I remember there were only Case No. 33 and Case No. 15. I am not quite sure about \* \* \* \*
6719. How do you know that these patients I have named were not put in without clothes? Because I have seen them.
6720. Do you make it a custom to go round and see? Occasionally I do, and these are cases of a chronic description.
6721. Supposing we have it in evidence that four or five patients are put into these single rooms every night without clothing;—do you know anything about that? I can only speak of what I have seen, and I know that there were only two patients put into these rooms without night-clothing.
6722. Is it not possible that occasions may arise when others were put in without clothing and you not know of it? That may be so, but it is not likely.
6723. Why? Because these matters are daily spoken of.
6724. Are these matters reported by the matron to you? No; not to me, but to Dr. Vause.
6725. Would you know that such a thing as this had occurred by the fact of it having been reported? Yes; I should know if more than these two had been placed in the single cells without clothing.
6726. Have you received any notification of the time when Dr. Manning or any other of the visiting doctors arrived at the asylum? I have only known of it when they have been in the asylum.
6727. Do they generally come to Dr. Vause's office? As a rule they do.
6728. Do the attendants in the asylum receive notice of their arrival? No; the general rule is that the matron is always sent for when visitors are announced. They are then taken to the wards.
6729. What time elapses between the doctors coming to the house and their going through the asylum? Sometimes 10 minutes; sometimes 15 minutes. Occasionally they have gone through without any waiting at all.
6730. Was it the general custom on the arrival of the visiting doctors to send for the matron? Yes; the matron, as a rule, takes the visitors through.
6731. Have you not said, in answer to Dr. Garran, that certain statements made by Maggie Macleod and Lizzie Verity with regard to the food and the changing of wearing apparel worn by the patients were altogether untrue? Yes; they are untrue.
6732. Do you know for certain that there are means at the disposal of the night-attendants to get tea, coffee, cocoa, or other warm drinks for the patients? Yes.
6733. Is there every facility for this? Yes.
6734. Do they keep the tea, cocoa, and other materials in No. 1 and No. 2 pantries, and in the matron's room? Yes.
6735. Are there always facilities for making these things warm? Yes.
6736. Could this be done in No. 1 dining-room; was there always a fire there? Not always, but a warm drink could be obtained if necessary.
6737. Was there a fire always burning in the winter-time? Yes, and whenever one was wanted the fire was laid in readiness.
6738. When patients were placed in these single cells were they seen to unless they were noisy until the following morning? If they were noisy at all it was the duty of the nurses sleeping in the adjoining room to see them.
6739. Did these nurses visit them at night? Yes, whenever necessary.
6740. Was a nurse kept on to visit them specially throughout the night? No; except in cases of illness.
6741. Unless a patient was noisy and restless, would she be seen after 10 o'clock at night until the following morning? Patients were always visited as far as I know.
6742. Are the arrangements the same to-day as they were when you went there? Yes; except that the night-nurse is always on duty now.
6743. When was this change made with regard to the night-nurse? Perhaps about June. At all events, it was about the middle of the year.
6744. Do you know any particular reason why a night-nurse is kept on at present? It is a different arrangement that has been made.
6745. Is it the custom for the night-nurse to visit and examine these rooms every hour or two? She visits every patient. She does not go into the room; that is not possible.
6746. Was that done in the beginning of the year—did you examine patients, if necessary, in the early part of the night? Yes, if necessary; such, for instance, in a case of illness or noisy patients.
6747. Do you remember Case No. 20, who broke her arm? Yes.
6748. Do you know how it occurred? No.
6749. Do you know that she was placed in one of the single rooms? Yes.
6750. Was she taken out in the morning with a broken arm? Yes.
6751. At that time was the night-nurse on duty visiting these rooms at stated intervals? Yes.
6752. Have there been many alterations made in these rooms since the removal of Case No. 1 to Callan Park? No; the gas was added after the accident to Case No. 20, and an additional window was put in each room, so that the light could be thrown into the rooms when necessary.
6753. Are you quite sure that there was not more than the usual amount of clothes purchased, or material for making clothes, immediately after Case No. 1 was removed? I am quite sure there was not.
6754. Nothing additional in the way of clothing for the patients nor sheeting for the beds? Nothing beyond the usual average.
6755. *Dr. Manning.*] Margaret Macleod told us in evidence that the sheets were taken off at night, and then she goes on to say that the quilts were taken off too,—is that true? Not to my knowledge.
6756. She was next asked what the patients covered themselves with, and she replied, "A small blanket, if there was one; but very often there was only a bit of one, and they covered themselves with anything they could get hold of";—is that a true statement? It is quite false.

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6757. I wish you to understand that she is speaking of the associated dormitories; is it true in reference to these? It is untrue.
6758. Has the supply of blankets always been sufficient? Yes.
6759. Then she says that there are only 2 lb. of butter per week for fifty-two Government patients;—is that true? No; it is not true.
6760. Do you purchase your clothing as it is required? Yes.
6761. Do you purchase a larger supply at the beginning of summer and at the beginning of winter than at any other time? Yes; blankets are required at the beginning of winter, and mosquito-nets at the beginning of summer.
6762. Does this custom prevail in ordinarily large houses? Yes.
6763. We have heard a great deal about Government clothes and private clothes being used on patients; are the private clothes always furnished by Dr. Vause at his own expense? Yes.
6764. Is the cost for private patients the same if they have no clothes as it is if clothing is found by their friends? Yes.
6765. Sometimes are the clothes entirely provided by Dr. Vause? Yes.
6766. Do you know Case No. 44? Yes.
6767. Is she an aged person and very wet in her habits? Yes; she requires a good deal of attention.
6768. Do you make up dresses specially for her use? Yes.
6769. Are these often made up from the same roll of winsey as it is used for the clothing of Government patients? Yes, it is.
6770. Do you consider that material stronger and more suitable for her? Yes; but besides these she has French merino dresses and flannel wrappers. In the winter-time a change in her dress is made whenever necessary. She has to be changed very often, both in regard to her dress, French merino, or winsey, and also in regard to her stockings: She sometimes wears cashmere stockings.
6771. Have you charge of, and are you responsible for, the clothes worn by private patients? Yes.
6772. Passing on to these single rooms, are you aware that one or two are almost always kept for the use of private patients? No.
6773. Do you know that one or two have bedsteads? Yes; one or two.
6774. How is the milk supplied to the institution? We have our own cows, and they are milked twice a day. The milk is taken to the dairy, and direct from the dairy to the house.
6775. Have you had to check nurses for the wasteful use of clothing and other stores? Yes; I have.
6776. Is it a tendency on the part of nurses to be wasteful in clothing? No; not so much with regard to clothing as in regard to food. I have had to complain of the way in which bread is thrown away. I have seen as much as half a loaf thrown into the pig-sty, and in consequence have remonstrated with the nurses.
6777. Where is the Medical Superintendent's office? In the front of the house.
6778. Is it in the main building? Yes.
6779. Is the office to which the official visitors go a part of the main asylum? Yes.
6780. So that, as a rule, when the official visitors come to Bayview House—not to the doctor's house, but to the asylum, and go to the office first—they go to an apartment next to the visiting room, and part of the main asylum? Yes.
6781. Is it your duty to see that the rooms are kept free from bugs and other vermin? No; that comes under the matron.
6782. Do I understand you to say directly that, as a rule, the visiting medical officers go to the office, which is part of their duty, and not to Dr. Vause's house, which is separate from the office? Yes.
6783. Do they go there direct? They occasionally go through the institution first; but as a rule they go to the office.
6784. *Dr. Vause.*] Have you seen the visiting officials frequently walk directly through into the main building, without waiting for anyone to accompany them? Yes.
6785. Do they sometimes go in one direction and sometimes in another? Yes. I have known them to go to the Government side first, and sometimes through the general side first.
6786. Do you ever know which way they intend to go? No.
6787. As a rule, do they go through rather quickly? Yes.
6788. Have you seen them pull down the bedding in the dormitory? Yes.
6789. Pull everything to the floor? Yes.
6790. Sheets, blankets, and bedding? Yes.
6791. Both in the dormitories and in the single rooms? Yes.
6792. Have you ever heard any complaints about the bedding? No.
6793. During the absence of the matron do you visit all parts of the asylum? Yes.
6794. Have you seen patients put into the single rooms? Yes.
6795. Have you visited the single rooms after the patients have been in bed? Yes.
6796. So, have you had a good opportunity of seeing how they are clothed? Yes; if the matron has been absent I have always visited the patients in bed, up to as late as 10 o'clock at night.
6797. Is it a fact that you can go freely about the place? Yes; at all times.
6798. Did Case No. 19 have ordinary bed-clothing and night-clothes when she occupied a single room? Yes, always.
6799. If additional blankets are required do you purchase them? Yes.
6800. Has there ever been any delay in getting them when ordered? No; as a rule, the matron lets me know what goods are required. I have never yet been refused by Dr. Vause to supply anything I asked for, and, as a rule, everything has been supplied without question.
6801. Do you remember Josephine Mackay? Yes.
6802. Did she ask you to allow her to remain at Bayview? Yes; she cried bitterly when she was dismissed.
6803. Do you remember Case No. 12? Yes.
6804. Did she sleep in the hospital room from the beginning to the termination of her treatment? Yes.
6805. Was she only out of that room in consequence of great excitement? Yes.
6806. Has not Case No. 14 been accommodated in a similar way while you have been there? Yes.
6807. Did she always sleep on the Government side and live on the private side? Yes.
6808. *President.*] We have had it in evidence that the beds were made up for show during the day and were not slept in at night;—do you know if that is so? Nothing of the kind.

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6809. We have also been told in evidence that the grounds and buildings are infested with rats;—is that a fact? There are a few rats, but no more than can be expected in a large establishment of this character.
6810. We are told that one room used as a store for the patients' boxes is infested with rats;—is that the case? I do not think it is infested with rats.
6811. It has also been said that some rooms are infested with bugs. Did you ever know such to be the case? I remember one room being turned out. There may have been some seen, and if there were it was attended to immediately.
6812. *Dr. Vause.*] It has been given in evidence that you refused a cup of tea to a dying patient;—is that true? It is necessary to refuse a good many things when a patient is in a dying state. The patient to whom you refer had an insatiable desire for scidlitz powders and tea. Tea was strictly prohibited by Dr. Ramsey and afterwards by Dr. Vause, and it was for this reason, and for my own safety, I refused the request.
6813. Was not the strict order given to you that the patient was to have a certain regular diet, as stated in the diet book, and were you not peremptorily ordered not to give the patient anything else? Yes; that is so, and I obeyed my instructions. She craved for tea, and I asked Dr. Ramsey about it, and he said she must not have it on any account.
6814. *Mr. McGowen.*] When Mr. \* \* \* came to see his daughter, did he ask you to show him her sleeping room, and did you show him a certain room? Yes; I showed him the room in which she was sleeping when her father came to see her.
6815. If the daughter told the father that she did not sleep there, did she make a mistake? I think she made some mistake.
6816. *Dr. Garran.*] Did this patient sleep in more than one room? Yes; she was tried in the hospital, and then she was taken to a single room. She was next tried in an associated dormitory, and then she had to be put in a single room again for a short time.
6817. *President.*] And you showed Mr. \* \* \* the room his daughter was sleeping in at the time he called to see her? Yes.
6818. Were changes subsequently made in her sleeping places, consequent upon the development of her disorder? Yes.

[Witness withdrew.]

Miss Baldwin sworn and examined:—

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6819. *President.*] What position do you occupy at Bayview House? That of matron.
6820. How long have you held that position? For about seven weeks—since 27th of October, 1894.
6821. Are you a duly qualified medical and surgical nurse? Yes.
6822. Where were you trained? In Philadelphia.
6823. Have you also been in China? Yes; I had two years' general nursing there.
6824. Have you been at St. Bartholomew's Hospital in London? Yes; for twelve months as a staff nurse.
6825. Have you had experience in any other London Hospital? I was an assistant at Victoria Park for nine months.
6826. Were you ever at the London Fever Hospital? Yes; on the staff.
6827. Have you had charge, as matron, of any establishment in London? Yes; for three years I had charge of the Elizabeth Fry Refuge, an establishment for the cure and maintenance of discharged female prisoners.
6828. Altogether then, have you had a considerable amount of hospital experience? I have.
6829. What is your impression, formed on your seven week's experience as matron at Bayview House? I consider it to be a well-conducted institution in every way, especially as regards clothing, supervision, and diet.
6830. Do you consider the superintendence, especially at night, sufficient and satisfactory? Quite.
6831. What are the arrangements for the nurses at night? They come on duty at 10 o'clock at night. Between 7 and 10 the day-nurses look after the patients and see that they are well covered over, clean, and generally well attended to in the early part of the night. The night-nurses then continue these duties.
6832. Is there a tell-tale clock to show the hours of visitation? Yes.
6833. How often do the nurses make visits to the patients? Every hour.
6834. Have nurses any other duties to perform in the day-time? No; they have no day-work except to look after the patients. They have never been called upon to do anything else since I have been there.
6835. Do you think the nursing staff is sufficiently large for the number of patients at the institution? Yes.
6836. Have you frequent opportunities of seeing the food supplied to the patients? Yes.
6837. Do you see it every day? Yes.
6838. Is it satisfactory? Yes; both in quality and quantity.
6839. Have the official visitors called at Bayview House since you have been there? Two came three weeks ago—Dr. Huxtable and Mr. Nugent Robertson.
6840. Did you accompany them on their rounds through the asylum? Yes.
6841. Did they ask you about the patients? They spoke generally.
6842. Did they examine the beds? They did not do so particularly. They passed through the wards quickly and seemed to be in a hurry.
6843. Did you see if they examined any books concerning the patients, their treatment, and the management of the institution generally? I did not; I did not go to the office.
6844. Did they examine the beds at all? No; they just passed through the dormitories. They came between 11 and 12 in the morning; all the beds were made, and the patients were tidy and clean.
6845. What salary do you get as matron? £60 per annum.
6846. Do your duties commence early in the morning? At 6 o'clock.
6847. Do they end at 10 at night? Before that.
6848. In what relation do you stand to Mrs. Gilchrist, the Lady Superintendent? Our duties are quite distinct. I have nothing to do with her duties and she has nothing to do with mine.

6849. During your time at the institution have you heard any complaints of the ill-treatment of patients? No, never. Neither have I seen anything of the kind. On the contrary, the attendants are most kind to the patients, who at times are very troublesome. As far as possible the patients are treated as they would be if they were in a sane condition. Miss Baldwin.  
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6850. *Dr. Garran.*] During the short time you have been at the institution have violent patients been put into the isolation dormitories? There has been no one confined there lately.

6851. Have any violent patients been put in these rooms to sleep? No.

6852. If there were a violent patient in one of these single rooms would you allow a nurse by herself to open the door of that room during the night? It would not be right. If it became necessary to open the door the nurse on duty should come to me.

6853. Do you think one nurse is sufficient to keep the patrol of these rooms at night? Quite.

6854. Since the gas has been laid on, and the new window has been placed over the door of each of these rooms, can the nurses see into these dormitories without going inside? Yes, quite comfortably.

6855. By merely turning up the gas? Yes, if they need to. This even would not be needed if the patient was asleep.

6856. Are there still patients at Bayview Asylum who absolutely refuse to wear clothes at night? Yes; two or three single room cases.

6857. In these cases would you endeavour to keep clothes on? You do not interfere in these cases. If the patient will not keep her clothing on it would be unwise to attempt to force her. Such a proceeding would disturb her and break the required rest. It is better to leave patients of this class alone.

6858. Is it better to leave dirty patients alone in the same way? No; if they are dirty they should be cleaned at once.

6859. At any time during the night? Yes.

6860. Should the night-nurse go into the room and see to this? It is very seldom that such a thing occurs if the patient is properly attended to before going to bed.

6861. Has there been much necessity for this particular kind of attention at Bayview House while you have been there? No.

6862. Do you think the present arrangement is quite sufficient? I do not think it could be better.

6863. Have you heard any complaints from patients about being put into these rooms? No.

6864. *Mr. McGowen.*] How often have the official visitors been to Bayview House since you have been there? Twice; on the 13th of November and three weeks ago.

6865. When they came to the institution on the other occasion did they lift up the bedding and examine the beds? Yes.

6866. *Dr. Manning.*] How many of the single rooms are lighted with gas? Every one can have the gas-light thrown in.

6867. Is the gas lighted at night? Yes; as soon as it is dusk the gas is lighted outside the rooms.

6868. Have you been able to persuade Case No. 15 or Case No. 33 to wear clothes? I have got Case No. 33 to do so sometimes, but Case No. 15 never. Case No. 53 will wear clothes at night-time occasionally, but as a rule she will not.

6869. *Dr. Vause.*] Have you requisition books at your disposal? Yes.

6870. Do you know how long they have been in use? Since 1864.

6871. Have you made any requisition in them? Yes, every week.

6872. Are you able to get anything you want by making a requisition in the books provided for that purpose? Yes.

6873. Are the patients in the single rooms to whom you have referred chronic cases? Yes.

[Witness withdrew.]

TUESDAY, 18 DECEMBER, 1894.

[The Commission met in the Board Room of the Chief Secretary's Office, at 11 a.m.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
Esq., M.D., INSPECTOR-GENERAL OF THE  
INSANE.

ANDREW GARRAN, Esq., LL.D.  
JAMES SINCLAIR TAYLOR MCGOWEN,  
Esq., M.L.A.

Dr. Vause was in attendance to hear evidence and examine witnesses in his own defence.

John Young sworn and examined:—

6784. *President.*] What is your occupation? I am an accountant.

6785. Were you ever employed at Bayview Asylum in that capacity? Yes; and I am acting in that capacity now. Mr.  
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6786. How long have you been employed in this particular avocation? For fully two years. My business office is in Sydney, and I am not altogether engaged at Bayview House.

6787. How often do you visit the institution to make up the accounts? Sometimes as frequently as four times in the week.

6788. In your capacity as an accountant, do you know much about the internal working of the institution? No.

6789. Do you know anything at all about the management of the institution? No.

6780. Has your connection with Bayview House solely to do with the keeping of the accounts? Yes.

6781. Have you any statement to make to the Commission to-day in connection with a conversation you have had with a man named Gearey? Yes.

6782. Will you give to the Commission as shortly as you can the substance of what you want to say in connection with yourself and Gearey? Yes, I will. I was introduced to Gearey on the Wednesday before the last general election, which took place in July. I was on my way out to Cook's River, when I met a friend of mine named Scott. He asked me where I was going—Gearey, I mean—and I told him I was waiting

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waiting for a coach to take me to Bayview House. I told him I was engaged at Bayview to do certain work. He said he saw Dr. Vause going down the road, and as I wanted to see him myself, and as he apparently had left Bayview House, I said I would not go out until Saturday. After the introduction, at Gearey's invitation we adjourned to the Cafe Francais with several others. We entered into a long conversation, when Gearey was saying what he could and what he could not do, and amongst other things he said from information he possessed he could be able to close up the Bayview establishment, because he believed the Government patients would be removed.

6883. Was anything said in the course of that conversation in connection with case No. 1? He told me that he went out to Bayview House early one morning, and the result was that the patient was taken away. We then left the Cafe Francais, went up George-street, round the corner of King-street into York-street to the "Occidental Hotel," where we sat in a back parlour, and talked over the affair. Gearey said it was a scandalous shame to know how Case No. 1 had been treated. In the course of conversation it was said that everyone at Bayview House were more or less starved; that Dr. Vause was a cruel man; that he was of drunken habits, and never attended to his business; that Mrs. Gilchrist, the lady superintendent, was a perfect devil; and that the long Irishman, Doherty, was about the same. He further said they had nothing but Irish there, and that they had got discharged servants to sign the books to say that they knew of nothing against the institution. He went on then to say that he had sufficient evidence, if it ever came out, to close the place. He also said that the proprietors, whoever they were, were making a good thing out of this affair; in fact that they were clearing over £6,000 a year out of the concern.

6884. Who was it making this amount? I asked him who, and he said the proprietors. I asked what proprietors, and he said, "You know very well—Copeland, Greville, and Fred. Gannon." He said they make a nice little thing out of this, and I told him that I was surprised to learn that that there were any shareholders in it at all, and that from my knowledge, obtained through the position I held as accountant to the institution, I should know if there were any other shareholders, and what amount of money they had subscribed. I told him that it was news to me that there was more than one proprietor. He told me that he had quite sufficient evidence to inform me that what he said was true. He went on to say that he had evidence taken down and type-written, which I could see if I would go to his house, but at the same time I was not to be permitted to take a copy of it.

6885. Did he tell you anything else? Yes; he informed me that Dr. Vause was only the manager of Bayview House, although the property was in his name. He added that he had made inquiries at Remington's Insurance or Assurance Company, and that they would not give him any information; that he had gone from there to the Registrar-General's Office, and ascertained that the mortgage on the property was in Dr. Vause's name. In the course of conversation something was said about a syndicate, and Gearey informed me that Dr. Manning and Tom Slattery were also in it as shareholders, and that was the reason why Dr. Manning did not pay the attention to the institution he should when inspecting it. I saw Gearey on and off about half a dozen times. The last occasion on which I spoke to him on this subject was at Parliament House, and he then informed me he was waiting for Mr. McGowen. That was, I suppose, on or about the 13th November. I asked him how things were going on, and he said it would all right. Even if the other evidence he had in his possession did not go for much, the facts about Case No. 1 would be quite sufficient to close Bayview House. More than that, he had actually seen the paper where the application for a renewal of the license for Bayview House as a place where Government insane patients could be admitted, had been refused by the Minister.

6886. Was anything else said? I think he said everything was all right.

6887. Do you remember an anonymous circular being sent to Members of the Assembly? Yes.

6888. Was there any conversation between you and Gearey in reference to this document? No; I did not have any conversation about the circular.

6889. Do you know anything about it at all? I was in Parliament House about 10 o'clock waiting to see a Member there on business, when George Black, a Member of the Assembly, was passing through with two ladies. He had a copy of the circular in his hand, and giving it to me said, "Read it till I come down." When he came down again Mr. Haynes had arrived on the scene. He was asked if he had a circular; he said he had not. He then got Mr. Black's circular, and afterwards lent it to me. It contained almost the same charges that Gearey had told me of in his various conversations—such, for instance, that patients were starved, and so on. There was also something said about an attempt to get out Case No. 55, because of him not getting sufficient to eat. I said in reply, "You ought to know that \* \* \* is not starved, for he is as fat as a whale." Subsequent examination of the patient proved this to be true.

6890. Do you remember a man named Alexander Mackenzie, who was employed at Bayview House as an attendant on the male side? Yes.

6891. Have you ever met him in connection with any conversation you now refer to? Never.

6892. Have you seen Mackenzie in conversation with Mr. McGowen and Gearey? Yes, I have.

6893. Where did you see this meeting between these gentlemen? I saw Mackenzie with them the night before he was examined by this Commission. I saw Mr. McGowen, Mackenzie, and Gearey come along Castlereagh-street, up King-street, along Elizabeth-street, then through Hyde Park. Later on I saw them at the corner of the Park and Oxford-street, and the three of them went on from there.

6894. Were you watching these gentlemen whose names you have mentioned? No; I was not watching them, but I saw them.

6895. Did you follow on the same track that they were following? No. How I came to see them was in this way: I had to keep an appointment with an operator in the telegraph office during his supper time. The supper hour begins at half-past 9. Our interview was over by a quarter to 10; I then proceeded up King-street, and it was then I saw Mr. McGowen, Mackenzie, and Gearey go along Elizabeth-street, through the Park to Oxford-street, then down Brisbane-street, and past Gearey's house.

6896. What was your impression on seeing these three together;—was it anything extraordinary to see three men walk through the streets and cross the public park? If it had been anybody else besides those connected with this inquiry, I should not have thought anything of it, but I knew Mr. McGowen was a member of this Commission, and I knew that Gearey was interested in the whole matter, therefore I could but form one opinion.

6897. And what was that? That was that there was a witness in conversation with somebody interested in the Commission. Naturally it would lead anybody to believe that something was under consideration

having

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having reference to this examination. That certainly is the impression I formed. It may be a wrong impression. I did not hear the conversation, and they may have been talking about something altogether different. I just merely drew my own inference.

6898. Had you at this time had any conversation or taken any part with any witness who has been examined before this Commission? No, I had never spoken to any one or in any way in regard to the evidence either given or to be given.

6899. Had you any conversation with regard to the subject-matter of the Commission? Yes; to a certain extent I had.

6900. With whom? With one of the witnesses.

6901. Which one of them? The statement was volunteered to me. I have met two of the female witnesses who have come before the Commission—one was Mary Magney. One afternoon I was coming down from the Legislative Assembly and met her on the corner of Phillip and Hunter Streets, and she informed me of the cruel things that were being said about Bayview House. She told me that a man named Gearey had called upon her and requested that she should give evidence to the effect that Dr. Vause was of drunken habits. She said that she replied, saying, "I can say nothing of the sort, or anything bad of him. Although I lived there for some years I could say nothing of the sort."

6902. Who was the other witness you have seen? Bridget Morrissey.

6903. What conversation had you with her? Just about the same. I asked her if, supposing she were required to give evidence before this Commission, would she do it. She said, "Yes, she would, but she did not care about it, for she did not want to say anything against Dr. Vause." I said to her, "You had better go and see him if you want to give evidence in this inquiry."

6904. Did you interest yourself in this matter purely in defence of the institution in which you were engaged, just merely because you thought it was your duty to defend the place? Certainly. I had no other motive in doing what I did.

6905. Were the accounts of the institution always in proper order? Yes.

6906. Was there ever any difficulty in putting them straight and in business-like order? No.

6907. Did the expenditure seem to largely and suddenly increase at times, and then diminish at others? No; an average expenditure was pretty well maintained month after month right through. Some of the books I keep in my town office for my own convenience. I suggested to Dr. Vause that there should be a monthly return showing in the ledger the exact expenditure every month. That I furnish to Dr. Vause on the first of every month and every quarter.

6908. Have you noticed since the month of April last any unusual amount of money disbursed for clothing? I have noticed nothing out of the common.

6909. Are you quite sure upon that point? I am certain.

6910. While dealing with these accounts, and having frequent conversations with Dr. Vause, have you always found him perfectly competent to manage all affairs connected with the institution and its expenditure? Certainly.

6911. In other words, has he shown himself to be thoroughly acquainted with the business of the institution? Yes.

6912. There are stories going about to the effect that Dr. Vause is in the habit of taking rather too much wine;—is that true? It is utterly absurd. Being in close business relationship with him, I have had, morning, noon, and night, every opportunity of seeing Dr. Vause even up to as late as 10 o'clock at night, and I can say, speaking from my own experience, that there is no truth in these stories.

6913. *Dr. Garran.*] Have you known an attendant named Mackenzie while you have been at the institution? I saw him twice, I think.

6914. Do you know whether, since he left the institution or was dismissed, he has entertained angry feelings concerning his dismissal? I do not know.

6915. Have you talked to Mackenzie about these affairs since he left the institution? No.

6916. Do you know whether he at the present time is in any way actuated by a spirit of revenge? I cannot say.

6917. *Mr. McGowan.*] Did you introduce yourself to me before this inquiry began? I did.

6918. How often did you call and see me on this subject? I did not call specially to see you on any occasion.

6919. Did you speak to me always in the first instance before I spoke to you? I always spoke to you first.

6920. Do you remember the last occasion on which you spoke to me? Yes; it was in the lobby of Parliament House. I was with a friend named Griffiths.

6921. Did I seem abrupt to you when you spoke to me on that occasion? Yes; all you said was "Wednesday."

6922. Do you know of any reason why I should have been abrupt on that occasion? You said something to me about being Watty Griffiths' friend. I saw no reason why you should have been so short, and I only understood it because you told Griffiths he had better go home.

6923. In what state were you and Griffiths? Griffiths was a little bit on.

6924. Were you under the influence of drink? I had had one or two, but I was not the worse of it.

6925. Do you think that there was any other reason why I should speak abruptly to you, except that both of you were under the influence of liquor? All I asked you was, "When is the Commission going to start?" and you said "Wednesday."

6926. Did I ever give you any information, or did you ever give me any information, in reference to Bayview House? No.

6927. Did ever I ask you for any information? No.

6928. When you saw Mackenzie with Gearey and me did you report the fact to Dr. Vause? Yes.

6929. Did you follow us on that occasion? [*No answer.*]

6930. In what direction were we coming? I was going along the street and came from the southern part of Castlereagh-street into King-street. At this time you were coming from the northern part of Castlereagh-street. You passed on in front of me, I bringing up the rear. You crossed over into the Park behind the Registrar-General's Department. I went across the street not expecting to see you any more, and I certainly did not follow you, as you are trying to imply. I entered the Park in its southern half.

6931. Did you see us cross over the Park and go towards Mark Foy's? Yes.

6932.

- Mr. J. Young.  
18 Dec., 1894.
6932. Were you behind us then? No; I was simply on the other side.  
6933. Did you follow us across the Park? No.  
6934. How, then, did you know that we went as far as Mark Foy's, and then turned down Brisbane-street? Because I went through the Park, and I saw the three of you turn down Brisbane-street.  
6935. Were we walking all the time, or did we occasionally stop to talk? You were walking all the time.  
6936. Where do you live? At Enmore.  
6937. How long after you saw us go down Brisbane-street was it till you went home? It could not have been very long, for I believe I caught the 20 minutes past 10 tram. I must have done, because Mr. Gearey informed me that you were standing at the corner of Goulburn-street, and saw me go by in that tram.  
6938. Was that long after we had turned down in Brisbane-street? I suppose it must have been a quarter of an hour or twenty minutes.  
6939. Do you know that you cannot catch a tram for Enmore anywhere near Brisbane-street? Yes.  
6940. Would you, therefore, have to walk to Liverpool-street? Yes.  
6941. And still you say that you never followed us? No; I did not. I had some business with two other friends.  
6942. Do you not state that you took it for granted that, naturally, as the two men I was with were witnesses that we were in conversation about this Commission? Yes.  
6943. Do you know any other of the witnesses, or have you seen them with me? I have seen no others with you.  
6944. Have you ever heard that any other witnesses have seen me? No.  
6945. When you went to see Bridget Morrissey did she volunteer to give evidence? Yes. I did not go to see her—I met her in the street casually.  
6946. Did you start the conversation? No; she started on me.  
6947. Did you ever meet the girl Maggie Macleod in Essex-street? No; I am positive I did not.  
6948. Have you had any conversation with any other witness? No; excepting the two I have mentioned, and I would not have had any conversation with them if they had not stopped me, and started on the subject.  
6949. Have you ever been told anything as to the nature of the evidence given before this Commission? No.  
6950. Has Dr. Vause told you anything at all about it? No.  
6951. Did you ever tell anybody that you knew all that was said and going on before the Commission? No.  
6952. Did you never say that to our friend, Mr. Scott? No.  
6953. Are you positive of that? I am certain.  
6954. If he says that you did, is it true? He tells a falsehood.  
6955. Do the books show the amount of goods supplied to the institution? No; the vouchers show that.  
6956. Have you a record in the books showing everything that is bought for the institution? The vouchers show that.  
6957. Do you say that between the months of May and July there had not been bought an undue amount of goods for the use of the patients? No; there was nothing unusual purchased. The amounts struck me as being much the same.  
6958. Do the books you have to do with show the engagements and dismissals of attendants? No; the wages-book shows that, and Dr. Vause keeps that book.  
6959. But do you not audit that book? No; the employees of the institution are paid by cheque, and that is sufficient audit.  
6960. Are you positive that you never had an interview with the two witnesses, Morrissey and Magney, on behalf of Dr. Vause? I am positive I did not do it on his behalf.  
6961. Are you sure that in any conversation you have had with me you have never said anything about any other witness or the institution? I have only spoken to you twice. Once I asked you when this Commission was likely to start, and you said, "Very soon." That was the first conversation I ever had with you. I said to you on that same occasion, "I think you are being misled over this affair." You replied, "Oh, no; we have got quite enough evidence, and we have medical men as well."  
6962. Was there anything else said? Yes; you said, "I am not in favour of private asylums."  
6963. Did I say that? Yes.  
*Mr McGowen*: Yes; I admit that.

## Cross-examination continued:

6964. Is there any other evidence of conversation with me that you would like to give? I think that is about the substance of our first conversation.  
6965. Did you always introduce the question to me? Yes. As I said before, I have spoken to you twice, and I have given you the substance of the first conversation. The next time I asked you when the Commission was going to start, and you said, "Wednesday."  
6966. Was I aware that you were an accountant at Bayview House? Yes.  
6967. Did I ever ask you to give evidence? No. You asked me, "Are you Watty Griffiths' friend?" I said, "Yes." You then said, "Are you accountant at Bayview House?" I said I was, and you said, "I am against private asylums." I then said to you, "You will fall in over this." You said, in reply, "I never take up anything unless I am sure of carrying it through. See how I got on over the weights and measures affair." Then, when going away, you said, in a half-smiling manner, "We shall want you."

[Witness withdrew.]

## Josephine Mackay sworn and examined:—

- Josephine Mackay.  
18 Dec., 1894.
6968. *President.*] Did you write a letter to the Commission proffering to give further evidence? I did.  
6969. What is the nature of the additional evidence you wish to give? I wish to say, in the first instance, that Case No. 12, when she came to the institution, was placed in a single cell, and that the matron administered a drug in my presence to the patient at 10 o'clock at night. Case No. 12 was in a perfectly nude state, and had no covering. The room was most uncomfortable, and badly ventilated. There was a strong smell in it—a nasty odour in the cell.

6970. Is that all you wish to state? Case No. 12 and Case No. 32 were continually kept in leather mits, except when the Government inspectors were going through the institution. I wish to add that, in my opinion, the single rooms were not fit to keep cattle in.

Josephine  
Mackay.  
18 Dec., 1894. †

6971. What sort of cattle? Cattle of any kind. They are unhealthy, badly ventilated, and smell strongly. The first night a patient (Case No. 56) was in one of the rooms, she was very destructive and destroyed the wood-work. I noticed inside the wood-work there was a lot of clay, quite dirty. I also pulled up the ventilator from under the floor, and underneath the ventilator there was a lot of old straw, which smelled strongly. Patients have no utensils in these rooms, therefore they use the ventilators in the floor.

6972. Have you anything else you wish to say? I believe that at times some of the patients placed in these rooms have sane moments, and realising that they are kept in these horrible places does not lead towards their recovery in any way.

6973. Were you impressed that there was not sufficient ventilation? There was no ventilation, not sufficient covering, and no comfort of any kind.

6974. Have you studied medicine at all? No; but I have read a good deal.

6975. Are the opinions you are now expressing the result of your reading? No; they are the result of my experience gained at Bayview House, and that is quite enough.

6976. Have you anything else to say? After taking the draughts the patients become stupefied for the time being, and afterwards very often their stomachs are deranged and out of order owing to the indiscriminate use of draughts.

6977. Anything else? Concerning the escape of Case No. 24, I do not hold myself responsible for that at all.

6978. Did not Dr. Vause hold you responsible? Yes.

6979. Was it in connection with this case that he dismissed you from Bayview House? Yes; the woman made her escape at night, and was not missed until 5 o'clock next morning. If the matron made her rounds properly she should have missed the patient. It was not my fault that my keys were lost, and I was not responsible for the escape of the patient.

6980. Is that all you wish to state? Yes.

6981. When you were here before did you not say there was an ample supply of clothing for the patients at Bayview House? Yes. The patients clothes are changed once a week, on Saturdays, and only in one instance do I remember that there was a complete change in the clothing.

6982. If other witnesses state that there always has been a sufficient supply of clothing, is that true? There was not an ample supply while I was there.

6983. If other witnesses state there was an ample supply of clothing at your disposal, are they stating what is not true? They are.

6984. You stated when you were here on a former occasion that the food on the female side was insufficient quantity and of bad quality;—is that true? Yes, it is true.

6985. If other witnesses state that there was not only an ample supply of wholesome, well cooked food, but that the remains from the table were disposed of in various ways, are they telling the truth? No; they are not.

6986. If medical men, who have been examined here, say there was an ample supply of good food, are they telling the truth? No.

6987. If persons present during meal-times give evidence directly opposite to you, are they telling the truth? No; they are not.

6988. Do you also state that the majority of patients were put into these single rooms, which you describe as not fit for human occupation, in a nude condition? Yes.

6989. When other nurses and attendants state that the majority of these patients had and wore night-clothing, are they telling the truth? I remember seeing that Case No. 11 had sheets, and the whole of the others were put in naked.

6990. Did you personally see them? Yes; I was there and saw the attendants put them in.

6991. If other witnesses tell us exactly the reverse, are they speaking the truth? No; they are not.

6992. Did you say in your former evidence that no one looked into these patients after 10 o'clock at night, until they were removed from the single rooms the following morning? Yes; and nobody did look after them.

6993. Further, did you say, if there was any disturbance or noise during the night the attendants would get up and give the noisy patient a sleeping draught? Yes.

6994. Who would go in and administer that sleeping draught? The matron, with the aid of some of the nurses.

6995. Concerning the letter you wrote to the Rev. Father O'Callaghan, he has said, in giving evidence, that he never received any letter from you? I received no reply from him.

6996. There seems to be some slight discrepancy here—can you explain it? I know I wrote to him commenting on a letter he had sent to the newspapers in favour of the management of Bayview House. I pointed out to him that he came to the institution to celebrate mass, to visit the sick and the dying, and that he knew very little about the management of the place. I did not keep a copy of the letter, but it was written and posted.

6997. Has it been a matter of conscience with you in giving this additional evidence? Yes.

6998. Having it in your possession, and on your conscience, did it make you feel unhappy and uneasy in your mind? Yes; there were a good many items I could not remember when I was here before.

6999. You said in your former evidence that you had seen the clothing taken from one patient and put on another? Yes. I have seen dirty clothing that has been worn for a week before it was taken off some patients.

7000. Do you re-assert your former statement about the clothing being taken from one patient and put on another? Yes.

7001. By whose orders was that done? The matron's orders.

7002. Who was the matron at that time? Bridget Morrissey.

7003. Do you still say there was not sufficient clothing for the patients? No; Rachel Kelly very often changed the patients in that way; we were obliged to do it because we had not sufficient clothing.

7004. Did you get notice when the official visitors arrived at the institution? Yes.

- Josephine Mackay,  
18 Dec., 1894.
7005. Always? Yes.
7006. What length of time? From ten to twenty minutes, as far as I know.
7007. Would you have time to dress fifty-two patients in ten minutes? Yes; we very often put on new dresses over old ones, which were not fit for inspection. We put on these others over them when the patients became troublesome, as they did not understand being dressed and undressed again.
7008. You said when giving evidence before that patients were shivering for want of bed-clothing in the associated dormitories;—do you still say so? Yes; I have often given a patient a rug to keep her warm.
7009. Are you quite certain about this, because since we saw you last a number of witnesses who have given evidence before the Commission have stated exactly the reverse? I am telling you my own experience, and I know what I say is true.
7010. *Dr. Garran.*] In the letter you sent to the Commission, requesting to be further examined, you said your memory had been refreshed;—what has refreshed your memory? Things have come to my mind that I did not think of when I was here before. For instance, there was Case No. 12, on the first night she was in the institution, and my memory serves me better in many items than it did before.
7011. Have you had any intercourse with any other person by whom your memory has been refreshed? No; no one has seen me on the matter.
7012. Is the refreshing entirely of your own memory? Yes.
7013. You said in your previous evidence that you saw Nellie McBride hit a patient, and if McBride contradicts your statement is she telling the truth? I saw her do it myself. She has been rough and cruel to the patients many times.
7014. In your evidence the other day you stated positively that there was no possibility of getting hot tea or cocoa for the patients at night, and other witnesses have told us there is every facility for getting these things;—which is correct? I have myself been up at night with sick and dying patients, and I have never had an opportunity of getting these things. One night I think I did boil a little drop of milk over a kerosene lamp.
7015. We have, on the other side, had most positive evidence that these materials could be obtained by other nurses at night? We never could get them in my time.
7016. Did you ever speak to the matron on the subject? Yes; I very often wanted to get through, but could not get through the gate, which was locked and cross-locked.
7017. Did you ever ask the matron why you could not get these hot drinks if they were required at night? Yes; I have complained.
7018. What did she say? That such were not the rules of the institution.
7019. Did Bridget Morrissey say that? Yes; and Jessie Fuller as well.
7020. Are you sure you complained to Bridget Morrissey about these matters? Yes, we were always talking about them; first in general conversation, and then I complained.
7021. Bridget Morrissey was particularly asked whether the breakfast stores for every morning were not in the cupboards all through the night and available for use, and she replied that they were;—is that so? No; they were in tins and in plates.
7022. She was also asked if she or the nurses could get milk, or tea, or sugar in the night, and she said she could;—what have you to say about that? I say no. The milk was given out in the morning, and what was over was locked up during the day. There was no milk after luncheon, and we certainly had not a sufficient quantity of milk.
7023. She further said in her evidence that by waking the cook the nurses could always get a warm drink at night;—is that so? I know nothing about that. She knew as well as I did that the cross-lock prevented any one getting from the female wards to the kitchen in the night-time.
7024. You said in your former evidence that the mattresses were removed from the isolation wards at night and put back in the day;—suppose the matron says this statement is false, what have you to say in the way of explanation? There was always one mattress left in at night. The two good ones were removed and put in during the day.
7025. Do you mean that two of better quality were in the rooms in the day-time as show mattresses, and that they were taken out at night and substituted by others of inferior quality? Yes; the two mattresses properly made were never used at night.
7026. Were these only put in during the day for show purposes? Yes.
7027. Do you know if any patients were put in those rooms without a mattress? I know that Case No. 15 was generally in her room without a mattress. She used to take the straw out herself.
7028. Did some of the patients prefer the loose straw to the mattress? Yes.
7029. If these patients chose to lie in the loose straw were they allowed to do so? Yes.
7030. *Mr. McGowan.*] Do you say that Case No. 12 was placed in a single room the first night she arrived at the institution? Yes.
7031. Was she denuded of clothing? Yes; she had no bed-covering whatever.
7032. Are you positive of your statements as to Case No. 15 being constantly kept in mits? Yes; except when the official visitors were going through the institution. Case No. 15 and Case No. 32 were nearly always in mits; and they could not use their hands when these were taken off.
7033. Do you say you have never given any sleeping draughts? I have never given draughts; but I have given other medicines.
7034. Did Rose McMahon give draughts to one patient? Yes; she was sub-matron.
7035. Are you positive that the evidence you are giving is all true? Yes; I am positive.
7036. *Dr. Manning.*] Do you swear that you could dress fifty-two patients in ten minutes? Not I, alone; but the six nurses could put on other dresses, but not underclothing.
7037. Were you ever in any other hospital? No, never.
7038. What was your occupation previous to going to Bayview House? A dressmaker.
7039. Does that, do you think, qualify you to be a judge of ventilation? No.
7040. Yet you presume to give an opinion on that subject? Yes; because anybody going into these rooms would very soon be able to detect that they are badly ventilated.
7041. What do you know about drugs? I do not know anything about drugs.
7042. But do you not seem to think yourself qualified to give any opinion as regards the action of drugs on patients? I suppose I may express an opinion, for I have seen the effect of them afterwards.
7043. What are mits? They are leather muffs which are strapped on patients' wrists.

7044. Do you mean to say you have seen Case No. 32 and Case No. 15 constantly kept in mits? Yes; every day, except when you and the official visitors come there, and then they are taken off. Josephine Mackay.
7045. How many days was Case No. 15 kept in mits? At all times; during every day, except when you or the official visitors were there. 18 Dec., 1894.
7046. Do you mean this was the case during the entire time you were there? Yes.
7047. Always? Yes.
7048. Was Case No. 32 also kept there in muffs similarly while you were there? Yes; except when you or the other visitors were going through.
7049. From the day you commenced duty to the day you left, were these two women kept in muffs every day? Yes; I was six months in the building, and they were every day. I have seen them.
7050. For six months daily were these two patients kept in muffs? Yes.
7051. And were these muffs removed when the Government inspectors came round? Yes.
7052. *Dr. Fause.*] Before you left Bayview House, did you not go crying to Mrs. Gilchrist, and ask her to intercede for you to remain? No; I told Mrs. Gilchrist I was glad I was going.
7053. Did you write to the husband of Case No. 24? Yes.
7054. Did you write recommending that he should take his wife away from Bayview House? Yes; I did.
7055. Before you left Bayview? No, afterwards.
7056. Did you propose or suggest that you would nurse Case No. 24? I never did anything of the kind.
7057. Did you ever say that Mrs. Gilchrist refused a cup of tea to a dying patient? I did not.
7058. Who said so? I do not know; I did not.
7059. Did you ever hear anything about such a statement? I heard something about it. It was Case No. 46. She died after I left Bayview.
7060. Did you make any complaints, similar to those you are making now, before you left Bayview House? No; except that I may have mentioned things to my own friends.
7061. Outside? No.
7062. Not to anybody? No; except that inside I complained to the matron.
7063. Did you complain to Dr. Manning? No.
7064. Did you complain to any of the official visitors? I very often would have complained, but I felt too nervous to do so.
7065. Did you ever complain to me? I did when I first went to the institution, and you told me you tried to do the best you could.
7066. What was the nature of your complaint? I do not remember what it was about. You said that any complaint I had to make I was to speak to the matron.
7067. Did you tell Mr. \* \* \* that he ought to send his daughter (Case No. 12) to an establishment at Ryde? No; I never saw him.
7068. Have you written to him to that effect? No; I do not know his address.
7069. Did you tell Mr. \* \* \* that he should send his wife (Case No. 24) to Ryde? I said he should send his wife to another institution at Hunter's Hill, because Mrs. Gilchrist misrepresented the treatment of Case No. 24 to her children.
7070. Did you ever look at the ceilings in the single rooms? Yes.
7071. Is there any ventilation there? Yes.
7072. What is it like? I do not remember whether it is a round hole; it is a kind of funnel on the outside, going up from the roof.
7073. Yet, do you not say these rooms are not properly ventilated? No, they are not. I have nearly fainted myself in one of them.
7074. In giving evidence here are you actuated by any feeling of vindictiveness or retaliation owing to your leaving the institution? No; I am not.
7075. Could you get into No. 1 ladies' dining-room at night? Yes.
7076. Could you get into No. 2 dining-room at night? No; I could not when sleeping in No. 2 dormitory.
7077. Why? There is a special key.
7078. Do you not say you can get into No. 1 dining-room? Yes. [*Witness, after examining plan produced, said she previously misunderstood the question, and then stated that she could get into both dining-rooms.*]
7079. Do you know where the milk is kept? Yes.
7080. Where? In No. 1 kitchen.
7081. Could you get to it through No. 2 yard? Yes; I could not get at the stores or provisions. They were all locked up in the cupboard, and Mrs. Gilchrist kept the key.
7082. Is there a store on the other side? No; or if there is, whoever had charge of it kept the key.
7083. Are these stores in No. 2 pantry? Yes.
7084. What time are the stores given out? Every morning after breakfast; and we, for breakfast, were often short of sugar, butter, and tea. We used to make a first breakfast, and the stores would be used at that, and none would be left for the later breakfast.
7085. Had you not always some supply? No; very often we had none.
7086. None at all? No.
7087. *President.*] Would there be sufficient for the first breakfast? Yes.
7088. *Dr. Fause.*] What have you to say about the canvas jacket Case No. 15 used to wear? I have seen it.
7089. Had it long sleeves? Yes.
7090. Where were the sleeves tied? They were not tied. I have seen them loose. I made one myself for her.
7091. Do you say she always wore gloves? Yes; always in the day-time. I have often wondered that she did not lose the use of her hands throughs always being in mits.
7092. Did you ever see her in a long-sleeved jacket, with sleeves twice as long as they ought to be, for ordinary wear? Yes; and they should have been the ordinary length.
7093. How do you know? They ought to be the ordinary length, or an inch or two longer. They were twice the length.

- Josephine Mackay. 7094. *President.*] Do you still assert that the patients's hands were in mits all day long? Yes.  
 7095. *Dr. Garran.*] Were the patients wearing mits allowed to have their hands free when visitors passed through the institution? Yes; the mits were removed and put away.  
 18 Dec., 1894. 7096. We, as a Royal Commission, visited the institution the other day and saw one patient in mits;—how do you explain that? They were always released while I was there. I am certain of that. It was the duty of the nurses to take the mits off.  
 7097. *President.*] How can that possibly be when you are told that we saw one patient with the mits on? That was the rule during my time.

[Witness withdrew.]

His Honor District Court Judge Gibson sworn and examined:—

- Judge Gibson. 7098. *President.*] We have been informed that at one time you were one of the official visitors to the hospitals for the insane in this Colony;—is that so? I was.  
 18 Dec., 1894. 7099. Amongst the other institutions you visited in that capacity, did you go to Bayview House? Yes.  
 7100. On the occasion of your visiting Bayview House did you inspect all the different parts of the institution in accordance with the provisions of the Lunacy Act? Yes.  
 7101. From time to time did you inspect those cells in which patients were placed for isolation purposes? I have an idea that I inspected every portion of the buildings; but I do not know if I can at this length of time distinguish any particular rooms.  
 7102. Do you remember a certain building allotted to male patients for the purpose I have mentioned, a building detached from the main building in a small court-yard, and containing two cells? I think I know the part you speak of.  
 7103. Is there any part of the building you inspected which seemed to you to be unsatisfactory as regards the purpose for which it was intended? No; at different times a different state of things arose, to which the visitors took exception. These were small matters speedily remedied. On one occasion Dr. Cox and I complained very strongly about a privy or cesspit through which a sufficient quantity of air did not pass. It was in some corner place, and when we complained it was taken up and properly ventilated.  
 7104. Were all such small matters attended to without delay? Yes.  
 7105. Was there ever any complaint made to you by the patients while you were on your rounds of such a serious character that it required investigation? Complaints were continually made by patients; but, as a rule, when they were investigated we came to the conclusion that there was nothing in them.  
 7106. Had the patients every opportunity of making complaints to the official visitors? Yes.  
 7107. On the whole, then, were you satisfied, as far as your official observation conveyed, with the management of the institution? I may say that on the whole I was.  
 7108. *Dr. Garran.*] Do you remember discussing with your colleagues the suitability of these isolated bedrooms for the purposes to which they were put? I am afraid I cannot speak with certainty about these bedrooms.  
 7109. There are two on the male side and eleven or twelve on the female side. They are shown on this plan [*produced*]. Do you remember them [*after seeing plan*]? I think I know the rooms you speak of.  
 7110. We have evidence that these rooms were badly ventilated, and that they threw off a foul smell even in the middle of the day;—did you ever notice this defect? I really have a very keen scent. I never noticed it; there is always a more or less characteristic smell in such places as these, I think more especially amongst lunatics. I certainly never detected anything of the kind you mention. If I had done so I should not have tolerated it for one moment.  
 7111. Did you at any time condemn these rooms? We did not.  
 7112. As far as you remember, did your colleagues look into these particular matters? Very fully; more especially Dr. Cox and Sir Alfred Roberts.  
 7113. *Dr. Manning.*] Have complaints been made because you occasionally examine patients alone? We have sent patients' into the visitors' room when on their way through the wards. On one occasion Dr. Vause complained that we saw them and heard their complaints without him being present. We did that purposely, so that the patients could complain freely. This patient, a woman, complained that a man had stabbed her with a dagger. We sent her into the room and saw her by herself, and ascertained that there could be no foundation for such a statement.  
 7114. Have you seen the food at any time? Yes; I have been in the kitchen and seen it prepared. I was never there during a meal-time.  
 7115. Have you noticed the clothes worn by the Government patients? Yes; I have seen women dressed in ordinary clothes, not in any particular uniform.  
 7116. Do you think they were sufficiently clothed? That is a difficult question for me to answer. I do not know. Many of them prefer to go about almost naked.

[Witness withdrew.]

Mrs. Hankey sworn and examined:—

- Mrs. Hankey. 7117. *President.*] Were you at one time connected with Bayview House? Yes.  
 18 Dec., 1894. 7118. Do you remember the date when you were first engaged? It is so many years ago that I do not remember. It was while Dr. Tucker was there, twelve or fourteen years ago.  
 7119. Were you latterly engaged as matron? Yes; for five or six years or more.  
 7120. What year were you first engaged in this position? I cannot remember.  
 7121. Did you leave Bayview House in 1892? I left two years ago. I am not good at remembering dates.  
 7122. While you were matron had you every possible opportunity of inspecting everything connected with the management of the place? Yes; everything.  
 7123. Do you remember any cause of complaint for cruelty to a patient? There was some slight cause, in one case by a nurse; but this was remedied by the doctor.  
 7124. Will you mention the case you refer to? A nurse named Emily Morrow bruised a patient.

7125.

Mrs.  
Hankey.

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7125. In what way? She was very violent, and in the struggle the nurse caused her to be bruised.
7126. Did you ever hear of any other case of this kind? No.
7127. Was it the custom to keep the patients' hands in gloves of any kind? Some patients were very troublesome, and would take off their clothes. They could not be managed unless they had gloves on.
7128. Were they only kept in this way for a time? Yes; while very troublesome.
7129. Do you remember the single cells on the verandah? Yes; some eleven or twelve of them.
7130. Were patients always put in these places by the order of the doctor? Yes.
7131. How was this process carried out? They were simply put in; and if these patients took care of their clothes the rooms were made as comfortable as any other bed-rooms. If the patients destroyed their clothes, after fair trial they were provided with straw and coarse rugs lined with blankets.
7132. Did they have night-dresses? They had under-garments on them.
7133. Supposing you knew that a patient destroyed her clothing, would she be put in naked? No; there was only one patient who so destroyed the bed and bedding that she was put in naked.
7134. Who was that? Case No. 15.
7135. Did the others get night-dresses on them if they preserved these night-dresses? Yes; and they were also provided with blankets.
7136. What arrangements were made for night-watching? There was no night nurse unless a patient was sick.
7137. Was there any night patrol? No.
7138. Did the nurses go to bed at 10 o'clock, and then sleep in the dormitories? Yes.
7139. Did a nurse sleep at each end of the cells? Yes; there was a bedroom at each end; a nurse slept in each, and patients too.
7140. If one of these nurses heard a noise during the night, would she get up and see what was the matter? Yes; and if she could not manage by herself she would come and call me. I would get up and assist in whatever was required.
7141. What arrangements were made for supplying sick patients during the night with such nourishment as cocoa, tea, or milk? I had a spirit-lamp provided in my bedroom for that purpose.
7142. Did the nurses come to you then? Yes.
7143. Had you stores there, too? Yes; I always provided myself with these things, and kept them in my own room.
7144. Did they always come to your room at once? Yes.
7145. Was that the state of affairs from the beginning right through, until you left, in 1892? Yes.
7146. Were any stores kept in the kitchen for this purpose? No.
7147. Was there any store of these comforts in Nos. 1 and 2 ladies' dining rooms? Yes; there were large cupboards with everything of this kind in them.
7148. Were these stores accessible to the nurses, independent of the supplies in your bed-room? Yes.
7149. Are you quite sure this was always the case? Yes.
7150. In that case, would they have any need to go to you? If they wanted anything hot, they generally came to me. There was a fire in the winter time in the dining-room.
7151. Was there always plenty of clothing for the patients while you were there? Yes; they were always well provided for.
7152. Was it the custom when the winter time came on to get an extra supply of warm clothing? Yes; such as shawls, petticoats, and other warm things.
7153. Was it the custom for you to requisition the doctor for the necessary articles, and would he then allow you to go out and purchase them? Yes.
7154. About what month would this be done? Directly the weather began to get cold.
7155. Would that be about the end of May or the beginning of June? I suppose it would be. I do not remember the month; but directly the fires commenced I went out to get the extra clothing. Some patients like the warmest of clothing even in very hot weather.
7156. Was there always an ample supply of food? Yes.
7157. Was it always well cooked? Yes.
7158. Were you perfectly satisfied with the food? Yes; and if ever there was any little fault to find, I would go to the doctor and he would see to it.
7159. Did the nurses attend to the dirty patients regularly? Yes; a nurse was told off to see that the bed linen was made clean directly it was dirty.
7160. Do you still state, with regard to the personal linen and the wearing apparel of the patients, that there is an ample supply of both? Yes.
7161. Are you quite sure about that? Quite sure.
7162. Did you sign the usual certificate, saying that the institution was properly managed and so on, when you left Bayview House? Yes.
7163. *Mr. McGowan.*] Did you ever see more than one patient put in the single rooms without clothing? No; the only one I saw put into these twelve rooms without clothes was Case No. 15.
7164. *Dr. Garran.*] If witnesses have come before this Commission and deposed that it was the rule to put women in the single rooms without clothing, would that be true evidence? It would not be true in my experience, except in reference to this patient. We have tried a good many times to get her to wear clothes, but could not manage it.
7165. *Dr. Manning.*] When were the stores given out? Every morning at about 9 o'clock during the time I was there.
7166. How long are these stores supposed to last? Until after breakfast the next morning.
7167. During the night-time were these stores accessible to the nurses? The nurse in charge of the dining-room always kept the key of it. The other nurses could go and get the key when they wanted these things.
7168. Were muffs frequently used on the hands of patients? Not frequently.
7169. Did the doctor order the use of muffs? Yes, always.
7170. Were they never used unless the doctor ordered them? No, never.
7171. Where were they kept? In a cupboard in the dining-room.
7172. In whose charge? In charge of the matron.
7173. Could the nurses get at these muffs without the matron? No.

- Mrs. Hankey. 7174. What is the longest time you have seen them used on any one patient? On Case No. 15, who could not be kept from undressing herself.
- 18 Dec., 1894. 7175. What was the longest time you saw them on her? For three or four hours a day.
7176. For how long? About a couple of weeks.
7177. Were the muffs removed when the official visitors came? Sometimes.
7178. By whose orders? By my orders.
7179. Why were they removed? To make her look a little more presentable. She was always turning somersaults when going about. When the official visitors came we would take them off, and walk her up and down.
7180. Were the muffs put on Case No. 32? No; she was too simple to need them.
7181. What notice did you have that the visitors were coming round? There were always nurses moving about, and some of them were sure to see the official visitors. Then they would come and say, "They will be here in a minute." We never had any particular notice of their coming.
7182. Did the nurses always find this out? Yes.
7183. How long after the visitors arrived at the institution was it before they went through the wards? Sometimes 10 minutes, sometimes not 10 minutes; and it would not be longer. The place is always kept in good order, and there was very little to do. We might put the patients' clothes straight—such as arranging their dresses, and putting on a handkerchief.
7184. Was there any general change of dresses? No; we might put on a clean apron or a handkerchief.
7185. Have you ever seen the dresses removed and others put on patients on these occasions? No, never; there would not be time to do it.
7186. Would it be perfectly impossible to dress the whole of the patients in the time? Yes; we could not do more than put on a clean bonnet or apron, and gather them up together on the verandah.
7187. Did the official visitors see the food? Yes; they came frequently at meal-times.
7188. What was the character of the food? Roast joints and stews.
7189. Did you get the same joints every day? No.
7190. Was there any difference made in the food on the days when the official visitors came? No; we never knew when they were coming.
7191. When the official visitors were there, did you know whether they intended going through the dining-rooms or not? No; if they came in any where near dinner-time they would go through; but if they came earlier in the day they did not go through.
7192. Do you know if the official visitors made any inquiries concerning the dresses of the patients? They always looked to see if they were tidy.
7193. Had they a sufficient quantity of sheets and blankets on the beds? Yes.
7194. Did you ever hear them complain of being cold at night? No. They would throw their clothes off on to the floor. I remember now there was another patient we called "Jack." I think she was Case No. 33, who was put in a single room without clothes. She had plenty of rugs, but no under-garments.
7195. *Dr. Vause.*] Do you remember how the bruise occurred in connection with Case No. 57,—was the patient excited? Yes; she was a very troublesome patient, and it occurred while the nurses were putting her out of the dormitory into the single room.
7196. Was the bruise a mere accident? Yes.
7197. Do you think it could have been well avoided, considering the violence of the patient? I do not.
7198. Have you seen me since you left the institution? Not until to-day.
7199. Have you been in communication with me? No.
7200. Do you remember case No. 58? Yes.
7201. Do you remember how many blankets she had? About eight or ten pairs, and then she was not satisfied.
7202. Did she occupy a single room? Yes; she would not sleep anywhere else. It was her own wish that she should.
7203. Had the nurses every opportunity of speaking to me concerning anything about which they wished to complain. Every opportunity. You always went through the place every morning, and very often during the day.
7204. Who had charge of the medicine after it was made up? I always had charge of it.
7205. Did you keep it locked up? Yes; in my own room.
7206. Who administered the medicine? I always administered it myself unless a nurse was told off for a special case; then she would come to my room for it.
7207. Have you ever seen a clean dress put over a dirty one? No, never.
7208. Do you think every reasonable care is taken to keep the place and the patients clean? I think every care is taken in this direction.

[Witness withdrew.]

Mr. Patrick Martin sworn and examined:—

- Mr. P. Martin. 7209. *President.*] Did you write to this Commission, stating that you wished to give evidence in this inquiry? I did.
- 18 Dec., 1894. 7210. Were you at one time connected with Bayview Asylum? I was, as a generally useful man.
7211. Were you employed by Dr. Vause? Yes; after Dr. Tucker went away. I was with him nine and a half years.
7212. When did you leave the institution? About eleven years ago.
7213. At the time you were there were there any complaints about the treatment of the patients? No; I never saw or knew of anything to complain about. I never had a home, since nor before, as good as Bayview House. There was always plenty of everything, and there was cleanliness and comfort. I was perfectly satisfied.
7214. Was this the case both in Dr. Tucker's and Dr. Vause's time? Yes.
7215. Was Case No. 1 at Bayview House in your time? No. I have seen a good many gentlemen come there, though, and leave the institution in first-class health.
7216. *Dr. Garran.*] Do you remember the two isolation rooms on the private side? I do, sir.

7217.

7217. While you were there who cleaned them out? Each in his turn. One attendant on one day, and another attendant on the next. We put clean beds in these rooms every morning, no matter whether those used in during the previous night were soiled or not. The rooms were washed out every morning with chloride of lime.

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7218. Were they well cleaned? Yes; and they were examined by the doctor every morning.

7219. Were they often used? Sometimes a gentleman was put in when he was not clean enough in his habits to be with patients in the other rooms.

7220. Did you notice if patients ever suffered from cold in these rooms? No; they had splendid blankets and canvas quilted under and over.

7221. *Mr. McGowen.*] Were there any night attendants kept on? Yes.

7222. Was there always a night attendant on duty? There might not be always; but there was when there was anyone in a single room. I was often on night duty myself if there was a gentleman in one of the rooms. If I was not on duty some other attendant was, to see the patient a good many times during the night—sometimes as often as every five minutes.

7223. Was this always the case when anyone was put in either of these two rooms? Yes; the patient had to be looked after thoroughly both night and day.

7224. Are you sure that an attendant visited these places at least once every hour? Yes; and oftener than once an hour. Sometimes as often as every five minutes, both day and night.

7225. Was there a tell-tale clock to register these visits? No; I did not see one.

7226. How do you know that these visits were made, then, every hour? Because one attendant was watching the other.

7227. Was there more than one attendant watching in the night-time? Yes; my time would be up at a certain hour and another would take my place.

7228. Were you ever up all night? I would sometimes be up all night.

7229. What I mean is this—supposing you had to visit the cells at 12 o'clock at night, and had to do so every hour or half hour afterwards, what proof could you give the doctor that you had done so? I used to do it; I would not go to bed.

7230. Could you make any record that you had visited these rooms at 12 o'clock at night? I know I should have been found out if I did not, and then I should have had to leave. As far as I know, the patients were looked after according to instructions.

[Witness withdrew.]

Mr. \* \* \* sworn and examined:—

7231. *President.*] Where do you live? At \* \* \*

7232. What is your occupation? I am an engineer and brassfounder.

7233. Was your wife under treatment for some time at Bayview House? Yes.

7234. Do you remember the date on which she was first admitted? It was about June, 1893.

7235. Were you satisfied with her treatment? Yes, I was.

7236. Is she perfectly well now? Not perfectly; but well enough to get about the house and to attend to matters.

7237. Was she granted leave of absence on two occasions? Yes.

7238. Did she come home after the first? Yes.

7239. Did she return to Bayview? Yes.

7240. Now that she has been finally discharged, are you satisfied that she was properly treated while she was there? Yes.

7241. Does she ever speak to you about her treatment at the institution? She did while she was there; she praised everything that went on, and was quite satisfied.

7242. Is the principal point of your evidence that you desire to state on your wife's behalf that she was perfectly satisfied with her treatment? Yes; and there is another thing I want to say. The main reason why I came to give evidence was to tell you that Dr. Vause was very generous, and not mercenary in any way. After the first three months my wife was there I thought it better that she should go among the Government patients. My resources had been drained by the intemperate habits of my wife for many years, and I thought, perhaps, her mixing with Government patients would do her good. Dr. Vause said he could not agree to that. I wrote and told him I could not afford to continue the payment I had already been paying. Dr. Vause asked me how much I could pay. I told him, and he agreed to it without demurring. Afterwards my wife told me that there was no difference in her treatment; in fact, it was better than it was at first. The doctor thought it was better that she should go to his house, and she was taken there for a time.

7243. Notwithstanding the diminution in payment? Yes; that is one of the reasons why I came here to say he behaved very generously.

7244. *Dr. Garran.*] Was the patient sufficiently violent to be put in a single room? No; she was never violent.

7245. *Dr. Manning.*] What was the reduction in payment? I paid 2 guineas per week for the first three months, and 30s. per week afterwards until she left.

[Witness withdrew.]

Mr.  
\* \* \*  
18 Dec., 1894.

WEDNESDAY,

WEDNESDAY, 19 DECEMBER, 1894.

[The Commission met at 11 a.m. in the Board Room of the Chief Secretary's Office.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
Esq., M.D., INSPECTOR-GENERAL OF  
INSANE.

ANDREW GARRAN, Esq., LL.D.

Dr. Vause was in attendance to hear evidence and examine witnesses in his own behalf.

Catherine Elinor Perrin, sworn and examined:—

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Elinor  
Perrin.  
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7246. *President.*] How long have you been engaged at Bayview House? For ten months.
7247. When were you originally engaged? On the 14th February this year.
7248. Have you been in constant employment as a nurse since? Yes.
7249. By whom were you engaged? By Mrs. Gilchrist.
7250. Did you sign the book containing a list of your duties, setting forth your responsibilities and the rules and regulations of the institution? Yes.
7251. In what particular department were you engaged? In No. 2, Ladies' Private Room.
7252. Have you been much about the other parts of the institution? No.
7253. Do you know much about them? No.
7254. Do you remember Case No. 12? Yes.
7255. Was she in No. 2, under you? Yes.
7256. Do you remember that doses of medicine were given to her to make her sleep? She had a sleeping draught sometimes.
7257. What was the effect of this medicine on her as far as you recollect? She slept.
7258. The next morning after she had taken this medicine did you see any effects of its operation? No.
7259. Did you notice anything peculiar in the patient? No.
7260. Was it the custom to give this kind of medicine to that class of patient? Yes.
7261. Was Case No. 12 any different to other patients in that respect? No.
7262. Do you remember her coming to the institution? Yes.
7263. Did you see her when she arrived? Yes.
7264. Where did she sleep on the first night of her arrival? In No. 2 private room.
7265. Are you quite sure about that? Yes.
7266. Were you in charge of that room then? No; Maggie Macleod was in charge at the time.
7267. Are you quite sure she slept in No. 2, for it has been stated in evidence that she slept, on this particular night, in one of the single rooms on the Government side; was that the case? I do not think she was put into a single room until she had been at the institution for some days.
7268. Do you recollect positively whether she slept in a dormitory or in a single room on the first night after her arrival? I am in doubt, but still I have a feeling that she was put into a dormitory.
7269. As far as your recollection extends, was she placed in No. 2 dormitory? Yes.
7270. Some days afterwards, being restless and troublesome, was she placed in the single room to sleep? Yes; I think that was so.
7271. Did you ever see her badly treated? No.
7272. Did you ever see any other patients either rudely or badly treated? No.
7273. Did anything of that kind come under your observation? No.
7274. Although you were not there at the time, do you feel quite sure that on the first night that Case No. 12 was at the institution she slept in No. 2 room, under Maggie Macleod? Maggie Macleod was not in charge of that room. She may have been there temporarily. She was in charge of the dining-room, not of the dormitory.
- 7274½. Have you seen patients put into the single rooms? Yes.
7275. Have you helped to put them in? No; only case No. 12.
7276. Have you ever assisted with regard to others at all? No.
7277. Have you seen others put in these single rooms? I have sometimes.
7278. Are these cells prepared for the patients? Yes; they contain beds, blankets, and pillows.
7279. Was everything made as comfortable as possible? Yes.
7280. Have you ever known patients to be put into these rooms naked? No.
7281. Did some patients volunteer to sleep in these rooms? Yes.
7282. Was there any night watch on this side of the establishment? Yes.
7283. Has there always been one? Not always. Sometimes patients would be seen every four hours, and, if noisy, every two hours.
7284. Since when has this regulation been in force? That has always been in force.
7285. Has any change been made recently in regard to this night watching? Yes; there is a permanent night nurse now.
- 7285½. Has that change been made within the last four or five months, or since May last? The change may have been made longer than that.
7286. Has it been made for about six months? Yes; six or seven months.
7287. Do nurses now take it in turn to patrol these wards at night? Yes; they pay a visit every hour.
7288. Is there a tell-tale clock to mark off the time when the rounds are made? Yes.
7289. Is the food supplied to the patients always satisfactory? Yes.
7290. Is there any objection in respect to the quantity, the quality, or the way in which the food is cooked? No.
7291. Have patients ever complained of not having a sufficient supply of food? No; they always have more than sufficient. I serve the dinners, and always give the patients more than they want.
7292. Is the supply of bread always ample? Yes; there is plenty of it.
7293. If it is stated by some witnesses that there is not a sufficient supply of bread, can such a statement be true? It is not true; there is always plenty of bread.

7294. At night, if there is any particularly noisy or troublesome patient calling for assistance, can you hear her? Yes; I sleep close to the patients in the single room.
7295. Supposing cocoa, tea, or anything of that kind was required at night, is provision made for obtaining this nourishment? Yes; stores are kept in a cupboard for that purpose.
7296. Where? Both in the matron's room and No. 2 dining-room.
7297. Are these always accessible? Yes.
7298. Has that been the case ever since you have been at the institution? Yes; and all the other nurses have been told the same thing.
7299. Were there any means of making cocoa, tea, or anything warm? Yes; there is always a fire.
7300. Was there any provision in any other room for similar requirements? Yes; in the little kitchen.
7301. Has this been the case all the time you have been there? Yes; I can safely say so.
7302. Have you seen the official visitors go round the institution? Yes.
7303. Did you go round with them? Yes; sometimes.
7304. Have they ever spoken to you about the patients? No; they generally speak to the matron or to the doctor.
7305. Did they examine the patients? I know they have talked to the ladies.
7306. Did they examine the beds frequently? Yes; they often turn them up.
7307. Do you know if the official visitors knew what the dinner is like? They have been there twice since I have been there. I have seen them there.
7308. Was the dinner on these occasions any different to the ordinary dinner? No; it was just the same.
7309. While you have been at the institution have you seen any form of restraint used in the way of muffs or anything else? I have seen restraint used in regard to two Government patients. One was Case No. 59, where restraint was used occasionally. The other was Case No. 15, and sometimes Case No. 37.
7310. Do you know of anybody else? No.
7311. What was the reason why Case No. 59 was under restraint? She was very destructive in her habits, and when she becomes violent she might kill any of the other patients.
7312. Have you seen any other form of restraint used? No.
7313. Has your observation been principally limited to the ladies' department amongst private patients? Yes.
7314. So far as you know, is everything carried on satisfactorily for the comfort and treatment of these patients? Yes.
7315. Have you seen much vermin about the institution? No.
7316. In this respect was there anything more than is usual in a large establishment of this kind? No.
7317. Have you had any experience prior to this in a lunatic asylum? No; this was my first experience.
7318. When the official visitors came, was there ample notice given to get patients ready for inspection? No; the official visitors often came before there was any time to make preparation at all.
7319. Have you ever taken any trouble to put patients in order by making them tidy, except so far as putting a collar on, arranging their dresses, or brushing their hair? That is all it has been possible to do, and very often there is not time to do that.
7320. Did the official visitors drop upon you as a matter of surprise on many occasions? Yes.
7321. Do you remember when Mr. \* \* \* came to visit his daughter (Case No. 12)? Yes.
7322. Did he come frequently at one time? Yes.
7323. Did he ever ask you which room his daughter slept in? He never spoke to me, and I never spoke to him.
7324. Did you ever see him in conversation with his daughter? No.
7325. As far as you are concerned, did he seem to be perfectly satisfied with the way in which his daughter was progressing? Yes; he seemed to be pleased that she was getting on so very well.
7326. From the impression conveyed, do you think Mr. \* \* \* was satisfied with the way in which his daughter was treated? Yes.
7327. Do you know whether the daughter slept in the room that was pointed out to him? I do not know.
7328. Were you present at any of the interviews when the father visited the institution? I was not.
7329. *Dr. Manning.*] Have you not spoken with regard to Case No. 15 and Case No. 59 being in muffs? Yes.
7330. Did you ever see the muffs removed when the official visitors came to Bayview House? No; I have not been in that division when they came.
7331. How often does Dr. Vause go round the institution? Several times a day.
7332. At what time? Before 7 o'clock in the morning and up till late at night. I have seen him go round as late as half-past ten at night, and I have seen him sometimes as early as ten minutes past 6 in the morning.
7333. What are the usual times when Dr. Vause makes his rounds? I have seen him at breakfast-time, between 10 and 11 o'clock in the morning, at 12 o'clock, and between 4 and 5 in the afternoon.
7334. Has Dr. Vause visited the institution at these times ever since you have been there? He was ill at one time, and when I went there Dr. Ramsay officiated for him.
7335. Were you at Bayview House while Case No. 17 was there? No.
7336. *President.*] Do you remember Margaret Macleod? Yes.
7337. We have had many statements of a contradictory nature; I should like your opinion as to the truthfulness of this witness; was she a truthful girl? As far as my experience goes she was never truthful.
7338. Supposing she says that the food was not sufficient in quantity; that it was bad in quality; that it was badly cooked; that there was an insufficient supply of clothing; that she could not get clothing for the patients,—is she telling the truth? I am afraid she is not telling the truth. I have always found plenty of food, of good quality, well cooked, and ample clothing.
7339. Do you believe Macleod to be a truthful person? No; no one in the institution believed her to be truthful.
7340. Do you know a nurse named Lizzie Verity? Yes.
7341. Do you know one named Rose M'Mahon? No.
7342. Do you know Bridget Morrisey? No.
7343. Have you any reason to doubt the veracity of Lizzie Verity? No.
7344. Supposing Lizzie Verity in her evidence says that patients were put into the cells stripped of clothing;

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clothing,—is that true? I never saw that. Patients placed in the single rooms always had night-clothes and bed covering. One or two might have been placed in the single rooms without clothing because they tore off their clothes.

7345. Would they all be destructive patients of this kind, because she says they were all stripped;—is that the case? I never saw anything like all of them.

7346. Did you see Case No. 12 in that room? Yes; I put her there.

7347. Did she have a night-dress, chemise, and so on? Yes; except when she tore them up.

7348. Were these night-clothes put on her at first to try if she would wear them? Yes.

7349. Did she afterwards become so destructive that the things were useless? Yes.

7350. After that was she supplied with a sufficient amount of bed-clothes? Yes; she had blankets.

7351. Did you give her rugs? No; only blankets and a quilt.

7352. Did she tear these? No.

7353. The witness Macleod was asked if there was any provision for supplying patients at night with hot coffee, tea, or any other warm drink, and she said "No";—is that your experience? No; there was always a fire, and one could always get these things in No. 1 dining-room.

7354. Have you ever noticed that the clothing of the Government patients was inadequate? No.

7355. The same witness said that the clothing supplied was very bad and insufficient;—has that come under your observation? No; not in the main. I can say more. If a patient was destructive and tore up her clothes constantly she would be supplied with new.

7356. She said that it was impossible to get a sufficient supply from the store;—is that true? No; there was always an ample supply.

7357. Do you remember Case No. 1 being removed from Bayview House? Yes.

7358. Do you remember a large supply of clothing being brought in immediately after his removal? No; I do not remember any particular change in the supply of clothing.

7359. Do you mean to say that there was nothing more than usual? No; there is always an additional supply bought at the beginning of winter.

7360. Did you see anything extraordinary in the matter of supply at the beginning of the present winter? No.

7361. If this witness says that there was an unusual supply of material bought just after the removal of Case No. 1, and that people were brought into the asylum to make up the clothing,—is that true? We all help in making up clothing at that time of the year.

7362. Was there any extraordinary supply of material brought in on this occasion? No; nothing of the kind.

7363. Did you ever hear, in the course of your experience at the institution, that the clothing of some patients was put on others to make them look presentable when the official visitors came round? No; I never did.

7364. Do you remember the case of a patient who had her arm broken while she was in one of the private cells? Yes.

7365. What was the name of that patient? Case No. 20.

7366. Do you know when she was put in the cell at night? I do not; I was not there.

7367. Were you present when she was taken out? No.

7368. When did you know about her arm being broken? I heard about five minutes past 7 in the morning, when her arm was being bound up.

7369. Who was binding it? Dr. Vause.

7370. Do you know the particulars of the case? No.

7371. Do you know of any other patient having received injuries while in these single cells? No.

7372. Are you perfectly satisfied with the general management of the institution, and that all possible is done for the comfort and cure of the patients? Yes, I think so.

[Witness withdrew.]

Ada Simpson sworn and examined:—

Ada Simpson. 7373. *President.*] Are you at present employed as nurse at Bayview Asylum? Yes.

7374. Were you engaged for that position about November, 1893? I was.

7375. In what part of the institution are you occupied? On the Government side.

7376. Have you been there the whole of the time since your engagement? Not all the time, but I am now in charge of the patients.

7377. Are you on day duty or night duty? I am on day duty.

7378. Latterly, have you taken day and night duty in turn about? I have not. I am not a night nurse.

7379. While you have been at the institution have you seen any neglect of Government patients? No; I have not.

7380. Have you seen any placed under restraint, such as wearing muffs? Yes; I have seen some wearing muffs and some wearing strong dresses.

7381. How many have you seen wearing muffs? One particularly—Case No. 59.

7382. How many have you seen wearing strong dresses? Three of them.

7383. Are these strong dresses put on these three patients because they tear up their ordinary clothes? Yes.

7384. Are they put on simply to prevent the patients tearing up their clothes? Yes.

7385. Are gloves placed on the hands of Case No. 59 because she is dangerous? Yes.

7386. Do you know that patients are put in the single cells off the verandah? Yes.

7387. Did you ever help to put them in? Yes.

7388. Do you know if any are put in during the day-time? Yes, they are, if they fight with other patients or become generally troublesome.

7389. On these occasions who puts them in? Whatever nurse is in charge.

7390. Has the matron generally ordered them to be put in? Yes.

7391. How long are they kept in on these occasions? Sometimes half an hour, and sometimes an hour.

7392. Supposing occasions arise when the nurse has to put a patient in these single rooms, is the matron informed at once? As a rule, we send and ask if we may put such a patient in a single room before we do.

do it. If a patient is exceptionally boisterous we put her in at once, but, as a rule, we go to the matron, and ask for permission. Ada Simpson.

7393. Have you any general permission to act on your own authority? No. 19 Dec., 1894.

7394. On the other hand, do you summarily lodge patients in private cells if they become dangerous? Yes; but it is only occasionally it happens.

7395. Supposing a case happens at night where a patient is put into one of these single rooms, who is responsible then? The matron; she is always there when a patient is put in at night.

7396. Are the rooms kept clean and tidy? Yes.

7397. Are they cleaned out every day? Yes; not only every day, but every time the patients leave them.

7398. What bedding is supplied to these rooms? Blankets, mattress—sometimes a single mattress, but always large ones when the patient is troublesome—rugs, pillows, sheets, and sometimes an india-rubber utensil.

7399. Do they give each one an india-rubber utensil? Yes.

7400. Are you sure about that? Yes.

7401. Is there an ample supply, so that one can be put in each room? Yes; I have seen one in each room.

7402. Who watches over the patients at night? The nurses have taken it in turns during the last five or six months.

7403. Have you seen patients taken out in the morning? No.

7404. Have you ever seen patients put into these rooms at night naked? No.

7405. Never? I have only seen Case No. 15 put in naked; all the others are supplied with night-dresses, but they sometimes tear them. Case No. 15 would tear her clothes before you could turn your back.

7406. Have you had timely notice of their arrival when the official visitors come to Bayview House? No; not unless the nurses happen to see them come in, and then mention it to us.

7407. Do you then get the patients together? Yes; we get them together at once, so that the visitors may see them easily.

7408. When the visitors go round the institution, do they ask you any questions about the patients? No.

7409. Do they ask the matron? Yes; we report to the matron, and she tells all that is told about the cases.

7410. Did you ever see the dresses of patients altered—such as putting a clean dress over a patient to hide her actual condition from the official visitors? No; I have never seen that done.

7411. What do you do when the official visitors come in the way of arranging the patients' dresses? Some of the patients are very unruly, and object to have anything done. We just put their collars right, straighten their dresses, and make them look presentable.

7412. Would it be possible for you and the other nurses on the Government side, if you received ten minutes' notice, to re-dress all the patients, and make them clean? No, it would not. I have never known it attempted.

7413. Have you ever been told a quarter of an hour or twenty minutes before the official visitors came through the ward to get the patients ready as quickly as you could? No; I have never been told.

7414. If the witness, Maggie Macleod, said that information was specially conveyed to the nurses in charge of the Government patients so as to put them in order for the official visitors,—is that true? It is not true, according to my knowledge.

7415. Have you ever received an intimation of that kind? No.

7416. Do you know Maggie Macleod? Yes; she came the week before I did.

7417. Do you remember when she left Bayview House? Yes.

7418. Did you ever have any conversation with her about the institution? No.

7419. Did she ever tell you that there was an insufficient supply of clothing, and that the whole place was neglected? No; she was always grumbling, and was of a disagreeable nature. I never took much notice of what she said.

7420. Was she a truthful girl? No; she was not truthful.

7421. This same witness said that the box-room was full of vermin;—is that true? No.

7422. Were there any bugs there? Not that I am aware of.

7423. Macleod said, "From the first day I entered the room I was in a state of misery on account of the number of bugs there";—is that true? There are no bugs there.

7424. She said that the patients put into these single rooms had to sleep on straw without a mattress of any kind;—is that true? There is only one patient of this kind, and that is case No. 15.

7425. She said there were a large number of patients stripped and put into these rooms with a bag of straw;—is that true? No; it is not true.

7426. She was asked if they stripped themselves quite naked what they had to cover them with, and she said they had nothing at all;—is that true? No; each one has a night-gown, and a bed is made for them to go into.

7427. She was asked further if these patients were supplied with sheets, blanket, or any other bedding, and she said there were neither sheets nor anything else, and then she went on to say, "There were only sheets for two patients while I had anything to do with them for a period of about five months";—is that true or false? It is false.

7428. She was asked what patients got for breakfast, and she said, "I never saw them get anything but rough chops, cooked badly, on one day, and a rough meat stew put before them the next day";—is that true? It is false. I consider the food very good. It has always been very good, and very good stew.

7429. Is the general statement made by Macleod in regard to the breakfast utterly false? It is quite false.

7430. Is the tea supplied to the patients good or bad? It is good.

7431. Macleod was asked if the patients were not supplied with plenty of bread and butter. She said "No; down at the Government end they only used to get dripping or treacle. There were as many as fifty-two patients down there, and they were allowed—so the sub-matron told me—2 lb. of butter per week";—is that a true statement? They often had butter, sometimes jam, sometimes treacle.

7432. Is it true that there was only 2 lb. of butter per week for fifty-two patients? No; it is not true.

7433. She was further asked if the quantity of butter supplied was absolutely insufficient for the patients, and she answered, "Yes; we used to scrape and scrape, so that each could have a bit";—did you ever see anything of that kind? No; but I have been told to use the butter properly, and not waste it.

- Ada Simpson. 7434. Is there always an ample supply of butter? Yes; always.
7435. Was there an ample supply of dripping and treacle when these were given to the patients? Yes.
- 19 Dec., 1894. 7436. In other words, was there such scraping and scrimping as described by the witness Macleod? There was nothing of the kind.
7437. She was further asked what the patients had for dinner, and she said that they mainly had a sort of stew made with boiled necks of mutton, and that she never saw any other joints there;—is that true? No; they always had a very good stew, when they had stew at all.
7438. She was asked if the patients had soup, and she replied that they were served with soup twice a week, but it was very poor in quality;—is that true? They had very good rich soup every other day, such as gentil, barley, rice, and pea soups.
7439. Have you seen all kinds of joints, both of mutton and beef, at the institution? Yes.
7440. When Maggie Macleod says that the joints there were mainly necks of mutton, and that she never saw anything else,—is that true? It is absolutely false.
7441. She was asked if she was obliged to take just what food came from the kitchen and distribute it as best she could, and she replied, “Very often I have gone down to the kitchen and tried to get more, and I was told that Dr. Vause would not allow any more”;—is that in accordance with fact? It is utterly untrue. There has always been plenty, and more than sufficient. There was always more in the kitchen if sufficient had not been carried to the dining-room; but I do not remember any occasion when we had to go down for more.
7442. Do you ever go with the patients to see their friends? No; I have not been.
7443. Do you remember Case No. 11? Yes; she is a private patient. She is there now.
7444. Do you remember her daughter complaining about the state of her underclothing? No; I never heard of it.
7445. Did you ever hear of the patient being so much neglected as to be allowed to roll about in her own dirt? No; I do not think that is possible. She is generally a clean patient, and looks after herself; and, besides that, a nurse is always looking after her.
7446. It has been stated by some witnesses that the sheets are put on the beds in the associated dormitories during the day and taken off at night;—is that the case? There are four, and sometimes five, beds from which the bottom sheets are removed because of the dirty habits of the patients. I take away the sheets and replace them with waterproof sheets and a double blanket.
7447. Has it ever been your practice to take the sheets off for the purpose of saving washing or for preserving the sheets? No.
7448. Was the object in removing these bottom sheets to make the patients more comfortable and cleanly? Yes.
7449. Who directed you to do this? The matron, Bridget Morrissey.
7450. Did you only do this with the dirty patients? Yes.
7451. Were the other patients supplied with linen? Yes.
7452. Do you know whether Macleod and Verity took off the sheets for other reasons? No.
7453. We have had it in evidence that Maggie Macleod did take off the sheets;—did you ever know of it? No; except those I mentioned.
7454. Was Macleod in that room during your absence? Yes; I was nursing a special sick patient for about six weeks.
7455. During that time was Macleod in charge of your dormitory? Yes.
7456. Would it be during that time that she would remove the sheets from the beds? Yes. If she did take them off she did it slyly and without authority.
7457. Do you flatly contradict everything that Maggie Macleod says in this matter? I do.
7458. Is the ward we are talking about the same dormitory that you are now in? Yes.
7459. Are there fourteen beds in that ward? Yes; seven on each side.
7460. Do these women, sleeping in these beds, always wear night-dresses? Yes.
7461. All of them? Yes.
7462. Even those four from whose beds you removed the sheets? Yes.
7463. If Maggie Macleod said these patients did not wear night-dresses, is that true? It is untrue.
7464. She said that only one patient had a night-dress until some were made lately, and then she goes on to say, “Some coarse brown calico was bought, and Dr. Vause got the coachman’s daughter to come in and make it up”;—is that true? We could always get an ample supply from the linen-room, and we regularly got a supply when necessary.
7465. Were you ever on night duty? Only with the special patient.
7466. Do you know if the nurses on night duty can get refreshments for patients, such as coffee, tea, or warm milk? Yes.
7467. Where are these refreshments kept? In a cupboard in No. 1 dining-room.
7468. Has the matron any under her charge? I do not know. There are plenty of stores in No. 1 dining-room.
7469. Always? Yes.
7470. What stores are they? Milk, tea, sugar, bread and butter, and eggs. The night nurse has a key of the cupboard.
7471. What means have you of making food warm? A fire in No. 1 dining-room.
7472. Is there always a fire there? There always has been since I have been there.
7473. All through the night? Yes.
7474. Have you any need to go to the kitchen at all? No.
7475. Could the nurses get to the kitchen, if necessary, during the night? Yes; there is a pass-key hanging in the cook’s room. You can go to the cook’s room, and just inside the door is a key hanging that will open the cross-lock.
- Dr. Vause.] I did not even know that. I thought the cook had a key, but I did not know a cross-lock key was available for the other nurses.
7476. President.] Maggie Macleod said in her evidence that if she wanted a cup of warm tea, cocoa, or milk, she would have to wake the cook before she could make it hot;—is that true? It is untrue.
7477. Do you know that you are giving evidence on oath? I do.
7478. In the statements you are making are you endeavouring, as strictly as possible, to adhere to the truth? Yes; all I say is true.
- 7479.

7479. I tell you this because, in the main, the statements made by Maggie Macleod are the very reverse to what you say as the result of your experience, and I ask you now, as far as your experience goes, are the statements made by Macleod quite wrong? They are absolutely untrue. Ada Simpson.  
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7480. Have you any complaints to make about the institution? No.
7481. How long are the muffs kept on patients during the day? There is only one case where the muffs are kept on, that is the case of Case No. 59, and when in her room they are off. When she is amongst other patients, for safety's sake, they are kept on. She is the only patient who wears muffs.
7482. Have you seen that alterations have been made in these single rooms since last May? Yes; the gas has been laid on.
7483. Has there been an extra window placed over each door? Yes; and the gas is so laid on that the light can be thrown into the rooms through these windows.
7484. Do you remember Case No. 17? Yes.
7485. Did you attend upon her? Not particularly; I saw her in a general sort of way.
7486. Do you remember Case No. 18? Yes; she was a fit case.
7487. Do you remember this woman being ill? She had a great number of fits.
7488. Do you remember what food was supplied to her? Yes; milk. She would take very little food at all.
7489. Maggie Macleod says in her evidence that the food supplied to this patient was not sufficiently nourishing; that the milk was half water, and sometimes there was no such thing as fresh milk to be had. Is that possible? No; I always got plenty of milk for this patient, and arrowroot, too.
7490. Supposing patients were taken ill to whom would you report? I reported to the matron at once.
7491. Do you remember Case No. 12, and did you see her frequently while she was at the institution? Yes, I remember the case.
7492. It is stated in evidence that she took draughts to make her sleep at night. Did you ever see her when she got up in the morning? Yes.
7493. Did she seem to be suffering badly from the effects of the draught she had taken over night? No; she was always noisy.
7494. Was she noisy when she woke up in the morning? I do not remember.
7495. It is stated by some witnesses that several of the patients wore stockings without feet;—is that true? That is not true.
7496. Did some of the patients sometimes take off their shoes and their stockings, too? Yes.
7497. Were they immediately supplied with proper stockings if they tore up those they were wearing? Yes.
7498. Have you shoes specially made for the patients who object to wearing shoes or stockings? No, the shoes are not particularly made for that purpose. These patients wear ordinary boots, with a lock attached to the tops.
7499. Maggie Macleod says in her evidence that the patients, or rather some of the Government patients, often wore stockings without feet, and then they would try to stick the tongues of their boots in the openings, so as to hide their bare feet;—is that true? It is untrue.
7500. Did you ever make any complaints to the matron, or did you ever hear of any complaints being made to the matron about these things? No.
7501. Had you any conversation about the institution with Maggie Macleod at different times? No; I never had much conversation with her.
7502. Did she ever tell you that the place was scandalously managed? No.
7503. Did she ever tell you that the authorities of the asylum were trying to get as much money as possible out of the patients? No.
7504. Am I to gather from your evidence that you have not much confidence in what she said? I have none at all. She was a deliberate story-teller, and I never believed anything she said.
7505. Did you know anything at all about a patient who had her arm broken? Yes.
7506. Did you put that patient in a cell the night before this happened? No. I put her into a dormitory. I believe she got very troublesome there; but before this happened I went off duty. The last I saw of her was about 8 o'clock at night. Before leaving I tried to coax her to lie in bed, but I understand that as soon as I left she got up again.
7507. Was her arm broken at that time? No.
7508. Do you remember at what hour she was taken to the single room? No; that happened after I went to bed.
7509. *Dr. Manning.*] Where did Case No. 17. sleep? In No. 2 dormitory.
7510. Do you remember how long she slept there? No; I do not.
7511. Do you know if she was in a single room part of the time? Not to my knowledge.
7512. Do you know anything about this patient being placed in a single room without covering, and being left there from 7 o'clock at night till 7 o'clock in the morning? I know nothing about that.
7513. Always when you saw her was she sleeping in an associated dormitory? Yes.
7514. *President.*] Did you always find that Dr. Vause was attentive to his patients? Yes; always.
7515. Have you seen him in the institution at other times than when he made his regular round at 12 o'clock in the day? Yes.
7516. If Maggie Macleod says that she never saw Dr. Vause in the institution except when he made his usual rounds, is that true? Dr. Vause often comes in irrespective of his general rounds and mixes amongst the patients.
7517. The same witness was asked if Dr. Vause ever saw and attended to any special case. She said, "No, he never did;—is that true? I have often seen him attend patients when necessary.
7518. Do you remember if patients wearing muffs had them removed when official visitors came to the institution? I do not. When Case No. 59 was wearing muffs the official visitors saw her.
7519. Do you remember Case No. 15, and did she as a rule wear muffs? She wore strong dresses and muffs too occasionally, nearly every week.
7520. Were the muffs taken off at night? Yes; they were always taken off at night at meal times.
7521. For how long was she in the habit of wearing the muffs? Sometimes for a week at a time.
7522. Did she wear them continually for two or three months? No, I am quite certain about that.
7523. Do you remember that you are on your oath, and are you quite sure that she did not wear them more than a week at a time? Yes.

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Simpson.  
19 Dec., 1891.

7524. *Dr. Manning.*] Did you ever see the muffs removed from Case No. 15 when the official visitors came to the institution? No; I did not.
7525. From whom did you see the muffs removed? Nobody.
7526. When the official visitors have gone round to see the patients, and when they saw them wearing muffs did they inquire into the nature of the case? No; they would see Case No. 59 and speak to her. She would go straight to them.
7527. Was Nurse Verity there while you were in the institution? Yes.
7528. If Lizzie Verity says that as soon as the alleged facts respecting Case No. 1 became public there was a large quantity of clothing supplied to the patients;—is that true? That is not true, as I have already said.
7529. This witness was asked if the patients, when visited, were taken in a disreputable condition to see their friends and relatives. She replied, “No; their clothes are changed; a decent skirt would be put on the patient if she possessed one, and if she did not have one of her own, better clothing would be taken off one of the other patients, and put on that patient who would be going to see her friends”;—is that true? No; if anything was wanted in the way of dress it would be taken from the linen room.
7530. Would the clothing be taken from another patient and put on her? No; I never saw that done in my experience.
7531. She was further asked if she had seen a number of patients wearing stockings without any feet. She replied, “That numbers of them are like that; but I do not take much notice of things of this kind, for you can’t get some patients to keep their stockings on”;—is that true? In some cases patients will not keep their stockings on. For instance, Case No. 50 cannot be controlled in this respect. Occasionally we have had to lock her boots on.
7532. Do you remember how Case No. 12 was dressed when she was first in the institution;—did she wear an ordinary dress? Yes.
7533. Was this clothing taken away from her at night, and was she dressed a little differently before she was placed in bed? Yes.
7534. What dress was put upon her then, especially when she was placed in a single room? A night-dress.
7535. How many mattresses were placed in the single room when she slept there? Several, because she would not stay in bed. This precaution was taken until she became quiet. There were two double mattresses placed in her room.

[Witness withdrew]

A. Jarvie Hood, Esq., M.B., M.S., sworn and examined:—

Dr. A.  
Jarvie Hood.  
19 Dec., 1894.

7536. *President.*] We understand from the note that you wrote to the Commissioners, that you desire to give evidence as regards the management at Bayview House? Yes, I do.
7537. In what particular direction will your evidence tend? For fully a month I visited the institution daily to attend upon the matron. While doing so I had good opportunities of observing the nursing and the patients; and I think, having seen these, one has a right to express his opinion.
7538. While you were attending on the matron had you full opportunity of going through the institution? Yes, repeatedly; both in the day and in the night. I think I went through most of the wards; and when there at night I saw some of the unruly and noisy patients.
7539. Did you see the building across the courtyard, near the kitchen, set apart as isolation rooms for male patients? Yes; I was in that room.
7540. Were you in that room, or one of those rooms, before Case No. 1 was removed from the asylum? No; I was in the room in October and he left in May.
7541. What is your opinion about the ventilation of this room? It seemed to be perfectly right. I was in it in the daytime when the room was not occupied.
7542. Was it well ventilated? Yes; it smelled perfectly fresh and sweet.
7543. At what time of the day were you in this room? In the afternoon, between 4 and 6.
7544. Did you make any inquiries, to ascertain whether or no it was occupied? No; I did not ask, but I do not think it was occupied at the time.
7545. What was the means of ventilation? There were some openings round the top near the roof, which is the best way of ventilating.
7546. Was there a window in the room? Yes; opposite the door, high in the wall. There was a shuttered opening.
7547. How was the roof ventilated? I think there was some grating in the roof; at all events, the room seemed to be perfectly fresh.
7548. Did you notice how the floor was ventilated? No.
7549. Did you notice any grating in the floor or near the floor? No; I did not pay particular attention, for at the time I did not know that I would give evidence before this Commission.
7550. Did you see a number of single cells on the Government side? Yes; I looked into about half a dozen, and I thought the method of lighting them was a very good one. It is so arranged that you can see the patients without disturbing them.
7551. Do you mean that this can be done by turning up the gas? Yes.
7552. Did you notice a small window over each of the doors of these rooms? Yes; that is where the light is thrown in.
7553. I may inform you that these are recent improvements or alterations in these cells;—are you satisfied that they are suitable for the purposes for which they are intended? I think they are very well suited.
7554. Have you had any experience in lunacy work? Yes; I was, about ten years ago, Resident Medical Officer at Smithton Asylum, Greenock, where there were between 300 and 400 patients.
7555. Having seen these rooms which you have described, do you consider the patients placed in them should be under close inspection during the night? I think they require to be visited more frequently than other patients.
7556. How often, judging from your experience, should these patients be visited by the night patrol? I think at least every two hours. Some need more frequent visits than others.

7557.

7557. Would you think it sufficient surveillance for a nurse to be sleeping at each end of these rooms—would that be satisfactory without any night patrol at all? No; I do not think so. I think someone should go round more or less frequently all through the night.

7558. *Dr. Garran.*] Did you notice that on the female side the isolation buildings were inside the building? Yes.

7559. Did you notice that the isolation rooms on the main side were detached from the main building? Yes.

7560. Do you think there is any advantage in the detachment? Yes; I think I do. The patients are further away from the others, and there is less chance of them either disturbing other patients or being disturbed by them.

7561. Do you think the floors of these detached rooms would dry more quickly than they would in a corridor? Yes.

7562. Do you think the advantages are greater than the disadvantages in having these rooms detached? I think the one balances the other pretty evenly.

7563. Is there any great harm in bringing patients from these rooms across the yard to their bath? No; not in ordinary weather. I do not think patients should be brought across the yard in wet weather.

7564. When you were in charge of an asylum had you occasion to put patients in solitary rooms? Yes.

7565. At what degree of violence and destruction did these patients arrive before you took this course? When they became inclined to injure themselves, or to become dangerous to others, or when they tore up their clothing.

7566. If patients became so noisy as to disturb the rest of others, would that be sufficient justification to put them into solitary confinement? Yes; that is quite sufficient, for one noisy patient would upset the whole ward and do a great deal of harm.

7567. Did you find that separate treatment benefited this class of patient? Yes, always.

7568. Did you find that having an attendant day and night with a restless patient was better or worse than allowing such a patient to sleep in a single room? In a large majority of cases it is best not to have an attendant in the room.

7569. Does a patient sleep best alone? Yes.

7570. When alone is there less of disturbance and more of sleep? Yes.

7571. Supposing patients were dirty, how often would you clean them up and put them to rights? If he were in a sound sleep I would not wake him for purposes of cleanliness. If he was not in a good sleep nor likely to go to sleep he might be cleaned.

7572. Supposing he was not awake, would giving him a utensil or interfering with him in any way, thereby inducing restlessness and irritation, do more harm than allowing him to remain in his dirt? Yes; most probably it would do him more harm.

7573. Looking at this question from a medical point of view which would you rather do, wake the man up for purposes of cleanliness or let him remain in his dirt? I should most certainly not disturb him as long as he could sleep.

7574. Would you sink the whole of the sentimental side of the question and treat the patient for his own good? Yes; quite.

7575. In dealing with questions of this kind must the medical officer be his own judge in every case? Yes.

7576. *President.*] Having had some little experience in matters of this kind, is it the custom in cases of lunacy, when there is some difficulty in administering medicine, to give these medicines in the food and drink, or in other forms not usually resorted to in ordinary medical treatment? Yes.

7577. Have you any objection to raise against such a practice? No. I know that in some cases this course is absolutely necessary; I do it myself in private cases.

7578. Do you know that cases of melancholia sometimes relapse? Yes.

7579. Supposing there has been a case of melancholia under treatment at Bayview House; that it has recovered; that it is removed to the country; and that there is a slight relapse in the direction of sleeplessness—in such a case as this I ask you whether this is a suitable prescription for a patient in such circumstances. [*Prescription produced, Exhibit "B." See Appendix*]? It is a suitable prescription.

7580. Is there any danger in it? No; not if the patient took the whole dose.

7581. Is there the slightest danger? No; not the slightest.

7582. Are you quite sure? Perfectly. I have not the slightest doubt about it.

7583. If the patient took this would it have any tendency to bring the disease back or injure her in any way? I think certainly not.

7584. *Dr. Vause.*] In chronic cases, the patients being in good general health, sleeping in the single rooms, for noisiness or destructiveness would you disturb them by frequent visitation? No.

7585. Supposing it to be a dirty case; providing the patient is taken to the closet regularly during the day and is seen up to 10 o'clock at night and is then alright, and if a nurse is sleeping quite close, do you think there is any necessity to see that patient until the next morning? No; not if the patient is in good general health.

[Witness withdrew.]

Esther Allen sworn and examined:—

7586. *President.*] Have you been employed for some time at Bayview Asylum? Yes.

7587. In what capacity? That of housemaid.

7588. Have you attended on the patients at all? I have at different times.

7589. Are your particular duties those of housemaid? Yes.

7590. How long have you been there? About eighteen months.

7591. Have you had opportunities of going through the institution and seeing the general treatment of the patients? Yes.

7592. Have you had any particular duties in any department inside the institution? No.

7593. Do you know that occasionally the institution is visited by official representatives sent by the Government to look into the management of the place? Yes.

7594. When these official visitors come do they go to the office or do they go to the house first? Sometimes to one and sometimes to the other.

7595.

Dr. A.  
Jarvis Hood.  
19 Dec., 1894.

Esther Allen.  
19 Dec., 1894.

- Esther Allen. 7595. Is it the custom for you, when they come to the house and ring the door-bell, to notify their arrival to the nurses in the institution? I tell the matron, and she comes down and takes them through.
- 19 Dec., 1894. 7596. Is there any special message sent to the different departments of the institution, saying that the official visitors are there? No.
7597. Did you ever know of this being done? I do not.
7598. It has been given to us in evidence that when the official visitors arrive that you or some other person not only inform the matron, but that a message was immediately sent round to the different departments for nurses to get the patients ready;—do you know anything of that? No.
7599. Did you ever hear of it being done? No.
7600. Did you ever know of any case where a piece of paper containing a written intimation to this effect was sent to the nurses immediately after the arrival of the visitors? No.
7601. Do you remember a nurse named Josephine Mackay? Yes.
7602. She said, in her evidence, that when the visiting doctors come to the institution a message to that effect is sent to the different departments as soon as they are admitted;—is that true? No; I have told Josephine Mackay as I was going through that the visitors had arrived.
7603. Was that after you had seen the matron? Yes.
7604. Did you give notice in a casual sort of way? Yes.
7605. Had you any particular object in this? No.
7606. Are you quite sure about this? Yes.
7607. Do you know that you are on your oath, and are you telling the truth? Yes.
7608. We have it in evidence from a witness named Lizzie Verity that the official visitors made an ordinary inspection of the asylum, and she, as a nurse, with other nurses, always received timely notice of their arrival. Questioned particularly on this point, she replied, "A nurse or someone would come into wards in a minute and let us know if the doctors were there; then the attendants in the dormitories would come out and assist in getting the patients ready and everything in order;"—did you ever tell Verity such a message as that? No the only person I told of the arrival of the visitors was Josephine Mackay.
7609. Was the only instruction you received from the medical officer in charge to the effect that you were to let the matron know, so that she could take the visitors through the wards? Yes.
7610. Was the fact of your informing Josephine Mackay merely a matter of accident? Nothing else.
7611. Did you ever see any cruelty used towards the patients? No.
7612. Are you quite sure about this? Yes.
7613. Do you know anything of the internal work of the institution? No.
7614. Have you any complaint to make about the management of the institution? No.
7615. Do you know anything about the food and the clothing of the patients? They always seemed to me to be fairly well dressed.
7616. As far as possible were they kept clean? Yes.
7617. Was every attention paid to them by the nurses connected with the place? Yes.

[Witness withdrew.]

Mrs. \* \* \* sworn and examined:—

- Mrs. \* \* \*. 7618. *President.*] Was your husband (Case No. 1) for some time an inmate of Bayview Asylum? Yes.
- 19 Dec., 1894. 7619. Are you aware that on or about the 21st May last he was removed from Bayview to Callan Park? Yes.
7620. Had you any reason why he should be removed from Bayview House? Yes. I thought he was always under supervision, but I understood at the last moment that such was not the case.
7621. Did you make any complaint to that effect? I always took it for granted that there was the fullest supervision. Unfortunately I trusted the doctor, who always assured me that all was right. I could not trust to the dependants in the asylum, so I always saw the doctor personally.
7622. When you visited your husband, did you see him in a room set apart for the purpose, and was he brought to you. Not at all times. When I first saw him he was in his bedroom. Then, occasionally, I saw him in the sitting-room, and then I saw him in various rooms downstairs.
7623. Were you ever made aware when he was removed from these various rooms what part of the building he used for his sleeping-quarters? As far as I knew at first he used to sleep upstairs. Then he was brought downstairs to a room opposite the room I saw him in. That, I understood, was the room he slept in latterly.
7624. Were you aware that he was placed in any other room to sleep? Certainly not.
7625. Did he ever in the course of conversation with you make a statement to the effect that he was sleeping in a place that he called the stable? Yes; he told me that.
7626. What did you do then? I spoke to Dr. Vause about it, and Dr. Vause said my husband was not altogether responsible for what he said.
7627. Did he ever tell you that he slept in an isolated room? No; he told me he slept in the stable, and on a bed of straw. Twice I spoke to Dr. Vause about it, telling him what my husband had told me.
7628. What did Dr. Vause say? He said that I could not place any reliance on what my husband said. He added that the patient was never left alone, as it was not safe to leave him.
7629. Were you ever made acquainted with the fact that he slept in an isolated room while he was at Bayview House? Certainly not.
7630. Was the first information you received on this matter from certain public disclosures? My son was the first to tell me about it.
7631. Where did he get his information from? Mr. \* \* \*, of the firm of \* \* \*, our family solicitors, told him.
7632. Did you approve of your husband being removed from Bayview House to Callan Park? Most decidedly.
7633. Did you ever express an opinion to the chief attendant at Callan Park, Mr. Little, that you were satisfied with the treatment of Case No. 1 while at Bayview? No; I never said any such thing to Mr. Little or to anyone else. I am perfectly confident about that. I do not remember ever mentioning anything about my husband or his treatment at Tempe. I certainly never said anything about his treatment.

7634.

7634. Do you think your husband has greatly improved since he has been at Callan Park? He has always had variations in his condition. I do not think he is any better now than he has been. He has varied all the time since the beginning of his illness. Mrs. \* \* \*
7635. Was it with your full consent that he was removed from Bayview House? I did not know he was removed until after it was done; but I certainly approve of it. I did not know of it on the Sunday. My son told me that he had heard enough to make him dissatisfied with the treatment. He went and consulted with Dr. Scot-Skirving, and they had him removed to Callan Park. 19 Dec., 1894.
7636. Even now are you satisfied that such action was taken? Yes.
7637. While Case No. 1 was at Bayview House how much was paid for his maintenance? Five guineas per week. Dr. Vause asked that, and Dr. Scott-Skirving made the arrangement.
7638. Do you know what attendants waited on the patient? I knew there were two at one time, and I asked Dr. Vause if it would not be better to have three. He said it was not necessary.
7639. *Dr. Garran.*] Were you under the impression that one attendant, at least, slept in the same room with the patient all night? Most certainly I was. When I asked Dr. Vause about this, my greatest fear was that the patient might wake up and not rouse the attendants, and he showed me the way in which, on the patient first waking, the attendants would be sure to see and hear him.
7640. Are you of opinion that the patient should not have been shifted from his bedroom without your knowledge? Yes, or that Dr. Manning or Dr. Scott-Skirving should have been informed.
7641. Do you complain that this was not done? Yes.
7642. Do you know if an attendant was sleeping in the adjoining room when the patient was sleeping in the small room upstairs? So I have been told.
7643. *Dr. Vause.*] Did the patient improve for a time while he was at Bayview House? Decidedly. He was exceedingly ill for the first four months, and then steadily improved until August. After that his condition varied again.
7644. Provided he had an attendant constantly near him at night, would you have taken much exception to his being alone? If I had been told by anyone whom I could trust that it would be better for him I might not have objected, but I always understood that he had an attendant. I was not aware that he was placed in an outhouse.
7645. Do you know that the place he occupied has been sanctioned by the Inspector-General of the Insane for the very purpose it was used in the case of your husband? No.
7646. Are you aware that it is constructed upon a plan drawn up in the Colonial Secretary's Office, and that this room is under the constant supervision of the Inspector-General and the official visitors? No; I am not.
7647. Did you know that the room was under the official observation of these gentlemen? No; I did not know that.
7648. If you knew that the excited state of the patient rendered it advisable for him to be alone for some hours during the night, would you have been satisfied, had you known that there was an attendant constantly watching over him? If such treatment had been recommended by anybody I trusted.
7649. Do you know that I told Dr. Scott-Skirving that your husband was in a single room? No.
7650. Do you know that this fact is entered in the case-book at the institution? No.

[Witness withdrew.]

FRIDAY, 21 DECEMBER, 1894.

[Commission met at 11 a.m. in the Board Room, Chief Secretary's Office.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.  
 FREDERIC NORTON MANNING,  
 Esq., M.D., INSPECTOR-GENERAL OF THE INSANE. | ANDREW GARRAN, Esq., LL.D.

Dr. Vause was also in attendance to hear evidence and examine witnesses on his own behalf.

Sir Alfred Roberts, Kt., M.R.C.S.E., J.S.A., sworn and examined:—

7651. *President.*] As you are aware, Sir Alfred, this is a Royal Commission appointed to make a full and diligent inquiry into certain allegations made against the Licensed House for the Insane known as Bayview House, Cook's River Road, near Sydney. Are you one of the official visitors appointed by the Government to periodically inspect the licensed houses for the insane in this Colony? Yes.
7652. Are you Chairman of the Board of Visitors? Yes.
7653. How long have you held that position? For about thirty years, more or less, speaking from a rough guess; I have not exact data with me.
7654. Do you know Bayview Asylum? Yes; quite well.
7655. And all the buildings connected with it? Yes.
7656. Have great changes been made within the last few years in regard to the character of the buildings? Yes.
7657. Have the improvements made been mostly recommended by the official visitors? Yes; by the official visitors and the Inspector-General of the Insane.
7658. When inspecting the premises, has your attention been called to an isolation building in one of the yards near the kitchen, where there are two rooms into which patients under restraint, or for periods of seclusion, may be placed? Yes; there are two isolation rooms in one separate building.
7659. Do you remember when this building was erected? I think it was put up before I began my visits, and prior to the first license being granted.
7660. On many occasions have you had an opportunity of carefully inspecting the ventilation of this building and its general suitability to the purposes for which it is used? Yes.

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7661. What is your opinion concerning these isolation rooms? I think they answer the purposes for which they are intended very well.

7662. How are they as regards ventilation? They are very well ventilated. They are boarded round inside, and sufficiently lighted.

7663. In your opinion is there any advantage in having these two rooms isolated from the main building, especially taking into consideration for what purposes they are intended? I should say, of course, that these buildings are not the same in character as those you will find put to similar purposes in perfect modern asylums, but still the position of the rooms possesses some advantages, as the patients in them are more likely to be quiet, and less likely to disturb others than if they were in a different situation.

7664. In other institutions of a similar character we have observed a number of isolated cells placed together, and even on the Government side amongst the female patients at Bayview House this is the case. Do you think there is any advantage in having the isolation cells altogether detached from the other buildings? In some respects it will be an advantage.

7665. In what respect? Quietude would be insured for the patients confined in them, and other patients would not be disturbed by any noise the patients in this building might make.

7666. Are there any drawbacks in having the rooms detached from the main buildings? I think the chief drawback would be crossing the yard in any kind of weather.

7667. Do you think the other advantages more than counterbalance that drawback? No; personally, I think it would be preferable to put them in a corridor.

7668. Did the cubic space in the different departments at Bayview always seem to be sufficient for the patients? Yes.

7669. Were the arrangements generally in the associated dormitories and in the other buildings satisfactory? Yes, they were generally satisfactory.

7670. With regard to the patients on the Government side placed in the corridor where the seclusion cells are situated, from your observation; was sufficient clothing provided for these patients? Yes.

7671. Are you perfectly satisfied upon that point? Yes.

7672. What was the provision made for watching the patients at night in this particular part of the institution? I cannot tell you. I cannot speak positively upon that point at the present moment. I cannot give you any exact numbers, but we have frequently counted the number of nurses and patients and found that there was a proper average of one to the other.

7673. Are there about eleven of these cells? Yes.

7674. The evidence shows us that a nurse sleeps at each end of these cells at night, is that so? Yes.

7675. The evidence further shows that up to about six months ago there was no night patrol along this corridor. Do you consider that two nurses sleeping at each end are sufficient to keep necessary watch over the patients in the solitary cells at night? Yes.

7676. Are you aware that there is now a night patrol? Yes.

7677. Also that there is the usual tell-tale clock which registers the number of visits made to patients? Yes.

7678. Was this the case up to six months ago? No.

7679. Do you think the latter arrangement is much more satisfactory than the former? Yes.

7680. Have you heard any official report at any time that patients had met with accidents and serious injuries in these isolated cells on the Government side? No.

7681. Do you remember Case No. 20, who had her arm broken; did it ever come under your notice that she, being troublesome and refractory in one of the associated dormitories, was placed in one of these cells late at night and when taken out the next morning it was found that her arm was fractured? I do not recollect it.

7682. Is it a most unusual thing for accidents of this kind to occur in these cells? Yes.

7683. We have it in evidence that a number of patients were placed in these isolation cells on the Government side without night-dresses on account of their tearing their clothes and being destructive generally, without an ample supply of blankets and bedding? Do you think that probable? Many patients placed in these cells, while in a state of acute mania, will not keep anything on them at all. They will tear up everything they lay their hands on, including the mattress, sprinkle the straw upon the floor, and then poke it through the keyhole straw by straw.

7684. Do you think it is better on the whole in cases of that kind, and especially in cases of acute mania, where a patient soils himself or otherwise acts in an unsatisfactory manner, to leave him alone all night rather than disturb him by an attendant going into the cell for purposes of cleanliness? I think so.

7685. Do you think it is better to leave him alone? I do.

7686. Do you think that should be the general rule? Yes. In reference to this matter I may explain that we, as official visitors, have always been in the habit, when making our rounds, of going into every cell where a patient is confined. We have always taken the precaution, when visiting the female cells, of getting a female nurse to slip quickly through the door before our arrival and throw a blanket or something over the patient, who in all probability would be nude. Then the attendant keeps her quiet and we go in, question the patient and ascertain if possible the particulars of the case, and the suitability of the treatment. Very often the nurses have the greatest possible difficulty in getting out of the door again. These visits we know excite the patient, are anything but pleasant experiences to ourselves, but still we always feel it to be our bounden duty to see every patient confined in that way.

7687. In your opinion was the number of attendants at Bayview House sufficient, and were you always satisfied that these attendants were capable of properly performing their duties? Yes.

7688. As an official visitor, did you always examine the bedding? Yes.

7689. Were you always satisfied with it? Yes. In respect to the bedding it was almost invariably clean, good, and amply sufficient; in fact, the number of blankets was very often excessive; the patients, however, seemed to like this, and they therefore had them; now and again we have found things at fault, and told the Medical Superintendent, who at once rectified them.

7690. It has been represented by a number of witnesses that the quantity of bedding in No. 2 associated dormitory was not sufficient, that there was an insufficiency of blankets and coverlets? That never came under my observation, and I never heard any complaint either from the nurses or any one else to this effect.

7691. Referring to the food supply, were you ever present, Sir Alfred, at any meals taken by the patients? Yes; I have been present at dinner, and sometimes at tea.

7692. Could there have been any previous notice given to the authorities of the institution that you were about to make the visit? No; as Chairman of the Board it was my duty to fix the day and hour of the visit, and I never apprised either the Medical Superintendent or anybody at the hospital when our visits were to be made.

7693. Was that your universal rule? Yes.

7694. When you arrived at the institution did you go to Dr. Vause's private house first or to the main building? Into the main building.

7695. Always? Yes, always.

7696. Was it the custom of the official visitors to go on their rounds in the same direction regularly, or did you take a different direction at different times? As a rule we proceeded to the female division first.

7697. In accordance with the Lunacy Act did you examine the official and statutory books as to patients in seclusion or under restraint? Yes.

7698. With regard to the terms of the 71st clause of the Lunacy Act of February, 1879, Part 6, which states that it is the duty of official visitors to make full inquiry as to whether under restraint or in seclusion, and why, is there a special meaning given to the words "under restraint" and "in seclusion"—I see that they are printed in the ordinary type, and therefore in reading the clause as it stands there is no reason to suppose there is any special meaning attached to these words—will you kindly explain what you understand to be your duty or duties in connection with this particular provision? We consider it to be our duty to ascertain what patients had been under restraint during the time between this and our previous visit, and, furthermore, what patients were in seclusion.

7699. By "restraint" do you mean a patient being placed in a single cell? No; "restraint," so far as I am concerned, implies that a patient is put in gloves or a jacket, so that his limbs are confined to prevent him injuring himself.

7700. What do you take to mean "seclusion"—does it mean that a patient is put in one room and, therefore, is secluded from others, either by night or by day, or both? I take it to mean that whether the patient is put away for one hour or three or four days, the medical journal of the institution is bound to show the length of time of seclusion, and the reasons for this seclusion. It was the custom of the official visitors, when investigating these cases, to put simple questions to the attendants for the purpose of ascertaining whether the entries in the journal were correct.

7701. Supposing a patient were placed in one of these cells at night regularly for some weeks to sleep there, do you think, that in compliance with the clause of the Act I have quoted, the fact should be recorded in the journal? Yes.

7702. If a patient is placed in one of these rooms during the day-time for a few hours, should it be noted in the journal? Yes; even if the patient were only placed there for half an hour.

7703. If a patient were there for weeks at night should the fact also be noted in the medical journal—or if it is not, ought it to be? In my opinion it should be noted.

7704. Were you acting as Chairman of the visiting Board during any part of the time Case No. 1 was at Bayview House? Yes; for the greater part of the time after he was first admitted, and, I think, for about eighteen months after his admission.

7705. We have had it in evidence that for six months previous to last May, when that patient was removed from Bayview House, he had been placed to sleep in one of these two isolated cells in the court-yard every night;—was that fact ever brought under your notice? No.

7706. Had that fact ever been recorded in the medical journal? No.

7707. What, generally speaking, was the earliest hour you made your visits to Bayview House? Eleven o'clock in the morning.

7708. And what was the latest hour you visited there? About 6 o'clock in the evening.

7709. As an official visitor was it your habit to examine the books of the institution before proceeding on the tour of inspection in the different departments? Yes.

7710. Was it also your habit to examine patients specially when they made any complaints? Yes.

7711. Were complaints made by the patients in that institution often frivolous in character, and without foundation? Yes; but we made inquiries into all complaints, and if they were of a trifling character we would let the patients talk about them, and gauge them accordingly. If they were anything at all serious we would have the patients removed to the office, and there hold a thorough investigation as far as we were able to do so with a lunatic patient.

7712. I have forgotten to ask you previously, did you, when inspecting the beds, occasionally have to criticise both beds and bedding adversely? On one occasion we criticised the bedding adversely on the female side, I mean in the isolated rooms on the female side.

7713. Did you inspect the clothing of these patients from time to time? Yes.

7714. Was it always sufficient in quantity? Yes.

7715. We have had it in evidence that the patients on the Government side were inadequately clothed, and that frequently in the case of destructive patients there was a great want of under linen;—did you ever see anything of that kind? No; it could not be expected that we should examine into questions of under linen of female patients.

7716. But could you not tell if a patient had petticoats on by the set of the dress? Yes.

7717. Are you, therefore, satisfied that there was no inadequacy of clothing of that kind? Yes.

7718. It has been a matter of complaint on the part of some witnesses examined during this inquiry that patients between the time of the arrival of the official visitors and their visits to the ward, would be dressed in fresh, clean clothes, in order to make them appear in the eyes of the visitors clean and tidy, and altogether different to what they were under ordinary circumstances before the arrival of the visitors;—do you think there would be sufficient time for such changes to be made? No.

7719. Was it possible for fifty Government patients to be dressed and put in order between the time of the arrival of the official visitors and their inspection of the wards? No; there was barely time sufficient to get the patients together, and put them on seats, so that the visitors in their passage through the institution could observe them properly. Certainly there was not time to change their clothing except, perhaps, to arrange a shawl upon the shoulders or put a collar round the neck.

7720. Would it be possible to make the great changes, I have described, in the way of putting on fresh dresses in the space of ten minutes or a quarter of an hour? No.

7721. Would there be time to take the dress off one patient and put it on another? No.

7722.

Sir Alfred  
Roberts, Kt.,  
M.R.C.S.E.

21 Dec., 1894.

- Sir Alfred Roberts, Kt., M.R.C.S.E.  
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7722. Would there be time to obtain clean dresses from the store, and put them on patients? Certainly not.
7723. Was it possible for the dresses of patients to be changed in the time that elapsed between your arrival and the seeing of the patients? No.
7724. If such a process were gone through, would not the patients themselves be loud in their complaints to the visitors? Yes; some of them especially.
7725. Would the visitors always find some two or three patients who would complain most forcibly about such conduct? Yes.
7726. Another matter that has been referred to by some of the witnesses is in the nature of the complaint that medicines have often been administered to the patients in their food or drink;—do you think that is a proper course to follow? It may be very desirable, if not absolutely necessary, in some cases.
7727. Do you think that it is an absolutely indispensable process in certain circumstances? Yes.
7728. When we visited the institution we saw muffs on one patient;—was that anything unusual? No.
7729. Have you seen muffs used on patients when you have made your visits? Yes, occasionally.
7730. Do you believe there is any reason to think that muffs are removed from the hands of patients when visitors come to the institution and that they are kept on at other times? I cannot say.
7731. Have you any reason to suspect that such a course is adopted? No.
7732. There was certain prescription sent by Dr. Vause to a lady who had formerly been an inmate of the Bayview Asylum, but who recovered sufficiently to go home; this prescription was sent to the country in answer to a letter, and I should like to ask you whether you can see any possible danger arising from the use of this medicine prescribed, or whether in any way you object to its character; this is the prescription [*produced, marked Exhibit B; see Appendix*]; do you think that this prescription is a suitable one for a patient suffering from sleeplessness after treatment in the asylum for acute melancholia? I see no objection to its use.
7733. Do you think any danger can arise from its use? No.
7734. Could it be administered with perfect safety? Yes.
7735. Do you remember a Miss \* \* \* asking you for the discharge of her sister (Case No. 30)? Yes.
7736. Did you refuse, as an official visitor, to sanction such a discharge? Yes.
7737. Do you know the case to which I am referring quite well? Yes.
7738. Has this case come publicly before the Courts of this Colony on several occasions? Yes.
7739. Are you perfectly satisfied in regard to the patient that it would not be safe to discharge her to the care of her sister, Miss \* \* \*? Quite.
7740. Not only on financial grounds, but also for other reasons? Yes.
7741. As an official visitor, have there been any serious reports of the ill-treatment of patients made to you by the attendants at any time? No.
7742. Have you inspected from time to time the books, certificates and other documents relative to the institution, and always found them well and regularly kept? Yes; but I think now and then we have pointed out unintentional omissions, but they have always been righted at once.
7743. Regarding any suggestions you may have made from time to time as to the internal management of the institution, and for the comfort of the patients, or matters of that kind, was Dr. Vause always attentive and willing to carry out your views? Yes.
7744. *Dr. Garran.*] When you were first appointed, was Dr. Tucker in charge of Bayview House? Yes.
7745. Had you, as an official visitor, full opportunity of studying his management? Yes.
7746. Has that of Dr. Vause been inferior in any way to that of Dr. Tucker? No.
7747. Has Dr. Vause always obeyed the instructions of the official visitors in regard to improvements? Yes.
7748. Did you ever give any formal report approving these isolated rooms? No.
7749. You spoke about the inconvenience of patients crossing the yard when going from these rooms in the morning to their bath;—could that be quite got over by the construction of a covered way? Yes.
7750. Do you think the patients ever caught cold by crossing the yard early in the morning? I never heard of any.
7751. Do you think that patients who denude themselves at night suffer from cold? No. One of the peculiarities of lunatics is that their cutaneous circulation is so active that they do not feel the cold.
7752. Do you mean that if they do not get an injurious chill, a surface chill does not matter? I have never known an injurious chill to occur. If they go without clothing they do not seem to care. I have put my hand on patients in that state, and never felt them to be cold. I remember one patient in Gladesville in that state. Two or three times I felt his skin; it was always quite warm, and he never complained of cold.
7753. Was seeing him in this condition more a distress to you than to the patient? Yes.
7754. If a patient received an injurious chill would his general health show it? Yes.
7755. If there were no indications of a chill, was that a proof that the patient was not suffering by being naked? Yes.
7756. Destroying the clothing, then, even if it results in the patient being denuded, is not medically injurious to these patients? No; but in another climate the results might be different.
7757. Are these poor unfortunate people under some illusion while they are so destructive? Yes.
7758. If you were to insist on clothing them to save this distress to those who see them, would the patient thwart you? It would be of no use trying.
7759. But supposing you engaged in a kind of battle, you wanting the clothes on, and the patient wanting his clothes off, what would be the result? You would not get the clothes on.
7760. Would the battle have injurious effects? Yes.
7761. Looking at such cases from a medical point of view, would it be desirable to avoid a contest? Yes.
7762. Are you aware that there are two isolated dormitories, some 13 or 14 yards distant from the main buildings at Bayview House? Yes.
7763. Do you know what distance away from these buildings the night attendant would sit while on duty, and when not actually engaged in visiting the patient? Yes.
7764. In these circumstances, do you think the night watch can be properly carried on? Certainly.
7765. Is it sufficient? Yes.
7766. At Callan Park, is not the night warder under cover the whole time he is on duty? Yes.

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7767. On a cold, dark, and miserable night, do you not think there is some inducement for a warder at Bayview House to sit by the fire, instead of turning out and crossing the yard to see the patients? Yes; he certainly could do so.
7768. Could he perform his duties if he sat at the fire? No.
7769. Do you think that is a good plan for night-watching? No; not if the duties are neglected. But the rule in other asylums is for attendants to visit the patients periodically at stated intervals. If a patient is found to be in a critical state, or has met with an accident, another attendant is called, and they sit with him together.
7770. We have been told that in regard to Case No. 1, instructions were given to the attendant to listen at his door, and if he was quiet not to disturb him, do you think those are proper instructions? Yes; quite so.
7771. If the night attendant only visited the door of the room once every two hours would that be sufficient? No; I think he should make his visit at least every hour.
7772. I presume from what you say that you quite approve of these solitary sleeping rooms? Yes; with the proviso that there is ample night attendance.
7773. Are they a necessary equipment to every asylum? Yes.
7774. What degree of noisiness or restlessness justifies a medical officer in putting a patient into solitary confinement in one of these rooms? I do not think I can explain the exact margin where and when it becomes necessary to put patients into these rooms. I should think they should be put into these rooms when they attempt self-injury, or become unmanageable, or so noisy as to be a source of disturbance to everybody about them.
7775. In the case so prominently brought under our notice, that of Case No. 1, we have been told that he was very noisy, that he would not keep in his bed, and that he disturbed everybody within hearing, would that be sufficient justification to put him in a single room? Yes.
7776. If you had been in charge of Bayview House, would you have put him in isolation? Yes.
7777. I gather from what you have said that you consider it would be better to allow him to denude himself at night than interfere with him in the hope of getting on his night-clothes? Yes; it is the general custom in asylums, as the result of experience, that when certain patients show indications of recurring excitement, to put them into seclusion, to calm their feelings.
7778. Does that mean that seclusion has a calming effect? Yes.
7779. Is there any doubt upon this particular point? No.
7780. Now comes the question of dirty patients, is it still more distressing to see them? Yes.
7781. Supposing you had a dirty patient would you interfere with him during the night;—would you allow attendants to go into the cell periodically to clean him? No.
7782. Taking the interest of the patient into consideration, do you think it would be better, he not grasping or suffering the ignominy of his condition, that he should be left alone until morning? Yes.
7783. If you had an extremely dirty patient would you give instructions that he should be left alone until he received his morning bath? Yes.
7784. Do you think the Medical Superintendent is to blame for the course he took in respect of Case No. 1? No.
7785. Do you know that sometimes narcotics are given to patients who cannot sleep? Yes.
7786. After a narcotic has been given is it not better to leave the patient alone as long as he can sleep? Yes. In this matter of cleaning patients you must at once see that it would be necessary to get at least two more attendants to hold the patient down. Then there would have to be a search for the faeces, for it is nearly always hidden. All this would mean tremendous work in the middle of the night, setting aside the prejudicial effect it would have on the patient.
7787. *President.*] Would not the adoption of such a course cause great excitement to the patient? Yes, it would.
7788. *Dr. Garran.*] In regard to the women patients when they take off their night-dresses, is there any alternative in their case but to remain naked when they have destroyed their clothes? Not that I know of.
7789. How do pauper patients manage—those who cannot afford to buy new night-clothing;—has any night-dress been devised which they cannot take off? No. If a Government patient can wear night-dresses without destroying them I think they should have them.
7790. We have been told that some patients are in the habit of tearing everything into shreds? It is not the slightest use of giving night-clothes to such patients.
7791. Do you see any preference in straw mattresses over loose straw? In some cases, where patients throw themselves about, and will not lie for long in one place, it is better to put loose straw in the cell to a depth of about 9 inches.
7792. In cases of violence do the patients use bedsteads? No.
7793. Are these patients supplied with a straw mattress, pillows, and coverings? Yes.
7794. Are you familiar with the rugs used at Bayview House? Yes.
7795. Are they of the regulation pattern? They are the kind of rugs generally used. I do not know that there is any specified pattern. One side of these rugs is a little different to the other. They are made of ordinary canvas, lined with blanket.
7796. In this case is the blanket stitched on? Yes. In some respects this is a preferable structure as compared with double canvas, with the blanket in the middle, because the blanket is next the skin, and it is not so indestructible.
7797. In those rugs where the blanket is on the inside, do you know that the patients pick the blanketing off? I am aware of that; and when they do, and the blanket disappears, it is the duty of the Medical Superintendent to have it renewed.
7798. In all lunatic asylums is it inevitable that patients are put naked into isolation rooms? They are not put in naked, but they very soon make themselves so.
7799. We are told that at Bayview House this was done; would there be, with patients of this particular description, any use in doing otherwise? It would really make but little difference.
7800. Do you say that, assuming that the clothing is off in a minute? Yes; and so it often is.
7801. Is putting these patients to bed naked a custom followed to avoid waste of dress? It may be so.
7802. Is it so in Government asylums here? I think it is very likely to be so. When I have seen them in these cells they have been always in a state of nudity.
7803. We have been told, in reference to this particular case, that when the patient was taken out of the room the first thing in the morning, the odour of the place was that of stale urine. Do you consider it possible that patients of this kind have a distinctly-smelling urine? I think so. 7804.

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7804. If the room did smell as of stale urine, would that imply that it was not properly scrubbed out? I think if it was properly scrubbed out the smell would not rise.
7805. Would the smell being there be positive evidence that the room had been neglected? Yes; during our visits we have smelled these rooms to see if they were sweet, and with very few exceptions they were.
7806. In the middle of the day they might be sweet, but in the particular instance to which I am referring the smell was said to exist early in the morning, would that be likely? Oh, yes; very likely. I did not quite catch the meaning of your question. In the early morning the smell of fresh urine and faces would be so strong that you would not be able to detect the smell of stale from that of fresh.
7807. We have been informed that the smell of the urine of lunatics is extremely strong, is that so? It is.
7808. That being so, would it be difficult to detect which is fresh and which is stale? Yes; at that time in the morning it would be impossible, I should say.
7809. Are the floors of this room close to the ground? Yes.
7810. Do you think they should have been 6 inches higher? Yes; they would have been better so.
7811. Could urine escape through the cracks in this floor? Yes.
7812. Do you think that would smell? Yes.
7813. At Callan Park are the crevices in the floors of the single rooms filled up? Yes. When referring to the use of those cells at Bayview House, we have always thrown cold water on the practice, and latterly have been given to understand that they were not in use.
7814. Speaking of tidying up the patients for your inspection, do you see any particular objection to that practice? No; on the contrary, I think it shows a good feeling on the part of the attendants to make the patients look neat and tidy. At the same time we have been careful not to give them sufficient time to smarten up the patients by changing their dresses.
7815. Would the patients only require a little tidying up? Yes.
7816. Do you object to a moderate amount of it being done? No.
7817. We have been told that in some cases of dirty patients it is the custom to take off the under-sheets of the beds, put on a water-proof sheet, and make the beds up again. Would you object to that course of procedure? There could be no harm in putting a water-proof sheet over the mattress, but there should be an ordinary sheet or blanket over that, preferably a blanket.
7818. Do you see any objection to making up these beds of dirty patients differently to the others? No.
7819. Did you ever make any request to Dr. Vause to have a night patrol? I do not think so, because latterly we understood that these rooms were not used at night.
7820. If he did not have a night patrol on the male side was he breaking any rule or disobeying any orders? No.
7821. Was this matter of a night patrol entirely at his own discretion? Yes.
7822. *President.*] Do you say that these rooms latterly were not used at night? Yes; we understood that.
7823. We have been told in evidence that they were always used on the Government side, or at the very least five of them were used nightly? It does not say so in the medical journal.
7824. Whether it is entered in the journal or not the general evidence here has been that there were at least half a dozen of these rooms used by patients at night. In that case would you, had you known of it, have recommended that there should be a night patrol? We would. We shall find fault, too, very strongly if it is not entered in the journal.
7825. As you may have gathered we have been informed of a strong urinous smell arising from certain cases of insanity, and that this smell is exceptionally strong when the room is first opened in the morning;—would that be so? Yes.
7826. Supposing a sanitary inspector of a Municipal Council entered this room when it was first opened in the morning would he most likely meet with some smell altogether different to the smells he would encounter in following his ordinary avocation—perhaps a smell at which he would be horrified? Yes; most likely.
7827. Would his experience in municipal matters as a sanitary inspector enable him to correctly judge of the freshness or staleness of matter in this room? Not in the slightest.
7828. We have had it in evidence from one witness, associated with a Municipal Council, that this room was of a stale, urinous odour. Would his experience in ordinary civil life be of any avail whatever in matters of the kind referred to now? No; not at all.
7829. *Dr. Manning.*] Are you aware that the word “seclusion” as mentioned in the 71st clause of the Lunacy Act only refers to the placing of the patients in a single room with their clothes on during the day? No; my interpretation of the Act is different. I always expected, if patients were placed in seclusion rooms, that the fact would be notified in the journal, whether the patient were placed there either in the day or night.
7830. How is it then, that 200, 300, or 400 patients, or even more are in the single rooms at night at the public asylums without any record whatever being placed in the journal or in the statutory books? I suppose it is because they are under regular treatment there. If a patient outside receiving ordinary treatment in an associated dormitory were placed in a single room I should expect that to be “seclusion” in the terms of the Act, and his removal to the room should be notified in the journal.
7831. Are you aware that “seclusion” is defined by the English Commissioners in Lunacy to consist of putting a patient into a solitary room with his clothes on during the day-time? No; I am not aware of that. I was under the other impression.
7832. Are you aware that a great many patients in the public asylums are placed in single rooms for one or two nights at a time, and that the cases are not entered as seclusion in the books? No; I was not aware of that.
7833. In examining the seclusion books at the public asylums have you not seen for weeks together that there was no entry of a patient being in seclusion—can you imagine that during the whole of this time in a large public institution there were no patients sleeping in single rooms? I have no doubt there were, but I always looked upon it that these patients occupying the single rooms were not strictly cases of seclusion.
7834. Would it not be possible in a large establishment to have the space for the entry of seclusion cases in the books absolutely blank for weeks at a time if you only put in the seclusion book cases removed to the rooms in a casual way? I do not think I quite take that view of it.
7835. Do you not say that you are aware that the “in seclusion” column in the books sometimes remained blank for weeks together? Yes

7836. In an institution containing 800 or 900 patients, do you not think it is possible for an occasional single-room case to be omitted from the books? I think they ought not to be; but I am quite aware that patients have occupied seclusion rooms, though not in a sense seclusion, and no word has been mentioned of it in the journal.

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7837. What distinction do you draw between a person who always sleeps in a single room and one who requires to be put to sleep there for two or three nights? If a patient becomes violent during the night, and it becomes necessary to put him in a seclusion room, I should expect that to be set down in the journal, even if he is removed either for his own sake or for the sake of other persons.

7838. Is that the way the official visitors have always read this word "seclusion"? I think so; at all events that is the way I have read it.

7839. *President.*] I think it is the proper way too, notwithstanding the interpretation of the English Commissioners.

7840. *Dr. Manning.*] What do you suppose to be the reason of entering "seclusion" at all in the medical journal? In order to see whether a patient is confined unnecessarily or not.

7841. That being the case how are you able to draw distinction between a person kept in a single room occasionally, and a person kept in a single room always? I say it should be notified in the journal when a patient is put into these rooms occasionally.

7842. What I mean is this—"seclusion" is to be entered in the medical journal for special reasons, and these reasons are. I take it, when it becomes necessary to put a patient into the single rooms in the day-time, or even the night-time;—but would you think it necessary to enter a patient in the seclusion book as being in seclusion if he were in bed in a single room under medical treatment while suffering, say, from pneumonia? I think it would be very desirable to do it.

7843. What line would you draw between a patient frequently in a single room and a patient there only occasionally? You know as well as I do that there are a great many patients kept in isolated rooms as a matter of treatment for various reasons. Some of the women at Gladesville, of a slightly better class, are kept in these isolated rooms so that they may be more comfortable and that their feelings may be spared by removing them from the actual surroundings of other lunatics. That is one reason. Another reason is, that if a patient is likely to be disturbed much mentally or to cause disturbance to other patients he, and I say very humanely too, is put in an isolation room. The Medical Superintendents often mention this. A further reason is that if a patient becomes actually violent, he or she is placed in isolation as a matter of absolute necessity.

7844. I am afraid you do not quite grasp my idea. You know there are patients who may be placed in isolation for a fortnight, and there are others who may be there for a month. Could you draw any distinction in cases of this kind in the matter of "seclusion" when they are placed in single rooms at night? No; not between a month and a fortnight.

7845. Where do you think the entry in the journal for "in seclusion" should commence and where should it cease? I think that any patient who is suddenly removed either in the night or day from an associated dormitory to a seclusion room should have his case and all the facts associated with it entered in the medical journal.

7846. Supposing he has to be kept in seclusion, as you call it, for some time, would you still make the entry in the medical journal every day? I see no objection why it should not be entered.

7847. Would you continue the entry if the patient was kept in a single room for years? If he became habitually an occupant of the room I think the entry might cease.

7848. What do you consider to be habitually an occupant? One who is always there.

7849. But for how long? I cannot say that.

7850. Has it ever struck you in examining the blank sheet at the public hospitals—I mean those prepared for the entry of patients in seclusion or under restraint, that these entries are not made? Yes; it has struck me, but we have not considered it to be a matter with which we can find fault, because we are quite aware that in all modern asylums there is a certain proportion of isolated rooms for express purposes and we know that persons may be put in them either *pro. tem.* or habitually. What I say is that when they are placed in these rooms *pro. tem.* the causes and all the circumstances for such treatment should be set forth in the medical journal. That is my idea on the subject.

7851. But still considering the large number of patients there are in the public asylums did you expect to see these entries appear under the heading of "seclusion," and you did not see them appear? No; we have not expected it to appear for the reasons I have mentioned.

7852. Have you seen it appear at all? We have seen it appear occasionally.

7853. Have you seen in the medical journals at the hospitals for the insane certain entries showing that patients have been placed in single rooms at night? Yes; under the heading of "in seclusion."

7854. Have you ever seen a solitary entry in the medical journal of any hospital for the insane which shows that a patient or patients had been placed in a single room during the night? I have seen it entered "in seclusion," and I take it that means the same thing.

7855. Have you ever made any inquiries from the Medical Superintendents of these institutions regarding whether these entries refer to patients in the single rooms in the night-time? We have often seen that the period of seclusion has been noted.

7856. But did you ever make any inquiries from the Medical Superintendents as to whether that seclusion was in the night or day? I am not aware of when it was, or that we did make such enquiry.

7857. Would this seclusion to which you refer be in most cases for one, two, or three hours? Yes.

7858. Do you suppose that a patient taken out of the associated dormitory and put into a single room for one, two, or three hours and then taken back would be entered as a case of seclusion? I am quite aware that there are many patients in seclusion who are not entered on the medical journal. Of course, we get a list of patients in seclusion; we visit these patients personally, but it had not occurred to me that there was no record kept of them being where we saw them.

7859. Did it not seem strange to you that there were so few entries of seclusion if the cases occurring during the night were not included? I should have expected to see occasional cases of seclusion in the night-time, for I think it quite as necessary to note the cases of the night as well as those of the day.

7860. *President.*] As an official visitor have you read the Lunacy Act carefully? Yes.

7861. Have you read over the interpretation clause containing the terms to which special reference has been made? Yes.

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7862. Do you notice that the words "under restraint or in seclusion" are printed in the ordinary type and therefore bear the ordinary significance? Yes.
7863. Do you take the word "restraint" there to mean interference with personal liberty? Yes.
7864. And do you take "seclusion" to be seclusion in the ordinary sense of the word, either in the day-time or the night-time? Yes.
7865. Do you see any special significance attaching to the word "seclusion" in this clause other than its meaning as applied to the visitations and functions of the Inspector-General and the Government visitors? No. I am quite aware that many of the patients are kept in seclusion constantly in the large hospitals, and we have always felt it to be our duty to visit them during our inspections of the institutions. But we regard the word "seclusion," or I regard the word "seclusion," in a slightly different way when it refers to patients occasionally placed in solitary confinement.
7866. Where this isolation or seclusion was long continued did you fully understand it to be your duty to see the patients in these rooms? Yes.
7867. But supposing, on the other hand, some outbreak took place during the night, and it became necessary to place patients in seclusion for a time, would you expect to see a record of the fact in the medical journal? Yes.
7868. Do you expect to see a record in that book of every new case? Yes.
7869. *Dr. Vause.*] Would not an entry in the medical case-book to the effect that a patient was occupying a single room at night be sufficient? No; that would not be sufficient according to my interpretation of the Act. I think it should be mentioned in the medical journal.
7870. Would it not be sufficient to enter it in the case-book if a patient were sleeping in a single room at night? No.
7871. Do you remember looking at the single rooms on the female side of Bayview House? Yes.
7872. Did nearly all of these rooms have beds in them? Yes.
7873. Did you notice any entries in the journal stating that these rooms were occupied at night? No.
7874. Did you ever enter in your official report any objections to the omission of such entries of these cases? No.
7875. How long have you been visiting Bayview Asylum? Very nearly the whole time it has been established.
7876. Is that for nearly thirty years? Yes.
7877. Although you knew that there were twelve single rooms occupied every night, and although you knew that there was no entry made of that fact in the medical journal, have you thought fit to object to this omission until the present time? No, and I am not objecting to it now. I am stating that we consider it better for patients to sleep in the isolated rooms actually, and, as I have said before, we did not expect to see an entry of these permanent cases in the journal.
7878. Did you understand that the occupants of these twelve single cells were chronic cases, continually placed in these rooms for sleeping purposes? Yes.
7879. Do you remember calling at Bayview House shortly after the arrival of Case No. 1 there? Yes.
7880. Do you remember reading the report of his case in the case-book? Yes.
7881. Do you remember whether the fact of his occupying a single room at night was entered there? He did not occupy one of the isolated rooms at that time, he was in a single dormitory.
7882. If such an entry appears in the case-book—an entry stating that the patient occupied a single room during the first week of his residence there, how do you account for it? I cannot account for it. I saw him in another room.
7883. Did you read his case as entered in the case-book? I believe I did.
7884. Supposing that entry states that he occupied a single room at night, must you not have known it? I have no doubt I did. I cannot recollect at this time whether I noticed that one particular point.
7885. Do you not think it would be a sufficient notification that he was occupying a single room if an entry to that effect appeared in the case-book? There, again, I do not consider that to be an absolute case of isolation. He was put into the ward every day, and if he only slept in a single room at night I do not think that would amount to a *bona-fide* case.
7886. Would you not call that a *bona-fide* case of seclusion? Well, no. I do not think I should. It might be better to put him in a single room at night, and a very desirable thing to do so; but so long as he was allowed to be out and about or in the other wards during the day, I do not consider he was in strict seclusion.
7887. Do you remember reading his case? Yes.
7888. Did you take any exception to his treatment at that time? We, as official visitors, did not.
7889. From time to time have you requested alterations to be made at Bayview House? Yes.
7890. May I ask if these requested alterations were always carried out? To the best of my recollection, yes.
7891. Without unnecessary delay? Yes.
7892. Do you, as a rule, visit the private house or the office of the asylum first? Always the office of the asylum.
7893. As a rule, do you go through to the asylum without any delay? Yes.
7894. Did you examine the book subsequently to your visit through the asylum? Not always, but frequently.
7895. Were the single rooms clean, in good order, and free from smell when you visited them? Yes.
7896. *President.*] Referring again to the matter of this medical journal and the case-book;—have you always understood the reading of the Act and from the schedules that the medical journal is the book in which all cases of seclusion should be marked? Yes.
7897. And that the case-book would only contain entries referring to the medical treatment of patients in a general way? Yes; in a general way.
7898. In support of your view do you take the reading of section 21, part 2, of the Lunacy Act for your guidance? Yes.
7899. That clause says:—"In every hospital the superintendent shall once at least in every week enter or cause to be entered in a book to be kept for the purpose, to be called the medical journal, a statement according to the form in schedule 9 of this Act, and shall also enter or cause to be entered in a book to be

be called the case book (to be kept in such form and manner as the Colonial Secretary shall direct), as soon as may be after the admission of any patient, the mental state and bodily condition of every patient at the time of his admission, and also the history of his case whilst he shall continue at such hospital, together with a correct description of the medicines and other remedies prescribed for the treatment of his disorder; and in the case of death an exact account of the autopsy, if any, of such patient." Is this clause in accordance with your views as you have stated them? Yes.

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[Witness withdrew.]

Nugent A. Robertson, Esq., Barrister-at-law, sworn and examined:—

N. A.  
Robertson,  
Esq.,  
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7900. *President.*] Are you one of the official visitors to the lunatic asylums of New South Wales? Yes.

7901. Amongst other institutions you have visited in that capacity have you occasionally been to Bayview House, Cook's River Road? Yes.

7902. How often do you make these visits? We make the visits at least once a month, and sometimes oftener, if any special cases call for inquiry.

7903. Do you visit the institution in the daytime or at night? In the daytime.

7904. Have you ever visited it at night? I do not think we have done so.

7905. When making these visits do you inspect the premises generally? Yes.

7906. Amongst the different buildings connected with Bayview House, is there one to which your attention has been particularly directed where isolation patients are kept on the male side—they are two separate cells in one building? Yes; I know that building.

7907. Have you inspected it? Yes, frequently,

7908. Are you perfectly satisfied with its ventilation? Entirely so.

7909. Are you satisfied with the air space? Yes; these rooms are better than many similar rooms in the public institutions as far as the air space is concerned.

7910. Do you know the exact air space of these rooms? No.

7911. When you make these visits do you give notice of your coming in any way? Never on any occasion except, and that has been rarely, when we have made special inquiries into some particular case.

7912. When you have made these visits to the institution do you go to Dr. Vause's house, to the office, or have you any regular routine on these occasions? We have no regular routine. At one time we would go through the books before going through the hospital. I think we did this as a rule, because we would wish to acquaint ourselves with all new cases in the institution and examine them. We could only ascertain these by going through the books. At other times we would go straight through the asylum.

7913. Was there any long interval between your arrival at the office and your visit to the wards? No, there never was; even if we were looking through the books the interval was short.

7914. About what interval would occur—this is rather important for us to know on account of certain circumstances that have transpired during this inquiry? Sometimes there was no interval. If we looked through the books it would sometimes not take more than ten minutes, and perhaps less. Sometimes there were no certificates to be examined, and then there would be little delay. We would have to look at the books then to see what was recorded in the medical journal requiring attention.

7915. Do you think ten minutes would elapse on these occasions? Very often not so much.

7916. Did ever half an hour elapse? No; that would quite be impossible.

7917. Would the longest interval, as far as you can recollect, be perhaps no longer than ten minutes or a quarter of an hour? Yes; that would be the longest.

7918. When you have been making your general inspection of the building on the Government side have you seen the eleven or twelve isolation cells where women are placed in seclusion? Yes.

7919. Were you always satisfied with these rooms? I do not regard myself as an expert in these matters, but from a humanitarian point of view, if I may be allowed to express the opinion, I think they are sufficiently ventilated and lighted.

7920. Has your attention ever been called to anything obnoxious in these rooms? No; except when a patient has been absolutely dirty at the time of our visit.

7921. Do you think there was sufficient light in these rooms? Yes.

7922. Was it on your recommendation that additional windows were placed over the doors, and that the gas was laid on to them? That I cannot remember.

7923. Has this been done lately? Comparatively so.

7924. Have you ever been present at Bayview House at meal-times? Yes; on several occasions.

7925. Did you see the food, and was it sufficient in quantity? It was not only sufficient in quantity, but there are many patients who are perfectly reasonable and sane enough to understand the surroundings of their position, people whom I have found always ready to complain, and they most certainly would complain if there were anything wrong with the food. There is only one case in which I can remember any complaint, and that was from an old lady who said she had been deprived of her arrowroot. I have seen the meals frequently.

7926. We have had it in evidence that the food is not good in quality and not sufficient in quantity;—have you seen anything unsatisfactory in these respects? I think it is as good and as well cooked as it possibly can be in such large quantities.

7927. In going round the wards did you always examine the bedding? Yes.

7928. Was that in a satisfactory state? Not always. I do not know of anything unsatisfactory occurring in this respect while Dr. Vause has been present at the institution. It happened while Dr. Vause was away in England. On two or three occasions we found that beds had been made up wet. We returned without notice within forty-eight hours, and found that this had been remedied.

7929. Was it remedied immediately? Yes; and we have not had any cause to make a similar complaint since. This happened during the time Dr. Hetherington was in charge, and when he was new to the duties of his position. We always do turn down a certain amount of the bedding when going through the wards.

7930. Do you inspect the clothing of the patients? Yes; as far as I can from casual observation.

7931. Are you satisfied with it in every way? It appears to me to be so, but this is one of the matters I leave to my medical colleagues, and I, therefore, cannot express any definite opinion.

- N. A. Robertson, Esq.  
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7932. Do you remember the case Case No. 30? Yes; very well.
7933. Are you perfectly satisfied in your own mind as to her insanity? I do not suppose there is a much more insane person in New South Wales.
7934. Would you recommend that she should be taken away from Bayview House and placed under the care of her sister? I have taken a great deal of care and interest in this case, because \* \* \* \* has called upon me repeatedly in chambers and even at the club about the matter. I spoke to Case No. 30 about it. She repeatedly made to me remarks which, to my mind, are extremely significant—as for instance, she said something about her sister having money. She was extremely wild in her statements; but from what she said I came to the conclusion that if she had charge of her sister she would have so much more money to spend, and that she would be so much more comfortable at her sister's home. This statement led me to believe that there is some pecuniary interest in this desire to remove the patient. Further than that, the patient's sons, one of whom holds a very responsible position in \* \* \*, came over to Sydney, called upon me, and expressed very strong views upon this subject. The son in \* \* \* is most anxious to have his mother with him if she were fit to be at large, and both brothers are ready to offer her a home, but in her present condition they agree that it would be better to leave her where she is. They object most strenuously to Miss \* \* \* having charge of her sister, saying that she had her once before and abandoned her.
7935. *President.*] I have received a letter from some friend of this Miss \* \* \* and the patient, in which they state that this lady is perfectly sane. The letter was addressed to me when it should have been addressed to the Secretary for submission to the Commission, but as I have it I will mention the burden of its contents. It is said that this lady is perfectly sane, and that her sister, Miss \* \* \*, came from \* \* \* to effect her release. Do you recommend that? I think it is absolutely ridiculous for anybody to say that the patient is sane.
7936. It is stated, further, that it is very desirable she should be removed from the institution and placed under the care of her sister, as her sons seem to have no true sympathy for her in any respect;—do you agree with that? Her sons have spoken in the most feeling manner to me upon this subject. They say it is a source of great grief to them to know that their mother is in such unfortunate circumstances. They only wish it were possible for them to take charge of her, but they find it absolutely impossible.
7937. Is there any truth in such a statement as this, which appears in the letter: "From all I can hear she is perfectly harmless, and if those sons of hers had any filial affection they would provide a pleasant home for her instead of locking her up in such a place, or at least allow her to live with her sister"? She might be harmless to other people, but I think it would be dangerous to herself for her to live either in her brother's or her sister's house.
7938. Do you think it advisable to place Case No. 30 under her sister's care? I think it would be most disastrous, for I believe her sister is nearly as mad as herself.
7939. Have you ever seen any unusual restraint put upon the patients? No; I have heard certain statements, which were subsequently inquired into. For instance, there is one patient named (Case No. 8), about whom a great many complaints were made. We investigated them—one in particular, where it was said a patient had been dragged out of bed in the middle of the night. On inquiry we ascertained that not only the patient did not sleep there, but it was simply an ordinary case of an epileptic fit during the night-time.
7940. Do you remember Case No. 20, who had her arm broken? Yes; we investigated that. It was a special investigation, on which we wrote a joint report.
7941. Was this an accident? As far as we could discover it was purely an accident, probably due to an epileptic fit.
7942. Was there an iron bedstead in the room? Yes; she had a fit, and that is about all that is known.
7943. Do you remember other patients receiving injury in a single room besides this one? I saw a great many patients in these rooms, but I cannot recollect any other accident at this moment.
7944. In visiting the institution did you see Case No. 1? Yes; every time I went there.
7945. Did he ever mention anything to you, during the last six months he was there, about the place in which he slept? No; he never said anything at all about it. We made inquiries, and found out that he was sleeping in one of the single rooms.
7946. Did you find out, or were you told of it? We found it out.
7947. Did you find it out from any entry in the journal? No; from inquiry.
7948. Do you know how long he had been sleeping, or about what time he had been put to sleep, in this particular room? I think he had been sleeping there about six weeks, as far as I can remember, when we found it out.
7949. Can you fix the date of this time? No; I look upon it in this way: I did not think that it was for us to see that he was getting full value for the money paid by his friends—that was a matter for them to look after. We looked after his treatment. I ascertained that in his particular state the patient was excitable and mischievous, and could not sleep in the room in which he was before. As far as I could see the accommodation might not be pleasant to look upon to people not accustomed to see these things, but still I think he had sufficient.
7950. Putting aside the question of reasonable accommodation for the payment made, were you aware that the patient was placed in this particular part of the building for treatment only? I understood, as far as I can remember, that he was only put there temporarily. We were surprised to find that he had been there longer than we were aware of, and we did not know when he was first put there, but we knew of it long before it became a matter of public notoriety.
7951. Had you any opportunity of seeing the patient while he was in that room? No; not while he was in the room at night. We always avoided going to the institution at night for fear of exciting the patients. Our ordinary visits in the daytime were commonly the cause of excitement.
7952. Did Dr. Vause tell you the reasons why, and how long, Case No. 1 occupied this room, or any matters of that kind? As far as my recollection serves me, we were told either by Dr. Vause or an attendant that he had been there for some weeks on account of his restless and uncontrollable condition, and because he would not stop in bed.
7953. Seeing that to be the case, did you not consider it to be your duty to ascertain in the terms of the Act if all the particulars were stated in the journal? As far as I remember, we looked the matter up and found no entry.
- 7954.

7954. Did you ask for any explanation regarding the absence of such an entry from the journal? I think it was pointed out.

7955. Do you know that the Lunacy Act provides in clause 71, part 6, that the visitors are to examine the books to see whether any patient is "under restraint or in seclusion and why"? I might explain that Case No. 1 was neither under restraint nor in seclusion. The room he occupied was merely for his sleeping accommodation. He was not put in as patients are put into single rooms as I understand the reading of the clause, when they become excitable and need restraint, but he was put there for his ordinary sleeping accommodation, as an entirely harmless but exceedingly restless patient. I did not understand that he was put in there because he was a violent man, but more to keep him from moving about, as he would not stay in bed.

7956. During the earlier stage of his residence in the main building had he a comfortable bedroom, and all the appurtenances suitable to his position and so on? Yes.

7957. Was he then put in the other room? Yes; he became very restless and could not be kept in bed, and then it was thought better that he should be placed where he might move about without injury to himself or disturbing anybody else.

7958. In Schedule 9 of the Lunacy Act is there not a form of the medical journal in which there are spaces left for entries relating to patients "who are, or since the last entry have been, under restraint or in seclusion, when and for what period and reasons, and in cases of restraint, by what means"? Yes.

7959. Did you ever see an entry like that in the journal of Bayview House? I could not actually say that I saw any record like that.

7960. At the time you found out where Case No. 1 was sleeping, did you look in the journal to see if there was an entry under that heading? As I explained, we did look it up but we did not find any entry.

7961. Did you call the attention of Dr. Vause to this omission? I do not know.

7962. What do you understand to be the meaning of the term "in seclusion" in the Act? That is a term the meaning of which is rather difficult to explain. Some patients are said to be "in bed," and that might be regarded to be in seclusion. "In seclusion," as I understand it, means when a patient is isolated for some special reason.

7963. Do you mean that when seclusion takes place, either in the day or night, the fact should be entered in the medical journal? I think so.

7964. Whether the seclusion is but for a few hours or a longer period should it be entered? I think so.

7965. If the seclusion is carried on for week after week should it be entered in the journal? Yes.

7966. Do you take it in reading over the clause of the Act, that the words "in seclusion," having no special interpretation word, mean the ordinary English signification of isolation? Yes.

7967. Are you aware of any technical meaning being attached to these particular words? Some people seem to put a technical meaning on the word "seclusion," but some do not. It has become to a certain extent a euphemism, and patients are now entered as being "in bed," and so on.

7968. Taking things as a whole, has the result of your examination in your periodical visits to Bayview House been to satisfy you as far as possible that the comfort, convenience, and treatment of the patients are as good as they can be expected to be? Unquestionably.

7969. Have you seen any special faults upon which to report except upon minor details, and were these always immediately attended to by the Medical Superintendent? No; anything that we found fault with was entered in our report and attended to.

7970. *Dr. Manning.*] Could you as an official visitor at any time have discharged Case No. 30 from the institution? One official visitor could not do that.

7971. But could not you as an official visitor, with the advice in writing of the superintendent, order the discharge of any person after reporting to the Colonial Secretary? Yes.

7972. Do you consider that Case No. 30 would be an unfit case in which to use this power? Yes; undoubtedly.

7973. Have you the smallest doubt concerning her condition? No.

7974. Would you refuse to take this step with the intention of handing her over to the care of her sister, Miss \* \* \*? Yes; we think it would be a most lamentable thing for her to be placed in the hands of her sister.

7975. In regard to Case No. 20, did you sign a report, one clause of which is in these terms:—"That some want of care had occurred in placing this patient, who was an epileptic and restless, in a single room with a bedstead, though this appeared to be partly due to a recent change in the officer filling the position of matron, and to the fact that the patient had no fits since admission, so that there was only the Gladesville report to which the new matron had not access on this point?" Yes.

7976. Did you otherwise attribute any blame to the officers of Bayview House in regard to that accident? No.

7977. Did you also recommend in that report that the associated dormitories should be lighted at night as in the case of the hospitals for the insane? I do not think there is any recommendation for gas for the single rooms. With regard to questions of treatment of that kind I do not think it comes within my province to express an opinion.

7978. Turning to the question of seclusion, do you understand that placing a patient in seclusion at night is seclusion in the meaning of the Act? No, not necessarily.

7979. Well, what distinction would you draw in the matter? There is certainly some distinction; for instance, some patients are placed in seclusion really for comfort, because they sleep better. To a certain extent, therefore, the word "seclusion," as applied to the treatment in the night, is indulgence in some cases. The mere fact of sleeping by themselves is not to my mind the meaning of the word "seclusion" as it appears in the Act.

7980. What is your definition of the term "seclusion" for the purposes of entering in the medical journal? I should say that it means a patient being set apart for his own safety or for the safety of other patients.

7981. Do you mean whether by night or by day? Yes; it is not easy to define exactly the right thing.

7982. Have you examined the journals in the public hospitals for the insane? Yes.

7983. Have you seen that for many months together there would be no entries of seclusion in these journals? Yes.

7984. Do you suppose, therefore, that the whole of the patients placed in single rooms in the public institutions, and there are hundreds of them, are put there for their own comfort? Well, I assume in those

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those cases it is a matter of treatment at the discretion of the medical officer. For instance, one patient might disturb the whole of the dormitory, and it would be necessary to put that patient in a single room, but I should not call that seclusion in the terms of the Act.

7985. What is the difference between seclusion for their own sake, or seclusion for the sake of other patients? There are many patients who might be absolutely harmless, as regards other patients, and still knock themselves about.

7986. Do you expect patients placed in a single room at night, either for their own sake or for the sake of others, should have their cases entered in the medical journal? I think to a certain extent it should be done. I do not understand if a patient is put into a single room, because he sleeps better, that such patient is in seclusion. The word seclusion, as applied to those patients, seems to me to be used rather in a technical sense. The word seclusion in the Act to me seems to confer upon the official visitors a statutory obligation to see whether any patient is under restraint, or in seclusion, for violence or any other cause. I take it that if a patient is placed away for violent conduct, no matter night or day, that fact should be stated in the medical journal, and that we, as official visitors, should see every such patient.

7987. Can you give us any definite interpretation of what that word "seclusion" really means? I must confess it has always presented a certain difficulty to my mind, and it would be difficult for me to do so.

7988. Has it never struck you, in looking through the books of the hospital for the insane, that there must be in all the institutions literally hundreds of people who are in seclusion, if seclusion means putting them to sleep in single rooms at night? Certainly I have not regarded that as seclusion. I should regard it as seclusion if a patient were put away for an hour or two hours for excitement or violence, and I should expect this to be entered in the medical journal. The mere fact of patients sleeping in single rooms need not be entered in the statutory book.

7989. Is it not for seclusion that patients are put to sleep in these single rooms? I should say as a rule not.

7990. What is it then? Supposing a patient is removed from the ordinary conditions of sleeping, and special conditions of isolation that might carry the idea of seclusion. Still there may be always some one sleeping by himself and yet not be secluded.

7991. But what is the difference between a patient sleeping by himself for one night, and one sleeping by himself for a dozen nights? A patient may be there for one night through some temporary disturbance, while a patient sleeping there for a dozen nights might be under his ordinary treatment.

7992. Are you aware that there is not a night passes in the asylums on which patients are not removed from the single rooms to the dormitories, and from the dormitories to the single rooms, and have you ever seen these cases mentioned in the medical journal? I fancy it would be very hard for me to answer a question like that. If the condition of a patient required such treatment I presume it should be entered in the journal.

7993. Has it not struck you as curious to see that such few patients have been removed from the dormitories to single rooms, if that be seclusion, when, as you know, there are as many as a thousand patients in some of the institutions—does it not strike you as being extraordinary that there are so few entries in the medical journal of this nature? I do not think I have thought of it in that light.

7994. Do you suppose that a patient being placed in seclusion at night, and kept there for one, two, or three hours for disturbing the sleep of other patients, should be regarded as seclusion? I should think so.

7995. Is there any doubt in your mind that the entries you have seen in the journals of public and private asylums, mentioning the hours and causes of seclusion, do not refer to the removal of patients to the single rooms in the day-time? I presume they have so referred as a rule. The difficulty I am in is in arriving at what is actually meant by the word "seclusion." I cannot get at one with you entirely on this point.

7996. I have my own views as to the meaning of the word "seclusion," and I say the word refers to dealing with patients in the day-time, and I am exceedingly surprised to find that the official visitors do not regard it in the same manner. What is your meaning of the word? I have always recognised it to mean separation for violence, or isolation for some other cause of that nature.

7997. Do you think that patients placed to sleep in a single room at night would be in seclusion? Not exactly; if a patient became violent in the night and had to be removed in consequence and placed in a single room, I should consider that to be seclusion.

7998. What degree of violence would you consider to be necessary for the removal of a patient? Well that degree which would render it unsafe for the patient to be at large or as a disturbing element to other patients.

7999. How long do you think it would be necessary to have a patient in seclusion before the case was entered in the journal? I am inclined to think that every case should be entered, where it has been necessary to remove a patient into a single room in consequence of violence.

8000. Do you know that that would necessitate the entry of some hundreds of names in the journal every day? It might be necessary.

8001. Has it not struck you, holding that view, that you never saw any entries when patients were taken out of seclusion? Sometimes I have asked if persons have been taken out and have expressed surprise that I did not see more entries of this fact.

8002. Have you ever inquired of the medical superintendents whether placing a man in bed means seclusion? Patients have been described as being "in bed" when I think they would have been properly described as being in seclusion. I have been told when men have been separate, because they were not well, that they were in bed.

8003. Have you made any entries in any of the books calling attention to this question? I do not think we have.

8004. Do you say that anyone placed in the single rooms, at night, is in seclusion? I do not say that for a variety of reasons. Take Case No. 1 for instance. I think on the whole it should have been mentioned in the medical journal, although it was not a case that I regard as one of seclusion in the ordinary sense of the word.

8005. Do you not think that as there is such a vague idea as to the meaning of this word, some definite understanding should be arrived at? I think it is a pity that it is not more definitely understood.

8006. Do you know the view that is taken by the English Commissioners in Lunacy of this word "seclusion"? I do not know what the exact definition is.

8007.

8007. Do you know the view taken by the Scotch Commissioners in Lunacy? My attention was drawn to the matter and myself and others have had some discussion regarding the words "in bed" or "in seclusion," but we could not, as far as I recollect, come to any determination.

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8008. Are you aware that it is never applied, either by the Scotch or English Commissioners in Lunacy, to patients at night, who are supplied with bed-clothes for the purposes of sleep? I am not aware of that.

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8009. *Dr. Garran.*] Was Case No. 1, while at Bayview House, in seclusion during the day-time? I have never seen him in seclusion. Whenever we saw him he was with an attendant and in a cheerful frame of mind, generally singing some song. He would recognise us and call us by our names.

8010. Did he occupy a single room while he was in the main building? Yes, at first, he was in a single room downstairs for some time; then he was upstairs in a larger room with two or three beds in it, then he went into a small room off this.

8011. After that was he transferred to a more comfortable room away from the main building? Yes.

8012. To your mind did that latter change mean that he was placed in seclusion? No; I understood it was more a matter of treatment. He was neither harmful nor dangerous, but he could not be kept in bed.

8013. *Dr. Manning.*] Does what you call "seclusion" go beyond what you term a matter of treatment? What I should call "seclusion" in his case would be, if he had been violent, dangerous, or in any way uncontrollable, in consequence of which he was moved into a single room. That would have been seclusion. All I understand is, however, that he used to get up and walk about the single room; and that he would not sleep, and that he was best to be away from other patients.

8014. Have you said that you do not think this is a seclusion case, and that sleeping alone was merely a matter of treatment? That is exactly the point.

8015. *President.*] We have been informed that it was absolutely necessary to remove case No. 1 from the house into one of these two isolated rooms for isolation purposes on account of his being destructive, violent, and noisy—because he was an exceptionally troublesome patient;—do you think that being the case, the word "seclusion" in the Act would mean seclusion according to your definition of it? I think it would. What I understood was that case No. 1 was destructive and restless and would not keep in bed.

8016. *Dr. Vause.*] Do you think that the fact of his sleeping in a single room being entered in the case-book would be sufficient notification in his case? I presume if it were a matter of treatment it would be entered in the case-book.

8017. Do you consider that a sufficient notification? I think it should have been entered in the medical journal.

8018. Would you call the patients sleeping there being in seclusion? I did not know at that time what I know now. I understood that the patient was restless, and that this place was used as his ordinary sleeping-room. I thought he might have been changed from downstairs to upstairs, but not to the room for specially noisy, violent, and troublesome patients.

8019. But would you not call it seclusion in his case? I did not regard it as seclusion. We, as a Visiting Board, were aware of the fact of his sleeping there for some time. We found it out on one of our visits, and knew it long before that visit made by Dr. Anderson Stuart.

8020. Do you recognise the case-book as a statutory-book? Yes, it is a statutory-book.

8021. Have you ever been told that a patient was "in bed" at Bayview when he or she was in a single room? The patient may have been in bed in the single room. Sometimes patients have been in bed through not being very well, and on account of this they have been allowed to remain in the room.

8022. In the single rooms? Frequently I have seen patients in the single rooms who have been allowed to remain there. I do not mean that they have been actually in bed, but they have been allowed to remain in the rooms. But these are cases where the patient has not been put there for any specific purpose.

8023. *President.*] I should like to understand exactly when it was reported to you that Case No. 1 had been removed to this isolation-room;—was it a month or two months before he was taken to Callan Park? Yes; it was some time before.

8024. Cannot you give me the exact date? I do not remember it.

8025. Was it three or four weeks, or two months, or what? I think it was about four weeks before there was any great prominence given to the case. Up to then we had nothing at all to find fault with, and I do not think we made any particular inquiries, because we thought that his being in the single room was a matter of medical treatment.

8026. Did he ever say to you that he was placed in a stable to sleep at night? He never made any complaint of any sort or kind; not a single complaint. There was once a bruise on his eye. Dr. Cox said to him, "Where did you get that?" and he replied, "I fell down, dear boy."

8027. Did Dr. Vause tell you that Case No. 1 had this particular sleeping accommodation because of his restlessness? As far as I remember I was told that he was an extremely restless patient, and annoyed others during the night.

8028. Was anything said to you about the patient being extremely violent? No.

8029. Did Dr. Vause tell you the reason why the change was made in his sleeping accommodation? No; I think he said it had been changed some weeks before we found it out.

8030. Did you then examine the journal to see if there was any entry notifying the change? Yes, we did; but failed to find an entry.

[Witness withdrew.]

WEDNESDAY, 2 JANUARY, 1895.

[The Commission met at 11 a.m., in the Board Room, Chief Secretary's Office.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
ESQ., M.D., INSPECTOR-GENERAL OF THE  
INSANE.ANDREW GARRAN, Esq., LL.D.  
JAMES SINCLAIR TAYLOR MCGOWEN,  
Esq., M.L.A.

Dr. Vause was also present to hear evidence and examine witnesses on his own behalf.

L. R. Huxtable, Esq., M.B. et C.M., sworn and examined:—

Dr. L. R.  
Huxtable.  
2 Jan., 1895.8031. *President.*] Are you one of the official visitors to the Lunatic Asylums of the Colony? I was acting in that capacity for Sir Alfred Roberts during his illness. I am now an official visitor to the Hospital for the Insane at Parramatta.

8032. In your capacity as an acting official visitor did you become acquainted with Bayview House? I did.

8033. How often did you make visits to that particular institution? Some six or seven times, perhaps eight.

8034. Did you always make your visits in the daytime? Yes.

8035. Do you think it is objectionable to do so at night? I think it is, unless there is some special reason for such a visit.

8036. When you made your visits to Bayview Asylum did you first go to Dr. Vause's private house, to the office, or the main building? Very often to the main building.

8037. Did you follow a regular route in making your visits? No; we varied our mode of visitation on several occasions.

8038. What interval elapsed between the time of your arrival at the institution and the time you reached the patients in the different departments? Sometimes not more than a few minutes. We made a point on two or three occasions of going straight into the building and asking the matron to take us round.

8039. Did any interval, as long as half an hour, elapse between your arrival and your seeing the patients? Upon no occasion.

8040. We have had it given to us in evidence that on a number of occasions notice was given of the visit of the medical gentlemen to the institution, and patients were tidied up; that, in many cases, particular dresses were put on patients for these purposes;—would there be sufficient time in the interval after your arrival and your seeing the patients to do all this? Hardly.

8041. Has your experience shown you that it is sometimes difficult to get these patients put in order, and that it would take a longer time than would elapse in the interval? Quite so.

8042. Do you always examine the books when you visit Bayview House? Yes; and especially the medical journal.

8043. Have patients from time to time complained to you freely of their treatment? In this particular asylum I do not remember a single complaint, except from one patient, who complains to the official visitors on every possible occasion. It is needless to say that such complaints are generally groundless.

8044. Have you had opportunities of examining the food at Bayview House? Yes.

8045. Was it satisfactory in quantity, in quality, and well cooked? Yes.

8046. Do you think that the supply of bedding is ample as far as you can judge? Yes; as far as I am able to judge, I think it is ample.

8047. Have you taken it off the beds, so that you could thoroughly examine the clothing? Upon each occasion I have taken the opportunity of noticing what it is like.

8048. It has been stated in evidence that the clothing of the patients is inadequate, especially among the Government patients—have you noticed this to be the case? No; not at all.

8049. Generally speaking, as regards the internal management of the institution, are you satisfied? Quite satisfied.

8050. Have any complaints of a serious character been made during your time of official visitation in connection with the treatment of the patients in any way, such, for instance, as restraint, or any impriety? I have never heard of any such thing on any occasion.

8051. Do you remember Case No. 30? Yes; I do.

8052. Has she ever asked you for her discharge? No; but I have been told that she has asked other official visitors.

8053. From your experience in England as well as here, I should like to get your opinion on another point. In evidence before the Commission it has been stated that some patients had been in the habit of receiving medicine in their food and drink. Occasionally, is it necessary to administer medicine in that way? Certainly. There is nothing unusual in that.

8054. Is this the course adopted when patients refuse to take medicine in the ordinary way? Quite so.

8055. Do you remember Case No. 20, whose arm was broken? I remember it very well.

8056. Did the official visitors hold an inquiry in connection with this occurrence? They did.

8057. Was the case reported in the medical journal or case-book? I cannot remember. I presume it was.

8058. What was the result of that inquiry? The general result was we found that the patient had probably broken her arm while in an epileptic fit. It appeared from the evidence that while she was in this fit she had fallen across an iron bedstead which was in the room.

8059. Do you remember any other case in which a patient received injuries while in a single room? No; another does not come within my knowledge.

8060. Have you had some English experience in lunacy as well as here? I have. I was rather more than a year at the Border Counties Asylum at Roxburgh; at the Selkirk Asylum, Melrose, and for a time was in charge of that place in the absence of the medical superintendent. I have stayed as a visitor at other asylums both in England and in Scotland.

8061. From the experience you have gained in this and other countries do you think those two rooms for the isolation of male patients at Bayview House, one of which was occupied by Case No. 1, are places suitable for that purpose? Perfectly.

8062. Do you think the air space is sufficient? It is ample.

8063.

Dr. L. R.  
Huxtable.

2 Jan., 1896.

8063. Was the ventilation satisfactory? Yes. And speaking of air space I think these rooms are rather above the average cubic size.
8064. Have you ever seen patients placed in muffs or under any other form of restraint at Bayview House? No; I do not remember a single case.
8065. Have you examined the medical journal from time to time for the purpose of observing records of cases of seclusion? Yes.
8066. Did you expect to see all cases of seclusion recorded in the journal? All cases of proper seclusion.
8067. What do you mean by that term? The term, to my mind, has but one definition. That accepted in the old country by the Scotch and English Commissioners in Lunacy.
8068. What is their definition? That seclusion was to be regarded as isolation by day under certain conditions.
8069. Supposing there was a case of outbreak on the part of a patient or patients during the night in one of the associated dormitories, and it became necessary to remove such patient or patients into isolation or seclusion, do you not think that this fact ought to be recorded in the medical journal? Certainly not.
8070. Why? For the reason I have given you. The definition of the term seclusion, as accepted by the English and Scotch Commissioners, is the universal definition of that term, and any departure from that definition would lead to confusion, and place beyond control all means of comparison as to the result of treatment in the different asylums of the world.
8071. Do you not think it would be possible to keep a record of cases occurring at night as well as by day? It would be possible.
8072. Do you not think it quite as important, if not more important, for purposes of comparison and other reasons, to record cases of outbreak at night which require to be placed in seclusion, than it is to record such cases occurring in the day? I do not.
8073. Why? Because, after many years of debate on this very point, a universal practice has been adopted.
8074. We want to enter fully into this question, for this reason: To the ordinary mind, a case of outrage, requiring restraint and seclusion at night, is every bit as important as a similar case occurring by day. I am aware of what the usual and technical definition of the term seclusion is, but I should like to know the exact reason why, in your opinion, that definition should be so general? It is, of course, desirable that the practice of isolating patients in that fashion should be recorded. That was universally agreed upon long ago. Then came the question of what should be regarded as seclusion cases. For the purposes of analogy, we must place a lunatic, in relation to the term seclusion, on the same level as you would place a child in similar treatment. If you take a child and lock it up day after day in seclusion, that would be a matter which would not require explanation; so it is in regard to lunacy. If lunatics are put away by themselves for special reasons, the fact certainly ought to be recorded. If lunatics are put into the rooms at night for trivial reasons, such as a matter of taste on the part of the patients themselves, or by the order of the medical officers, for some trivial affair, that is not seclusion according to the definition of the term as universally adopted. Seclusion by day and seclusion by night are two very different matters. With regard to isolation of individual cases it is important to record them so that the result of the practice in one asylum can be compared with it in other asylums. In some asylums in England years ago, from motives of economy and insufficient number of attendants, it became too common a practice to lock patients up. Then it was decided that it was important and necessary to record every case that could properly be called seclusion.
8075. In your explanation you refer particularly to what may be termed the trivial cases of isolation;—do you not think it is desirable and necessary, when there is an outbreak of violence, requiring restraint or seclusion at night, that it should be recorded in the medical journal? I do not.
8076. Why not? I fancy my explanation covered that.
8077. Do you think there should be no record? I do not think there should.
8078. What is the value of the record during the day? For reasons I have tried to explain. An ordinary individual in an asylum has his liberty during the day, and the object in recording this seclusion is to see how many patients in a particular asylum it was found necessary to seclude during the day. If that number rose above a certain average, which from long experience was ascertained, it would then be a case for inquiry and the Lunacy Commissioners would see why it should be so. The rule is on a parallel in all asylums for the purpose of comparison.
8079. Was the original object to prevent restraint and seclusion being used so frequently in private asylums? Not only in private asylums, but in asylums generally.
8080. Is it not the case, in acute insane patients, that there is often an outbreak at night, and would you not think this outbreak as much worthy of record in the medical journal as similar cases occurring during the day for the purposes of comparison? If the outbreak was accompanied with any unusual circumstances it certainly might be desirable to report it.
8081. Supposing a patient is placed night after night for six months in seclusion because he has had frequent outbreaks of violence, do you not think that fact should be recorded in the medical journal? No, certainly not.
8082. Why not? Because it would not be in accord with practice. It would interfere with an understanding and an arrangement which have been universally adopted.
8083. How is the history of such cases to be known at all? They can be found out by inquiry.
8084. From whom? From the medical officers, if there is anything worthy of attention.
8085. Should there not be a record of such a thing under the statutory heading of "Seclusion," in the medical journal? No, I do not think it necessary.
8086. What is the use of the official visitors inspecting the books if you do not expect to find those entries there. How can you be aware of these cases if there is no record in the journal. Would you look in the case-book for such entries? In such cases as you speak of I certainly think I would.
8087. Do you know that in Schedule 9 of the Act particular provision is made for the form of the medical journal, in which it is printed over space left for entries, "Patients who are or since the last entry have been under restraint or in seclusion, when and for what period and reason, and in cases of restraint, by what means?" Yes.
8088. Do you consider that cases of the kind I have already mentioned, when patients are placed month after month in a single cell, on account of violence and outbreak, should not be entered in the medical journal under that heading? No, certainly not. Unless the patient was placed in a single room during the day, I am certain it would not be recorded in the journal of any asylum in the world. 8089.

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8089. Would such cases be included amongst those under medical treatment? Cases under medical treatment would be noted in the case-book.
8090. Are the case-books in all hospitals for the insane similar? Quite so.
8091. Do you know Case No. 1? Yes.
8092. Are you aware that he was placed in one of the isolated rooms on the male side? Yes, I was.
8093. How long were you aware of that fact—from the commencement? No; I was not aware of it throughout the whole of the case.
8094. Who informed you that he was placed there to sleep? The Medical Superintendent—Dr. Vause.
8095. Do you remember when, and how often, he informed you of that fact? No, I cannot remember.
8096. Were you aware that he was placed there some short time after he was received at the institution, and that he was there up to the time he was removed to Callan Park? I was not aware of it.
8097. Can you give an exact statement as to how long you were aware he was placed in that room to sleep? No; I cannot do that.
8098. We have had a good deal of contradictory evidence upon a point concerning which I should like some light. It is stated that when Case No. 1 was removed from this room, early on the morning of the 20th of May, he was in a filthy condition; that there was a strong stale urinous smell about the place from which he had been removed. Is it not a fact that in many cases of acute insanity the urine smells very strong, and might be regarded as stale by any person without particular experience in matters of this kind? I think anyone might easily be deceived. A person experienced in these matters might be able to make a distinction.
8099. Do you think it is likely that persons employed by a municipal authority to look after sanitary matters generally would be able to make such a distinction? No, certainly not.
8100. What experience would they have to enable them to distinguish between fresh and stale urine in a case of this kind? None whatever. They could not be judges in this matter.
8101. On the whole are you perfectly satisfied with the management of Bayview House? I was while I visited there.
8102. Did Dr. Vause always appear to be attentive to his patients, and to be desirous for their general welfare? That is the conclusion to which I came.
8103. *Dr. Garran.*] Comparing the room in which Case No. 1 slept with the corresponding rooms in Government asylums is the former in any way inferior to the latter? Certainly not; it is superior, because it is larger in its cubic space.
8104. We have been informed that there might be some advantage if these rooms were attached to the main building. By being detached do you think it is an advantage or a disadvantage? I think it being situated away from the main building is not such a disadvantage that it is not perfectly workable.
8105. We have been told that there is some advantage in the way of it being more silent than if it were attached to the main building;—is that so? I think it is an advantage.
8106. Is there any inconvenience to the patient in having to cross the yard in the open air, night and morning? The distance is not very great; it is only about 14 yards, I think.
8107. In view of the fact that patients might get cold in crossing the yard, do you think this is a desirable arrangement? I think it is perfectly workable.
8108. Do you think it would be better if a covered way were constructed between the isolation-rooms and the lavatory? Perhaps it would.
8109. If an attendant on night duty sits in a dining-room 14 yards distance, is that as good a method for night watching as an attendant being in a corridor passing in front of the door of the room in which a patient sleeps? I think an attendant under these circumstances would not be further from a patient than the average distance an attendant in a corridor would be in any asylum.
8110. Do you not think that an attendant at Bayview House would be tempted on wet and cold nights to sit by the fire in the dining-room, rather than go out across the yard to see the patient? No doubt that temptation would be there.
8111. Speaking generally, is the isolation-room in which Case No. 1 was confined a good one? It is quite suitable for the purpose.
8112. If you had been in charge of Bayview House, would you have had any hesitation in putting that patient in that room? No.
8113. What degree of noisiness or restlessness would justify you as a medical officer in putting the patient in that room, especially considering that the fact is not reported in the medical journal? I do not think that much justification is necessary. It is not always because of violence that patients are put into such a room to sleep. He may be put into such a place because it suits him better. He might sleep better, and be altogether less violent by being by himself. It is a well-recognised fact that some ailments to which insane patients are liable are much better remedied if the patients are left alone.
8114. We have it in evidence that Case No. 1 sometimes created a great noise at night;—would that be a sufficient reason to remove him to a separate room? That would be quite sufficient, for it would be necessary to place him beyond the possibility of annoying other patients.
8115. Was there any alternative when he was in this condition than to put him by himself? No.
8116. Would you have had any hesitation in putting him into the single room if you had been in the place of Dr. Vause? No.
8117. So far as you know of Case No. 1 was Dr. Vause quite justified in the course of treatment he pursued? Absolutely.
8118. Do you think Dr. Vause should have let the family know that Case No. 1 was sleeping in an isolated room? That would wholly depend on what the family consisted of. Letting such things be known often does more harm than good.
8119. Do you think that the removal of the patient into a single room should have been recorded in the proper book, so that the visiting doctors would be made aware of the fact? Certainly; I think so.
8120. If a patient becomes noisy at night, and you think that he would sleep better in an isolated room, is that sufficient reason for putting him there? Under certain circumstances it would be.
8121. Is the medical superintendent of the institution to be the judge of that? Yes.
8122. With regard to night attendants, does the result of your experience say that it is better to leave a patient alone rather than have a night attendant in the room? Speaking generally, it is much better that the patient should be quite alone.

8123. That being so, how often should a night-attendant see the patient through the observation hole in the door? Once every two hours.
8124. Do you think that is sufficient observation? That is the custom in many cases. In England visitation varies under different circumstances. Bi-hourly visits are necessary sometimes.
8125. If the instructions to the attendants at Bayview House were to visit the patient every two hours do you consider such would be a faulty arrangement? No; Dr. Vause, as Medical Superintendent, must be the judge of what is necessary, and give instructions to the night-watchman accordingly.
8126. We have been told that the instructions to the night-attendants were to the effect that they were to listen at the door of the patient's room, and if they found that their patient was quiet they must make no disturbance;—is that a correct course of procedure? Certainly; I should not disturb any patient who was quiet.
8127. If it had been necessary on the previous night to give a patient a sleeping draught, would you interfere with him as little as possible, always being hopeful that he would go to sleep? Certainly.
8128. If you found this patient took off his clothes during the night would you go into the room and put them on? Good gracious no; certainly not.
8129. Do you think he would get more harm from interference than by interfering to put on his clothes? Certainly he would.
8130. Would you interfere with a dirty patient? Certainly not.
8131. Would you wait until morning before cleaning him? That is the universal practice, and the reason for it is very obvious. Sleep is the first consideration.
8132. Would it do more harm to interfere than would accrue from leaving the patient alone? Decidedly it would.
8133. Notwithstanding the disagreeableness to a person of refinement? He is no longer a person of refinement when he gets to this condition.
8134. Do you mean to say that you would merely study the case from a purely medical point of view? Quite so. That is the result of long medical experience.
8135. And does this experience show that it is harmful to interfere? I do not think there is any doubt about that.
8136. Taking the case of a real foul and dirty patient, would you interfere then? No.
8137. Have you ever known a patient who denuded himself during the night catch cold? Very, very seldom.
8138. If they did catch cold would they show signs of it? They would if they got a serious chill, or an attack of pneumonia.
8139. Is it the established custom in large asylums to let the patients have their own way so long as they do not suffer from being humoured? Quite so.
8140. In taking Case No. 1 out at 6 o'clock in the morning, do you think it would be possible for a casual observer to know the difference between shivering from paralysis and shivering from cold? I did not know that he had any special paralysis of the limbs.
8141. We are told that he trembled while crossing the yard, and it is said that he was shivering from cold; I want to know if there is any difference between shaking from paralysis and shivering from cold? Undoubtedly. If he had a tremour from nervous disease it was a simple matter to distinguish it from the tremour of cold.
8142. Did you see the rugs which were used in the patient's room? I did.
8143. Did they seem to be adequate for the purposes for which they were put? They were the ordinary rugs used in such rooms.
8144. Can you tell whether the inside blanketing was torn or picked away? It very often is; there is nothing unusual in that.
8145. Is it necessary to renew the blanketing from time to time? Yes.
8146. Are these rugs the usual covering for patients of this class? Yes.
8147. Are they approved by the medical visitors? Yes.
8148. Do you know if the medical visitors have ever ordered additional ones? No.
8149. With regard to the women's isolated rooms;—if some women tear every bit of clothing off is it usual to reclothe them? It is of no use whatever, for the reasons that I have already stated.
8150. Has no garment been devised that they cannot tear off? You can clothe them in canvas and muffs which cannot be pulled off, but that is restraint. I know of no other means by which clothing can be kept on these patients. This form of clothing is only used in the daytime.
8151. Do you put muffs on them at night? No.
8152. If you did would it be an irritating form of restraint? Yes; and here comes in one of the main objects in putting them into the single rooms. By putting them there they are placed where they can neither harm themselves nor anybody else.
8153. Is this single-room treatment then the minimum of restraint? Yes; really it is.
8154. We have been told that there has been a great deal of tidying up of patients before they are seen by the visitors. Do you think if this practice is followed to a moderate degree there is anything objectionable in it? Certainly not.
8155. Is it only when the change of clothes amounts to re-clothing that this practice becomes objectionable? Yes. It would be objectionable if any special attempts were made to disguise patients or make them different from their ordinary condition when seen by the official visitors.
8156. We have been told that it is the custom in one of the female dormitories to take off the under-sheets from the beds and put on a waterproof sheeting in the case of several dirty patients;—do you see anything objectionable in that? No; such a precaution saves the mattresses.
8157. Is it better that there should be no bedstead in many of these solitary dormitories? Certainly.
8158. Is that in the interests of the patients? Certainly.
8159. So far as you saw Case No. 1 at Bayview House, did he seem to be suffering from want of attention in any way? Not at all.
8160. Did he ever complain to you about his treatment? No; on the contrary he was always buoyant; he was not in a condition to make any complaint. His general appearance and improvement in health and condition afforded sufficient evidence that he was not neglected.
8161. We have been told that during the daytime he was perfectly free to go about the ground as he liked;—is that so? Yes.

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8162. Was it necessary, therefore, to put him in this solitary room at night? Yes.
8163. We are told that in the first instance he slept in a room with an attendant; that he was next placed into an adjoining room with an attendant sleeping on the other side of the door; then that he was removed to the isolation room. Do you still think that was a proper course of treatment? Yes.
8164. Do you think it was only done for medical reasons? Yes; just as it is done in scores of other cases.
8165. From what you know of this case do you blame Dr. Vause for doing what he did? Not in the least.
8166. *Mr. McGowan.*] How long before Case No. 1 was taken out of the institution did you know he was sleeping in that isolated room? I am doubtful about the time. There has been a lot of talk about the matter in the public prints, but I am not quite sure how long he was in that room before he was removed to Callan Park.
8167. Do you think that was a suitable room for a case of his kind? Absolutely so.
8168. In cases of seclusion in the night-time should patients be seen without disturbing them every two hours? The room should be visited every two hours.
8169. Do you think the attendants should look through the observation hole on these occasions? That would depend upon the condition of the patient. It might be more judicious to listen than to look through the observation-hole.
8170. Take a patient like Case No. 1, who denuded himself of his clothing—should the attendant see in what condition the patient is? Yes.
8171. Supposing he looked through the observation-hole into the room, could he see the patient or any other patient? I should think so. It appears to me to be quite possible for a patient to be seen through the eyelet-hole.
8172. Does the same apply to the seclusion rooms on the women's side? Yes.
8173. Have any alterations been made there recently? Yes; a light has been placed in the corridor in front of these rooms.
8174. What for? In order that the attendant may see into these rooms if he wishes to. If I had been in charge of the asylum I very much doubt whether I should have put those lights there at all.
8175. Where is the utility of keeping a night-attendant if he or she does not see the patients? There are several reasons why there should be a night attendant. A patient might be noisy all night long; if so, he should be visited every hour and given nourishment. Patients might disturb other patients, and they should be visited. Attendants should visit the patient when anything unusual occurred.
8176. At Callan Park, when an attendant does not sleep in the same room as the patient, are you aware that such patients are visited every hour in the night-time, and do you not think that such is necessary at asylums like Bayview House? I think that it is necessary that patients should be visited as I have indicated.
8177. Is it not possible to have a room constructed so that a light can be thrown into it without disturbing the patients? Perhaps so.
8178. Have you seen the rooms at Callan Park? Yes.
8179. With a grating at the bottom of the door, to which the lantern carried by the attendants may be placed, and thus a light be thrown into the patient without disturbing him? Yes.
8180. Still, do you think the rooms at Bayview House are suitable for the purposes to which they are put? Perfectly.
8181. Did you ever notice a trembling in the limbs of Case No. 1? Yes; he trembled from general weakness.
8182. Is it usual in asylums for the insane to keep a record of every occasion when coercion is applied to patients, such as the use of muffs and other forms of mechanical restraint? That must be done.
8183. Is that done so that the official visitors can see the books and thereby ascertain what instruments had been used? Yes.
8184. The President has asked you a question about Case No. 20;—do you remember whether this patient was put into a single room and not seen until the following morning? I am not sure about that, but I think not.
8185. Supposing we have had it in evidence that women have been placed in these seclusion cells between 6 and 7 o'clock at night and not taken out till 7 the following morning, and have not been visited by any night-attendant in the meantime;—is that correct treatment? With a great number of patients, certainly. The majority of them go to bed and sleep as we do.
8186. Is it not the invariable custom to place in these rooms those patients who tear off their clothes and destroy their bedding? Not the invariable custom. These patients are generally put here, but other patients are put in single rooms for various reasons. They sleep quiet and calmly there where they would not rest in a dormitory. Some are put into single rooms because of their dirty habits.
8187. Did you know that women were placed in each of those single rooms without night attendance? I was not aware that patients were put into each of these single rooms without being looked after at night.
8188. Do you know there is a night-attendant now? Yes.
8189. *Dr. Manning.*] Do you know Case No. 30? Yes.
8190. Do you consider that she is insane? Yes.
8191. Do you think that she ought to be at large? I do not.
8192. Do you remember Case No. 13? I am not quite sure that I do.
8193. Are you aware that some women patients will not wear petticoats? I am aware of that fact.
8194. Are you aware also that it is not at all difficult for official visitors to distinguish patients wearing petticoats and patients without? There is no difficulty whatever.
8195. *President.*] Have you examined the isolated rooms occupied by female patients in Government asylums? Yes.
8196. We have had it in evidence that the only nursing provided at night-time on the female side at Bayview House, until very lately, was by two nurses sleeping at each end of the old single rooms;—do you think that sufficient night attendance in these circumstances? There are some ten or twelve of these single rooms. From my experience I can say that it would be possible, and even probable to confine patients in these rooms without any need of visiting them at all. These patients may have been sleeping there for years. They could be put to bed with the utmost confidence and would be much better left alone for the whole night.

8197. Do you consider it sufficient to have that amount of night nursing only? I think it would be more desirable that there should be more night visits to see that everything is all right.
8198. Do you approve the recent innovation at Bayview House in having a night patrol? Certainly.
8199. Was that night patrol suggested by the official visitors? No.
8200. Were any suggestions made by the official visitors always adopted by Dr. Vause? As far as I know, yes.
8201. *Mr. McGowen*] Have any consultations with outside practitioners been held at the institution in cases of mental or physical illness? None that I know of, but that might occur without my knowledge or without the knowledge of the official visitors. If the friends of patients desired to send their own medical men to consult with the Medical Superintendent, there is no objection to that course being followed.
8202. *Dr. Vause.*] Do you think that 10 drops of opium, given three times a day, is any way an excessive dose for a patient suffering from acute melancholia? I consider it a suitable prescription.
8203. Do you think simple excitement on the part of a patient at night to be of sufficient reason for sleeping in a single room? Yes.
8204. In your experience would not an intelligent attendant be able to tell how a patient was progressing by listening at the door of the single room? An experienced attendant would certainly be able to tell.
8205. Is a glazed window in a single room rather dangerous than advantageous? It is, if within reach of patients?
8206. Unless the glass is very thick? Yes.
8207. Do you remember, in reference to Case No. 20, the nurse saying she visited this patient's room during the night and in the early morning on which her arm is said to have been broken? I really cannot tax my memory to answer that question. The report of the special inquiry made by the official visitors is available to the Commission.
8208. Take ordinary chronic cases occupying single rooms, if these are visited at 10 o'clock at night, and again at 6 o'clock in the morning, would nurses sleeping close to the rooms be sufficient supervision? It might be.
8209. Supposing that recent and acute cases in single rooms had night attendance, would you object to ordinary single room patients being treated in that fashion? No.
8210. Would you recommend that night nurses should patrol an establishment with a small number of patients—say thirty or forty, not in single rooms, but in dormitories where nurses also slept? No; there need not be a night patrol through those dormitories.
8211. Would you keep a night nurse for them? No.

[Witness withdrew.]

Charles James Cox, Esq., M.D., F.R.C.S.E., F.L.S., C.M.Z.S., sworn and examined:—

8212. *President.*] Are you one of the official visitors to the lunatic asylums of New South Wales? Yes.
8213. In fact, I believe you are chairman of the Board at the present time? I am, and have been acting as chairman since the illness of Sir Alfred Roberts.
8214. In your capacity have you made a number of visits to Bayview House? Yes, sir.
8215. Were these visits made mostly in the day-time? Yes, sir.
8216. Have you ever had occasion to visit the institution at night? No, sir.
8217. Do you think it is an undesirable thing to visit lunatic asylums at night? That is the position the visiting Board has taken up. Using their own discretion, they think it best to confine their visits to the day-time.
8218. How often do you make your visits, as a rule? Once a month two of the Board must visit the place.
8219. When you enter Bayview do you go first to the office, to the main building, or to Dr. Vause's private house? Until quite recently we always went to the office.
8220. What interval elapsed between the time you arrived at the institution and your going through the wards? About 25 minutes.
8221. From time to time did the interval between your arrival and your seeing the patients vary according to whether you inspected the books or not? Yes.
8222. As a matter of fact, did you generally examine the books first? Yes, we have done so. In former times that was Sir Alfred Roberts' practice; latterly we have examined them after the visit.
8223. Do you remember, in the course of your observation of the books, whether there were any particulars entered regarding restraint or seclusion? Yes.
8224. What is the general system of inspection with regard to this matter? It is in accordance with section 78 of the Lunacy Act. You will see by that section that the official visitors "shall, so far as practicable, inspect every part of a licensed house, reception-house, or hospital, and every outhouse and building communicating therewith or detached therefrom, and every part of the grounds or appurtenances held or occupied therewith, and see every patient confined therein, and make such inquiries, examinations, and inspections as are set forth in section 71 of the Act, and enter in the Inspector-General's book a minute of the then condition of the said hospital, licensed house, reception-house, or other place, and of the patients confined therein, and such other remarks as they may deem proper, and shall, after every visit, transmit to the Colonial Secretary a statement of the number of patients admitted and discharged since the date of the last visitation, together with a copy of the entry made by them in the Inspector-General's book, and any other information they may consider necessary."
8225. What course do you follow when you go to the asylum? We go through the asylum after we have inspected the books. In the books we see the number of admissions, and then we examine the papers on which the patients have been admitted. This we have to do in accordance with the Act. We have to see whether they are properly signed, and that they are correct in all their details, also in accordance with the Act; then we have to see what number of deaths have occurred, to ascertain the causes of death, and to note the number of discharges.
8226. Do you also examine the grounds and the appurtenances of the institution? Yes; there is another book we have to look over.
8227. What book is that? There is the case-book, and there is the medical journal.

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8228. Does the medical journal contain a record of general facts in connection with patients in seclusion and under restraint, and other matters of that kind? Yes.

8229. Does the case-book contain merely a medical account of the cases? Yes.

8230. Do you say you also examine the buildings and grounds? Yes. After inspecting the books we go through the day yards, then to the sleeping apartments, and to the one or two private rooms. We particularly go into the closets attached to them: then we go into these rooms. We speak to any patients who desire to be spoken to, or to any of those who show any disposition to talk. In a friendly way we try to get them into conversation, and listen attentively to anything they have to say. Then we pass to another ward, see the bath-rooms, the closets, and go into the sleeping apartments. We then go into the general dining-hall, see the patients sitting there. We next go round and look about for anything that we may see. Then we go to the other dormitories and lavatories. We come out to where there are a number of single rooms. If they are open, we inspect them; if they are shut, we request that they may be opened. We are also particular in examining the closets in this part of the institution. In going through the rooms we turn down the bedding to see what that is composed of. We then go amongst the Government patients, where they may be sitting in a large room. We converse with them, and listen to what they have got to say. We are also particular about the closets here. We then pass on to the kitchen and laundry departments. We go through the kitchens and laundry and make a note of how many people are working there. We then go upstairs to a room where there are six or eight people put to sleep at night. After inspecting these we go down amongst the patients who are in the paddock. We pass from these to the men in the pavilion and the billiard-room, at which places we see them amusing themselves in various ways. We listen to what they have to say always. We ask to be shown any new patients, and we are particular in speaking to them. We look at the closets there. We then come up to the central main building, and, before entering, inspect the closets and all sanitary arrangements. We go through the bath-rooms, see the sleeping apartments, go on to the single rooms, and then to the place where the patients have dinner. Then we go upstairs, where there are two or three single rooms.

8231. In other words, do you make a general inspection of the whole of the premises? Yes.

8232. Have you been present when the patients have been taking meals? Yes, several times.

8233. Have you inspected the food from time to time? Yes.

8234. Were you always satisfied with the quantity and quality? Yes; I can say that most conscientiously.

8235. When inspecting the bedding have the underneath clothes always been clean and good? We have had to complain once or twice on this point. Certain things have been pointed out, attended to, and put right at once.

8236. When you have made complaints have they always been attended to? Yes.

8237. With regard to the patients' clothing, have you made inspection to see whether it was sufficient? Yes; I satisfied myself on that point. I have always thought it was my duty to see how many patients were properly clothed, and to know how many wore petticoats.

8238. It has been given to us in evidence that notice was given to the different departments of the institution when the official visitors arrived, "to get the patients ready," and to make them tidy. Do you think there would be a sufficient interval between the arrival of the visitors and their seeing the patients for that to be done? I do not think there would be.

8239. Would you approve such a practice? I do not think so, if it was intended to deceive. The patients are clean and tidy, and it would not be possible to make such a great difference in the clothing in the time available.

8240. Would it be possible during that interval to put dresses on the patients? In my own private opinion I do not think it would.

8241. Do you consider that a certain amount of tidying is necessary or objectionable on occasions of this kind? I do not see that there is any objection. On the other hand if a patient were soiled or very untidy nurses would not like to make them clean or put them straight in our presence.

8242. Would it be possible to do all this cleaning, and put new and clean dresses on the patients during the interval between your arrival and going through the wards? It would not.

8243. If these patients were so treated, if their dresses were changed, and they were hurriedly handled, do you think they would complain to you? Yes; they would lose no time in telling us. They could tell these things as well as you or I, and they are always ready to do so if they have a cause, and very often if they have not.

8244. Have you seen patients wearing muffs for purposes of restraint? Yes.

8245. Frequently? No; I have made notes about these things, for in giving my evidence I want to be very clear in expressing my views on the treatment of the insane in this Colony.

8246. In your inspection of the various departments of the institution have you seen the isolation room in which Case No. 1 was placed? Yes.

8247. Have you been in that room? Yes.

8248. Did you make a certain report to the Government on Case No. 1, but more particularly in connection with that room? Yes.

8249. In your report do you state that you were perfectly satisfied with the air space and general sanitary arrangements with respect to that single room? Yes.

8250. Do you also give a number of particulars in connection with the ventilation of that room? Yes.

8251. Is that report dated May 23rd, 1894? Yes.

8252. Do you object to that report being placed before this Commission as part of your evidence? No; that report is as follows:—

The Honorable the Colonial Secretary,—

23 May, 1894.

Sir,

I have the honor to acknowledge the receipt of your letter of the 22nd instant, enclosing the report and annexes of the Medical Adviser to the Government on Case No. 1, an inmate of the private asylum, Bayview House, Cook's River.

I have with great respect to point out that it is not easy to comply with your request, in so much that I do not wholly understand what it is desired should be included under the head of "Views."

With respect to the single room referred to in the papers forwarded to me with your letter, I would state that the room spoken of is one of two regularly set apart for the temporary accommodation of patients who may be violent, or too unmanageable otherwise to remain in the ordinary rooms. These two rooms form a detached building, standing in the courtyard about midway between the two main buildings on the male side of the hospital. The distance of these rooms from the building in which is the dining-room, &c., of the male patients is about 12 to 14 yards. The two rooms are identical

identical in every respect. The dimensions of the one occupied by Case No. 1 on the occasion referred to are as follows:—Length of room, 12 feet; breadth, 10 feet; height, 13 feet 8 inches; and is lighted by a central window on the eastern aspect 8 or 10 feet from the floor. The dimensions of the window are 1 ft. 9 in. by 1 ft. 6 in., and can be closed by a shutter from the outside. With the door closed and the shutter open the room is quite light enough to read easily.

Ventilation is moreover provided for by three ventilators of the ordinary kinds; one is placed above and rather to one side of the window, close to the ceiling; a second is placed on the opposite wall to the west, close to the ceiling; and a third, a perforated zinc ventilator, in the centre of the ceiling. There are in addition six or eight open round holes bored through the wooden ceiling. The building is substantially built of brick, with a gabled roof, and floored with firm wood; the space below the floor is provided with an efficient ventilator in the case of each room. It would have been better if the basement of the building had been raised in its original construction by several inches, as the floor is to my mind rather near the surface. The interior of the room is boarded up the sides to a height of 7 feet in the manner usual in such rooms in modern asylums, and colour-washed above. The ceiling is boarded over and painted. The rooms are perfectly dry and clean, and when occupied are free from small or foul odours. The bedding provided for patients placed in these rooms consists of a canvas-covered mattress, filled with straw, which is changed daily after being used; a pillow of the same kind is provided, and rugs consisting of a blanket and soft canvas closely quilted together, so as to resist the destructive propensities of the class of patients who require seclusion, three or more of these rugs being furnished as may be necessary.

With regard to the supervision of the patients placed in these rooms, the night watchman is instructed to visit them not less than once every two hours during the night. No tell-tale clock is furnished to prove that such visits are made. Had there been so, no doubt could have been raised that such visits were made. The male attendant in charge of the patients occupies a dormitory, the windows of which are always open above, not more than 12 or 13 yards from the door of the room in question, and which faces the dormitory windows. The room in which the patient slept was approved of and passed by the Colonial Secretary of the day when this hospital was licensed in accordance with the 25th section of the Lunacy Act. Rooms similar to and practically identical with them are provided for the accommodation of the class of patients under consideration in every asylum. Many of them, however, are provided with a thick bedding of straw all over the floor instead of mattresses, which, personally, I prefer to see used. Straw is the best material for mattresses for covering the floor with when patients are dirty and uncontrollable in their habits.

It has always been represented to the Board of official visitors that these seclusion rooms were only used temporarily, and in the case of patients whom it was necessary to seclude for short periods for the protection of other patients, or of themselves, or for subduing excitement, and the Board have seen no reason to doubt this representation, as these rooms have often remained for long periods unused.

In Case No. 1 it has been explained to us that his restless habits, caused by disease, rendered it impossible to keep him in an ordinary bed in an ordinary room, and that it had been found necessary and better to place him in a secluded room at night, as he could not be satisfactorily managed in any other way without undesirable coercion.

The patient, who perfectly recognises members of the Board, has been seen by us on the occasion of our visits, and when last seen, on the 12th of this month, was asked how he came to have a bruisa about one of his eyes, he immediately replied, "I fell down." No statements of other patients who are quite sane enough to appreciate their surroundings, and who have had opportunity of seeing the treatment of their fellow inmates, have made allusion to any harsh treatment exercised towards him, a privilege which all inmates have, and, as a rule, are extremely ready to point out anything which they consider harshness or injustice to other of their fellow patients. It is probably fair to say that in answer to questions as to their comfort, the inmates have spoken well, almost without exception, of their treatment, though, as is the case of all asylums, there have been many protests against continued detention.

We have noticed a great improvement in the bodily health of Case No. 1 since his reception into this hospital, which justified our concluding that the general treatment of his case had been satisfactory. As far as we have been able to see and judge of by examination, the bed-clothing has been sufficient. We can only record for the moment one case of late years in which insufficiency was complained of, and the complaint received our attention.

As to whether the accommodation of the patient in question is a fair return for the money paid, it is not for us to judge. This is purely a question for his friends to decide. They have always the option of removing him to one of the other Government asylums.

It has to be remembered that grave objections exist against paying official visits to insane patients in the night-time.

I believe all has been done that could be done to discover whether any ill-treatment or neglect of patients has been allowed, and, with regard to our visits, I may state that in no case has any notification ever been given of our intention to visit the asylum.

I have, &c,  
JAMES C. COX.

8253. Do you still adhere to the statements you make in that report? Yes.

8254. Do you do so in regard to Case No. 1? Yes.

8255. Are you perfectly satisfied that he received every possible attention at the hands of Dr. Vause? I am.

8256. Outside of that report in connection with this particular case, I wish to ask you one or two questions. Statements have been made in regard to Case No. 1, to the effect that while he was at Bay-view House he was greatly neglected, that he was placed in an unsuitable apartment, that that apartment is badly ventilated, badly lighted, and altogether insufficient, and that there were other circumstances which are altogether contrary to your report;—do you still adhere to your opinions as expressed in your report upon this case? I do, sir.

8257. Supposing it has been stated in evidence that this room was in a filthy condition, that there was a stale urinous smell about the place, that the bedding and covering supplied were totally insufficient;—are all these things in accordance with your experience? They are not; but I must say that I was never there at night.

8258. Would this supposed stale urinous smell arise from the ammoniacal condition of a patient in this particular stage of paralysis? It is probable it would arise from the disease; the urine is most offensive, and very ammoniacal.

8259. From your long experience in connection with these matters do you think that persons unaccustomed to these cases could distinguish between the smell of stale urine and the smell of an ammoniacal odour in this particular class of patient? No. I have been in these rooms very many times, and have never detected any such odour.

8260. At what hours of the day have you been in these rooms? Sometimes in the morning between 11 and 12, and sometimes in the afternoon.

8261. Were they always fresh after being scrubbed out? I have never perceived any odour of the kind described.

8262. Supposing two officials connected with a municipal department, who are in the habit of examining places in the city, went into that room the first thing in the morning after it had been occupied by a patient all night, do you think they would be able to distinguish the smells to which I have referred? Most certainly not.

8263. Are you quite positive that the usual experience of such municipal officers would be insufficient to qualify them as satisfactory authorities in matters of this kind? Most certainly they would not know. They are not the persons who can judge of these things at all.

8264.

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8264. Did Case No. 1 improve in his physical health while he was an inmate at Bayview House? Very much indeed; for a time he improved wonderfully. I went to see him particularly, and walked with him, arm in arm, once or twice in the grounds, and had a chat with him.

8265. Were you perfectly satisfied with his treatment at Bayview House? Yes.

8266. Did he ever complain to you in confidential moments of being placed in a stable to sleep? No such word or expression was ever used to me.

8267. Knowing well the whole of the circumstances surrounding his case, was it in your opinion justifiable to place him in that room for seclusion? Yes; I think it was necessary to place him in that room.

8268. Were you aware, as an official visitor to Bayview House, that Case No. 1 was sleeping in that room, and that he had been sleeping there for months? No. The first knowledge I had of that fact was on the 12th of May. When a man is placed in a single room for purposes of going to bed it is not reported in the medical journal. The first time I became aware of Case No. 1 sleeping in isolation was, as I have said, on the 12th May.

8269. How did you become acquainted with this fact? Through inquiring if any patient slept in this room.

8270. Did you do that in your capacity as one of the official visitors? Yes; and for the life of me I do not know why I did it. I did inquire, however, and I recorded the fact, because it is in my report, dated the 12th of May. That was the first time I knew of Case No. 1 being where he was. Then I ascertained that he had been sleeping there for some considerable time before.

8271. Do you not think it was the duty of Dr. Vause to report to you and the other official visitors any change that was made in the sleeping rooms used by this patient? Dr. Vause was not required to do so by law.

8272. When Dr. Vause knew that such change had taken place, do you not think the fact should have been mentioned to you and the other official visitors? I do think so.

8273. As a matter of fact, did you discover that the patient was sleeping in this room by your own inquiry? Yes; while on an official visit.

8274. Did you speak to Dr. Vause about this, or did you make any record of the fact in the books belonging to the institution? We inquired about the matter, and I recorded the fact in my report; which has been handed to you as part of my evidence.

8275. Independently altogether of that circumstance, do you disapprove, considering the nature of the disease from which the patient suffered, of his being placed in that isolated room? No; I think it was the best course to be followed in the circumstances of his case. The same thing is done in hundreds of other cases of that nature.

8276. Was any record made in the medical journal of the change in the sleeping accommodation of Case No. 1? No, sir. I say that Dr. Vause is not required to make it.

8277. Why? Because the law says a certain thing, and then matters of this kind hinge on the interpretation of certain terms.

8278. Do I understand from you that in reading clause 71 of the Lunacy Act, where it states "as to whether any patient is under restraint or in seclusion, and why?" you consider that Case No. 1's case should be recorded in these terms of the Act? I say that he was not in seclusion.

8279. What is your definition of the word? I say that in dealing with this subject several terms are used which are not defined in the Acts passed by the Legislature of this Colony. First of all, there is the term "seclusion." You will find, in looking through the Act, that this term is not defined. I have taken the trouble to write out my definition of these undefined terms. The first is "seclusion." By this I understand that a patient has been placed in a room by himself during the day with his clothes on, the door being locked on him. That has to be reported. Next, there is "put to bed in a single room." By this I understand that a patient has been placed in a room by himself during the day or night without his clothes, but with bed and bedding, the doors being locked on him. That is not recorded in the official records. The next is "isolation." By this I understand that a patient has been placed in a single room with bed and bedding, or a couch to recline on, the door being locked or left open according as the patient will remain by himself in the room; or he is isolated from the other patients on account of the existence of infection arising from him from disease. This is not reported or recorded. The next word is "restraint." By this I understand that a patient has been placed in a room by himself without his clothes, with bed and bedding, the walls of such room being so padded as to prevent him injuring himself against them either by day or night. This would be recorded or reported. Then comes the question of mechanical restraint. That means, in my mind, a restriction of the bodily liberty of a patient by such appliances as a strait-jacket, straps, sheets, towels, &c. That is recorded. Then comes being gloved. That means a patient's hands are fastened into a strong glove bag to prevent his tearing his skin with his nails, picking his ears, nose, or eyes, interfering with surgical dressings, or abusing himself, or to prevent him striking another. These facts are recorded. The next word I wish to deal with is "camisole." By this I understand that a patient will not permit clothing to be worn, or is destructive in his habits, or exposes himself, and a long canvas dress is put on him with canvas arms, and these are tied round his body. This method is used to avoid seclusion. Matters of this kind are recorded.

8280. Have you any reason for arriving at these conclusions? Yes, they are founded on the Lunacy Report for 1859, page 67. It is there shown that any compulsory isolation in the daytime, whereby a patient is confined in a locked room, should be considered "seclusion" and should be recorded. The reason of having this recorded is that patients otherwise would be locked up in single rooms during the day as a matter of convenience and economy. However, "seclusion" in this sense is a valuable agent in the treatment of the insane. If recorded, those who have to form an opinion of its propriety have an opportunity of doing so, to decide in fact if the seclusion was resorted to for medical reasons or for purposes of convenience and economy. The General Board of Lunacy in Scotland in their Report for 1873, page 271, issued instructions to the effect that whenever a patient is placed during the day in a room alone, with locked doors, the circumstance was to be reported as a case of seclusion, no matter whether the seclusion was adopted for medical treatment or for discipline. Dr. Granger, a member of the American Association of Superintendents of Hospitals of the Insane, in his work "How to Care for the Insane," says "seclusion is shutting a patient up in a room alone in the daytime, and if allowed to be done without orders from the physician in charge should be immediately reported."

8281. We are very much obliged to you for the authorities you have quoted, and after having done so, I would like to ask you whether it would not be desirable in the interest of patients, in the interest of the institution,

institution, and in the interest of Statisticians to have recorded cases of seclusion that occur during the night-time as well as those occurring during the day? No, it cannot be done. Being in bed is not the proper term for "seclusion." As a matter of usage and regulation I could understand it. I honestly say that I wish for a return of everybody locked up in these rooms. I say this, that the official visitors met together two or three years ago and had a form drawn up so that records of this kind could be made. For some reason that I do not understand the Government refused to adopt this form. I have asked for a copy at the Government Printing Office, and was informed that I could not get one. I saw one recently at Callan Park, and asked Dr. Blaxland for its use. He said he would send it in.

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8282. With your large medical experience, and with your equally long connection with these institutions, do you not think, if there were a serious outbreak during the night requiring seclusion, that it should be reported in the journal equally so with cases of seclusion occurring during the day? I should think so.

8283. Passing away from this subject, do you remember Case No. 30? Yes.

8284. Is she insane? Yes.

8285. Have you any doubt upon that point? Not the slightest.

8286. Do you know her sister, Miss \* \* \*? I have spoken to her; she interviewed me once.

8287. Is it your impression that Miss \* \* \* is a desirable person to have charge of her sister? I should think not.

8288. Have you ever been asked to discharge Case No. 30 to Miss \* \* \*? Yes, Miss \* \* \* asked me to use my influence to get Case No. 30 discharged to her care. I referred her to Dr. Manning.

8289. Do you know anything about Case No. 20, who had her arm broken while she is said to have been in one of these isolated rooms? Yes, I remember that case.

8290. Did you make a special inquiry into this matter? No; Mr. Nugent Robertson and Dr. Huxtable made the inquiry.

8291. Do you remember any other patients receiving an injury while in the single rooms at Bayview House? I do not remember any other case.

8292. Have you always been satisfied, as an official visitor, with the management of the isolated rooms on the female side of the institution? I have complained several times about the beds in them.

8293. In regard to the amount of clothing provided? No, I think the beds were too tightly stuffed.

8294. Are you a believer in loose straw in cases of this kind? Yes, I thoroughly believe in it.

8295. Are you aware that recently improvements have been made on the female side at Bayview House? Yes; I have seen them.

8296. Do you know that gas has been laid on? Yes.

8297. Do you approve of that? No, I do not altogether. I do not like patients being exposed to too much light. I think if you use gas at all it should be so arranged that the light could be turned down very low. I do not believe in gas at night for lunatic asylums.

8298. Were you always satisfied with the night nursing arrangements at Bayview House? Patients never complained to me.

8299. Patients placed in isolation;—did they have sufficient attention at night? I was never led to think otherwise.

8300. What was the provision for looking after patients at night at Bayview House? I was always under the impression that a person went round regularly at night, every two hours, to see the patients. That I thought was the regulation.

8301. Has that always been the case with regard to these rooms? I understood that it was so.

8302. Did you always understand that there was a night patrol? Yes.

8303. Would you be surprised to hear that it is only lately that there has been one at Bayview House? I should.

8304. Are you aware that two nurses slept, one at each end of the isolated rooms, and that there was no night patrol at all? No, I was not aware of that.

8305. On the whole, do you believe that Bayview House has been well managed, and that the alterations and improvements made have been of benefit to the institution? Yes, I think it has been very creditably managed.

8306. Has there been a large number of recoveries among the patients? Very large; there has been a great number of discharges.

8307. Do you think Dr. Vause has done the best he could for his patients? Certainly he has.

8308. Did he seem to take a deep interest in all his cases? Yes.

8309. Have you a high opinion of him as a professional man? I have every confidence in Dr. Vause.

8310. Have you heard other people speak about his treatment of the patients? Yes.

8311. Have the comments always been favourable? You always get growls, and doctors have to take their gruel as well as anybody else.

8312. *Dr. Garran.*] Are you thoroughly familiar with the isolated rooms across the courtyard? I am.

8313. Are you also acquainted with the isolation rooms at Callan Park? Yes.

8314. Practically, for medical purposes, are the isolation rooms at Bayview House as good as those in the Government institution? Yes.

8315. Regarding the sleeping accommodation, do you think Case No. 1 has gained anything by the change from Bayview House to Callan Park? I think not. It was all very well to say that he was in "seclusion." I saw him in a room several times when the door was wide open, and he had two attendants looking after him.

8316. Do you know that the room at Bayview House is detached from the main building? Yes.

8317. Is that an advantage or disadvantage? I think it is an advantage.

8318. In what respect? The attendants are not so close to the patient at night, and he has better opportunity of sleeping. At the same time the patient is under observation. More than that, the room was built under supervision, and in accordance with the Government approval. The rooms used for isolation purposes must have received Government sanction, or the house would not have been licensed as it is.

8319. Were these rooms built during your time as a Government visitor? I think they must have been, for I have been in that capacity for the last thirty years.

8320. Do you remember any official report being made upon these rooms? No such report has been made since I have been on the Visiting Board.

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8321. Would you condemn these rooms if you reported upon them now? No, I would not.
8322. Some witnesses have stated that the isolation of these rooms from the main building is an advantage in the way of silence, both for the patient in the room and for the patients from whom he is removed;—do you think that is so? Yes, that is one of the advantages.
8323. Do you think it is a disadvantage to have to cross the courtyard early in the morning or late at night? I think it is a disadvantage at night time, for in adverse weather there is a temptation for the night attendant to remain in the dining-room instead of going to see the patient.
8324. Do you think a covered-way between the main building and the isolated rooms would get over this difficulty? I think it would be a great advantage.
8325. Do you think this isolation room is sufficiently lighted? Yes; I have been in that room with the door shut, and have been able to read small print quite well.
8326. Do you approve of patients being placed in single rooms? I do, sir. I am a great advocate of that treatment.
8327. Do you think that a noisy, or dirty, or excitable patient should be kept quiet and alone? Yes.
8328. From what you know of Case No. 1 do you approve of his having been put in that room? Yes; I would have recommended it myself if I had known all I know now.
8329. Do you blame Dr. Vause for his treatment of Case No. 1? I do not; I have every confidence in Dr. Vause, and I believe that the patient received proper attention.
8330. The idea seems to prevail that he was taken from a room where there were comforts suitable to his position, and put into a room where there was nothing but blank walls except the bedding on the floor. Do you think that was a matter of fair treatment in a patient of this class? Yes, I think it was a great advantage for the patient. He was not conscious of the change. Being in another room, where there were other patients and attendants, would only tend to excite him and keep him awake when he required sleep. Being alone he lay down and slept.
8331. Do you think, looking at the question all round, that it is an advantage to have these rooms away from the main building? Yes.
8332. Have you any doubt on that point? No.
8333. Do you think it is much better for an attendant to be on the outside rather than inside with a patient of this kind? I make no qualification about a question of that kind, and I say that the attendant is best on the outside.
8334. In the case of a patient denuding himself, would you interfere in the way of re-clothing him at night? No, sir, I would not. They cover themselves up, as a rule, as soon as they feel any necessity for warmth—that is why I am such an advocate of loose straw being placed in these single rooms.
8335. Do you think when patients un-clothe themselves in this way that they are subject to illusions? You cannot tell; they do it, and that is all one knows.
8336. Have you ever found a patient in the habit of denuding himself suffer from cold? No case has ever been reported to me.
8337. Have you ever known of a case of pneumonia following this night exposure? No, I have not.
8338. So far as you know has any patient suffered through simply denuding himself at night? I will not say that. I know that in private practice patients do suffer from this.
8339. I am not speaking of private practice; I am speaking of insane patients? I do not think insane patients are apt to catch cold. It is not at all an ordinary circumstance that they do.
8340. Supposing there were some risk of a patient who denuded himself catching cold, would you interfere and force that patient to wear clothes? No; I would give him more straw and covering.
8341. If these patients feel the cold, though mentally unconscious of it, do they by instinct cover themselves? I think so. You will find in lunatic asylums that when men feel the cold they will lie down in a corner and cover themselves with anything available.
8342. Would you disturb patients at night for purposes of cleanliness? No, not between the time they go to bed and the time they get up.
8343. Do you think it better to leave such patients alone? Yes.
8344. Do patients of this class, medically speaking, suffer from being dirty? No, they do not realise their position at all.
8345. We have had it given in evidence that the first consideration with patients of this description is sleep;—is that your opinion? Yes.
8346. Do you think it better, no matter the state of the patient, to leave him alone until he is asleep? That is the correct treatment in cases of this kind.
8347. If you had been in charge of Bayview House, would you have put Case No. 1 to sleep in that isolated room? I would.
8348. Would you have interfered at night for the purpose of re-clothing him? No; I would have had him visited, but I would not have ordered the attendant to enter the room to put on clothes.
8349. Would you have ordered the attendant to clean him? No, I would not.
8350. Do you think Dr. Vause's treatment was right? I would have recommended the same treatment myself.
8351. Was that treatment in accordance with the treatment of similar patients in all large asylums? So far as I am able to ascertain it was, and it was the best that could be adopted in the circumstances.
8352. If Dr. Vause was not under any legal obligation to report the fact of Case No. 1 being put to sleep in this room at night, do you blame him for not letting the official visitors know? I think it would have been more judicious on the part of Dr. Vause to have reported the change to the Visiting Board and to the Inspector-General of the Insane. If I had been in his place I would have done so for my own comfort's sake.
8353. Is he under any technical or legal obligation to do so? No.
8354. Was it a question open to his own discretion? It was a matter purely for his own discretion. Personally, I am somewhat sensitive about these matters. I think all these cases would be better reported. I think they should be entered in the medical journal, so that they can be seen by the official visitors and the Inspector-General, then there would be no doubt in these matters. If I had my way this would be done.
8355. Did you see the rugs in the room used by Case No. 1? I did.
8356. Do you think they were of suitable quality, and that they had an adequate supply of blanketting stitched on the inside? Yes; the matron told me that the patient might have as many as he liked.

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8357. Did you see the attendants who waited upon him? Yes.
8358. Do you think they were suitable men for that position? Yes; they seemed to be intelligent men.
8359. Did the patient ever complain to you about his treatment? No; he always seemed to be very comfortable, and appeared to have everything he wanted.
8360. Did he ever complain to you about the room in which he slept? He did not.
8361. Did he ever call it a stable? I never heard such an expression pass his lips.
8362. Do you know whether this building used as isolation rooms on the male side ever was a stable? I believe it was built for the purposes for which it is used. I do not think it was built for a stable at all.
8363. If Dr. Vause ordered that the patient should be inspected every two hours, do you think that was sufficient? Yes; I believe that would be quite enough. It would have been folly to disturb him uselessly, but I think there should have been an attendant in his neighbourhood sufficiently near to hear any noise.
8364. We have it in evidence that this night attendant sat in the dining-room 14 yards distant;—do you think he was near enough to hear any noise? I inquired into that very point, and I even went so far as to ask the patient while he was in the room to speak while I was in the other building. With the window open I could hear him speak.
8365. Could you hear a patient passing up and down in that room? Providing there was no straw on the floor, I could hear a patient pacing about in his bare feet.
8366. Did you know the establishment when it was under the management of Dr. Tucker? Yes.
8367. Do you think it has been as well managed under Dr. Vause as it was under Dr. Tucker? Yes; I do.
8368. So far as you have seen the case, has anything come under your notice in the treatment of Case No. 1 of which you could disapprove? I have never seen anything that I could disapprove in his treatment. Every time I have seen him he was clean, well covered, and seemed to be happy; he was always glad to see me; he always recognised me, and never made any complaint as to his treatment. If I could say that he did not get proper clothing, if he had not been looked after as he should have been, I would not spare Dr. Vause five minutes. Dr. Vause knows quite well that if I had seen anything wrong in the treatment of Case No. 1 I should have told him my mind without scruple or hesitation.
8369. We have been told in evidence that there were placed in the patient's sleeping-room, after his removal from the main building, a straw mattress, three rugs, a pillow, and pyjamas;—do you consider that an adequate supply of clothing? Yes; I should regard the pyjamas as an extra—they would be liable through filth to become a nuisance; I should have left the pyjamas off.
8370. If you were told that the patient was put into this room in a naked condition, do you think any great harm would come from that practice? No.
8371. Has it struck you at any time that in the treatment of the case Dr. Vause has abused his authority in any way? Certainly not; to my mind the patient would have been better without clothing.
8372. Would not that have been very disagreeable, if not revolting, to onlookers? Yes; but that is a question that does not need much consideration. The patient himself does not realise his position. From a medical point of view all sentiment must be dropped, and it is best for the patient to be left alone, clothed or unclothed, as much as possible.
8373. Have you been an inspector of asylums for a great many years? Yes; for about thirty years, and I have seen most wonderful changes come over the treatment of lunatics in this Colony.
8374. *Mr. McGowan.*] Do you make your visits to the asylum on a certain day of the week and at certain hours of the day? No; we are very irregular in our visits, particularly irregular.
8375. At what hour do you generally go? As I say, we are particularly irregular. Sometimes we go in the afternoon, sometimes early in the morning.
8376. Do you always go into the office first for the purpose of searching the records? Very nearly so.
8377. Do you say that as much as 25 minutes elapse between your arrival at the office and your going through the wards? Yes.
8378. You described the manner in which you go through the asylum, do you always follow that course in making your inspection? No; we have gone just the reverse many times purposely.
8379. In addition to this 25 minutes' interval would there be a further lapse of (say) three-quarters of an hour, if you went through the men's division first, before you arrived at the female patients? Yes, perhaps so.
8380. That being so, would there arise an opportunity for changing nearly every article of clothing worn by the female patients? There might be some opportunity for this, but if it were done you would very soon get some evidence of it. You could not go and wash the whole of the people in that time; you could not get rid of any abnormal quantity of dirt about the place; and if you excited or hustled the patients by changing their clothes, they would soon let the visitors know about it.
8381. Certain witnesses have told us that clean dresses were put over dirty ones on Government patients before they were seen by the official visitors;—would there be time to make such alterations? I do not think there would.
8382. Supposing a patient had on a dirty dress, and a nurse put a clean one over it; is not that possible? Of course it is possible, but the patient would mighty soon whip up her dress and show the dirty one. These poor things are as sensitive about such matters as we are, and they would not tolerate such deception for a moment.
8383. Some evidence given to us has been to the effect that before you went round the premises the attendants would go on ahead, and make things ready for your inspection? And I have told you that we reversed the order of our inspection occasionally, just on purpose to detect anything of this kind.
8384. Do you not say that you did not know that Case No. 1 was sleeping in this isolated room until the 12th of last May? Yes; that is the fact.
8385. When you made the discovery did you make a record? I did; I made a record of the fact of his being there.
8386. Does the Lunacy Act compel the official visitors and the Medical Superintendent to make a record of the fact that a patient was put into a single room at night to sleep? No, sir; you may put a hundred and fifty in at a time to sleep at night, but you are under no legal obligation to make a record of this practice.

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8387. Do you think it is not necessary to keep a record? Personally, I would like a record kept of it, but according to the usages of these institutions and the requirements of the Lunacy Act it does not appear to be legally necessary to keep such a record.
8388. Were you given to understand that Case No. 1 was sleeping in any other room in the main building? I saw him in three different rooms.
8389. At any time previous to the 12th of May were you informed that the patient was sleeping in this room? No.
8390. Were you informed that patients were sleeping in single rooms on the female side? Some one sleeps in those single rooms every night.
8391. Do you say that the isolation rooms at Bayview House are as good as the isolation rooms at Callan Park? I think the one used by the Case No. 1 is practically as good.
8392. Although you acknowledge that the night attendant is 14 yards away from the patient? I think there might be better provision in that respect.
8393. From your knowledge of human nature, do you think, unless there is a tell-tale clock, that a lazy attendant might not go to see the patient every two hours during the night? Yes; I should like these rooms to be connected with the main building, but you must remember that the institution was built first of all as a private house.
8394. Are you strongly of opinion that persons placed in these single cells should not only be recorded in the books of the institution, but that a night attendant should see inside these cells once every two hours? Do not misunderstand me; there are means of observing the patients without going inside the rooms. I do not mean that an attendant should unlock the door and enter the room with a bull's-eye lantern in his hand. That would be a most injudicious thing to do. If there were any unusual noise or anything unnatural in the condition of the patient it would be the duty of the attendant to enter the room; but I most strongly disapprove of an attendant going into a room with a bull's-eye when the patient is asleep, particularly if that patient is excitable through being insane.
8395. Do you say that it is possible for these patients to be under observation during the night without the doors of the cells being opened? Yes; there is always a place in the door through which one may look into the cell. I do not see the necessity for an attendant going into the rooms every two hours and shoving a bull's-eye lantern into the faces of these poor creatures.
8396. Do you know that at Callan Park there is a grating at the bottom of the door to which the lantern can be placed, and thus a light be thrown into the room? Yes.
8397. Is that preferable to the arrangement at Bayview House? I do not think so; I think the arrangement at Bayview House is just as good as at Callan Park.
8398. Do you think Case No. 1 would be sufficiently under night observation if an attendant occasionally listened at his door? Yes, if the attendant listened at the door, and ascertained that the patient was asleep. If the attendant heard him snoring it would be madness to put the bull's-eye in his face.
8399. Do you think it was absolutely necessary that he should be seen at stated intervals? It was not necessary unless the attendant were instructed so to do by the Medical Superintendent.
8400. Were you always given to understand that there were night attendants on the female side? Yes.
8401. Do you know whether night attendants have been appointed since the 20th May? No.
8402. Do you know anything about Case No. 20 breaking her arm? Yes; and I know that Mr. Nugent Robertson and Dr. Huxtable held a special inquiry into the circumstances.
8403. Did you make any inquiries as to what came out in evidence on that occasion? Yes.
8404. Do you know that she was placed in a single room at night, and that when she was taken out the following morning her arm was broken? Yes.
8405. Do you know if any attendant visited her during night? I do not know; from what I gather she broke her arm through falling across a bedstead while in an epileptic fit. I have seen the result of bedsteads being in a bedroom before. I saw at Parramatta a man sleeping in a room with a bedstead. He took the leg off his bedstead and with it killed another fellow.
8406. Did you ever make any inquiries as to whether a night attendant saw Case No. 20? I took it for granted there were night attendants there, as there are in all well-disciplined institutions.
8407. Have you any complaints to make about the food? No.
8408. Did a nurse named Josephine Mackay write you a letter? No.
8409. Are you satisfied that each of these twelve rooms on the female side had a patient in it every night? I believe each had a patient every night.
8410. Are you satisfied that these are suitable rooms for the purposes for which they are used? It has been suggested that they ought to get a little more ventilation, and they have been altered and improved latterly; more light has been added.
8411. If any instruments of coercion or restraint were used upon patients would the facts be recorded in the books of the institution? Yes.
8412. Have you examined the book in which these entries have been made? Yes, and signed it. I have never known a case where the muffs, or other forms of restraint, have been used and not recorded. Patients have complained of having their hands tied up, and when we have made inquiries we have always found the necessary facts recorded.
8413. Are there some patients in Bayview House under the Master in Lunacy? Yes.
8414. Does he send anyone specially to visit these patients? I think Mr. Hargraves used to visit these patients, but I do not know who does so now.
8415. Do you know if the Master in Lunacy has a special visitor? Yes, he has.
8416. Do you know if there have been any consultations with outside medical practitioners at Bayview House for either mental or physical ailments? No, sir.
8417. *Dr. Manning.*] One witness has told us in evidence that the nurses undress every patient and redress them between the arrival of visitors and the time they inspect the wards;—do you think it is possible for this to be done in that time? I say it is not true; it is impossible to do such a thing.
8418. The same witness said that sometimes they could not change all the clothing for want of clothing, and that they would slip on a new dress over the old ones;—do you think that is likely? I do not believe it; nothing has ever led me to think that this has occurred. I have always been very careful in noticing the patients' clothing. I think I may rather pride myself on the performance of that part of my duty.

8419. Have you not said already that patients so treated would most likely complain of being hustled about? Yes, they certainly would. They are perfectly sane on most matters of this kind, and if they were changed or hurriedly dressed or hustled about they would complain and remonstrate as soon as they saw the official visitors.

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8420. Would they complain about having their clothes changed? They would.

8421. Do you know Case No. 13? Yes.

8422. Do you know that she is noted as a patient whose main desire is to make mischief? Yes.

8423. Do you know much about Case No. 20? No; I have only seen her once or twice.

8424. Are you aware that the official report made by Dr. Huxtable and Mr. Robertson, in reference to this matter, distinctly states that this patient was visited every two hours during the night before she met with her accident? I have heard so.

8425. Do you consider the extra lighting of the single rooms on the female side is an improvement? No, especially if the light is turned up at night. I approve of a light being there for use when required, but I certainly do not believe in keeping a light in a room during the night. It prevents the patients from going to sleep, and therefore does them harm.

8426. Are you aware that a great many patients sleep in these single rooms quite quietly both at Cook's River and at Gladesville? Yes.

8427. Do you know that some of these rooms are nicely furnished, and that it is at the request of the patients that they are used as sleeping rooms? Yes.

8428. If you put anyone in seclusion would you report it? Yes.

8429. What would be the use or advantage to the official visitors of recording the whole of the people who are placed in these single rooms at night? I think a record being made of the cases put in occasionally at night would be sufficient? I do not see a great necessity of a record being kept of all the patients who sleep regularly in these single rooms. I think it would be a most expensive business, and require a large amount of clerical assistance to keep a record every day. Still, speaking personally, I should prefer to see it done.

8430. What practical advantage would there be in following such a practice? It would afford an opportunity of showing actually what people were in those rooms at night.

8431. *President.*] Would you be particular in recording cases of mechanical restraint during the night-time? Yes; but as a rule mechanical restraint is not used in the night-time.

8432. Do you wish to put in an official report, drawn up by yourself and Mr. Nugent Robertson, dated the 4th of June, 1894? Yes; I have no objection to that being part of my evidence. It reads as follows:—

Bayview House Asylum for the Insane, June 4, 1894.

We made an official visit to this asylum to-day and we inspected every department in it. We examined the statutory books and found that they had been posted up and all entries made correctly to the 2nd instant. Since our last visit there have been no fresh admissions. There has been one death, Case No. 60 died 14th May, 1894, from natural causes. One patient, Case No. 1, had been transferred to Callan Park on the 20th of May last. The latest returns entered on the 2nd of June, show that the number of patients then in the asylum was female Government patients private male patients. private female patients. Two private male patients and four private female patients were out on leave. Case No. 59 had been placed in seclusion during the daytime on seven occasions, for one hour at a time, from excitement, and Case No. 61 one hour for the same on one occasion. No one has slept in either of the two single rooms on the male side since our last visit, except Case No. 62 for one night at his own request, because he thought the attendant was snoring to annoy him. We found two Government female patients in the hospital ward—one suffering from bronchitis and the other from diarrhoea. Case No. 41 was in bed, having suffered from a feverish attack of a typhoid character, but is now convalescent. These patients have had special day and night nurses, and Dr. Sinclair has seen them professionally with Dr. Vause. We found that the rain had beaten in through the shutter ventilators on the north aspect the previous night, during an unusually heavy gale from that quarter. We found also a short arrow, such as is used by the South Sea Islanders, in the hands of one of the female patients in one of the day rooms, which had apparently been picked up in one or other of the recreation grounds, which we took from her. The Board made a careful inquiry into Case No. 1. The room in which he slept was again examined, although the official visitors are already familiar with it. The room is dry and well roofed. The cubic space is sufficient and the ventilation and lighting ample. The two attendants who attended upon the patient at night, were separately examined, and the Board see no reason to doubt the accuracy of the information obtained from them. The patient was very destructive, having at different times torn up or destroyed some forty blankets, and had to be accommodated in the usual manner with canvas sheets and a canvas rug into which a blanket was sown. The attendants sat up on alternate nights for the purpose of visiting the patient. The practice was to go and listen at the door of the room in which he was, and if he was quiet he was not disturbed. If, however, as often happened, he was excited or noisy he was visited, and any wants which he expressed were supplied, a fire always being kept in the kitchen for the purpose of preparing cocoa, hot milk, or other refreshments, that he might desire, and these were frequently given to him. Case No. 1 invariably had a warm bath every morning at all seasons of the year by his own desire. The patient was extremely dirty, and would smear himself with faeces, and he rarely used the chamber utensil. The injury to his eye appears to have been caused in a struggle, in which the attendant tried to prevent him while in the closet from taking up faeces in his hands, the face of the patient accidentally coming in contact with the wall. The circumstance is duly noted in the medical journal.

8433. *Dr. Vause.*] Do you remember a certain conversation that took place between Case No. 1, yourself, and Sir Alfred Roberts, when the patient was particularly clear in his mind? I do.

8437. Do you think on that occasion the patient was as reasonable in his inquiries as a sane person would have been? Yes.

8438. Regarding his conversation on that occasion as being of a private character, do you think that if the patient, with his particular clearness at that particular moment, would have made complaints to you about his treatment if he considered he was not receiving proper attention? I think he would. I gave him every opportunity to make complaints to me. I walked arm in arm with him round the paddock several times, and from the whole of my experience the only thing about which I was vexed was the black mark on his eye. I said to him, "How did you get that?" He said in reply, "I tumbled down, old boy." Then I made inquiries about it; the attendant told me that the accident happened in a closet, that the patient attempted to meddle with the faeces; that the attendant took him by the arm, pulled him away; that there was a struggle and that he bumped his face, or the corner of his eye, against the wall.

8439. Did you read anything concerning Case No. 1 in the case-book? Yes.

8440. Do you remember reading in the case-book that he slept in a single room? No, I do not.

8441. Did you read his case at all? I did up to a certain date.

8442. Can you recollect any single case at Bayview House where a patient got cold through being put to sleep in a single room? No; I do not remember any such case.

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8443. Have you frequently gone through the asylum with Sir Alfred Roberts without any delay in the office? Yes; and so has Mr. Nugent Robertson.

8444. Might not an attendant fall asleep in a corridor fronting a row of single rooms as easily as he might fall asleep in a sitting room 14 yards away? Yes.

[Witness withdrew.]

FRIDAY, 4 JANUARY, 1895.

[The Commission met at 11 a.m. in the Board Room, Chief Secretary's Office.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
ESQ., M.D., INSPECTOR-GENERAL OF THE  
INSANE.

ANDREW GARRAN, Esq., LL.D.  
JAMES SINCLAIR TAYLOR MCGOWEN,  
Esq., M.L.A.

Dr. Vause was in attendance to hear evidence and examine witnesses on his own behalf.

Henry Gearey sworn and re-examined:—

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8445. *Mr. McGowen.*] The first question I want to ask you is in regard to a statement you made in your former examination. You then said, in regard to the room from which Case No. 1 was removed, that you saw cobwebs over the window, and are you still positive with regard to that? Yes, certainly; I say that this window had not been opened for months.

8446. Did you see these cobwebs from the inside of the room? No; I saw them from the outside of the room over the window about 2 feet square. This was in an old stable-like building, and I think the opening was where the hay must have been put through originally. I remember the size of the window, because when I looked up I knew there were no other means of egress from the room, and I said to myself, "You cannot get a man out of that." I saw cobwebs on the outside of the shutter. You could not see anything from the inside because it was too dark.

8447. During your inquiries into this case did you make any promise to any of the witnesses who have given evidence that if they would volunteer evidence against the institution you would secure for them a Government position? I never said any such thing.

8448. Did you make that promise to any one witness? No; it would have been absurd for a man in my position to make any such promise.

8449. If one witness has written a letter to another saying that she would come and give evidence before this Commission because she was going to get a Government billet through your influence, would that be correct? No. I knew that every one who came to me would be in the position of discharged servants. I knew that if Dr. Vause found out that they were communicating with me they would be discharged. It made me feel sorry to think I might be a cause of injury to these girls. I interested myself in one inasmuch as I went to see Mr. Munro in the hope of getting a position for one of the girls as stewardess on board one of the ships trading along the coast. That is the only one who has ever spoken to me or I have ever spoken to about a billet. I never mentioned to any one of them such a thing as a Government billet.

8450. Did you bring the facts of this inquiry under my notice—I mean as far as Case No. 1 is concerned? Yes; the reason I came to you was that I was recommended to do so by friends of mine.

8451. Had you been previously to Mr. Jeanneret, who at one time was a Member of Parliament? Yes, but he was no longer a Member of the House, and then I came to you.

8452. When did you first come to see me? It was on the 2nd of September; it was on a Friday. That was the first time I saw you or spoke to you about this matter.

8453. Did you lay before me certain papers, and did I ask you where you got them? I gave you certain papers and asked you to look over them. These papers referred to certain statements made in Parliament by Mr. Jeanneret when he moved the adjournment of the House.

8454. Did you tell an accountant named Mr. Young that you possessed these papers? Yes, I did.

8455. To what did these papers refer? In the first instance, a report by Professor Anderson Stuart; one by Mr. Sager, the Secretary of the Board of Health; my own report, made at the request of Professor Anderson Stuart on the 20th of May; a report written by Dr. Manning; comments on these reports by Dr. Vause; a report from Dr. Cox; and correspondence between Mr. Critchett Walker concerning these reports.

8456. Besides these, were there any others? I attached all the evidence I had in my possession about the asylum.

8457. Did this include the evidence received from female attendants? Yes.

8458. Did it also include matters with which you became acquainted after seeing Mr. Jeanneret? Yes.

8459. How did you get that evidence? By interviewing the people who had been at Bayview House. Sometimes I went to see them and sometimes they came to see me.

8460. Do you mind telling the Commission why you used these efforts to obtain this information? My first object was that I knew Case No. 1 was being ill-treated. I had no other object in view, except to see that he was right at the time of which I speak. In making inquiries about him other things came

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came to my knowledge. I never intended to go further than having Case No. 1 removed, but after what was brought under my notice by former employees of the place I did not think I should have been doing right to have shut my eyes to certain facts laid before me.

8461. Were the papers you gave to me type-written? Yes.

8462. Were these the papers you gave to me [*papers produced, examined by witness, and retained by Mr. McGowen*]? Yes, those are the first papers I know of.

8463. How did you get these papers and reports that were laid on the Table of the House? Mr. Jeannerot lent them to me, and I got them copied at my own expense.

8464. Do you know Mr. Young? I do.

8465. Have you ever had any conversation with him? Yes, two or three times.

8466. During the conversations with Mr. Young, has he ever led you to understand that he knew everything that was going on here? He told me he knew everything that was going on.

8467. Do you know if he told anybody else that he knew the nature of the evidence given before this Commission? Yes; I heard the same thing from another person.

8468. Have you any objection to mentioning that person's name? I would rather not.

8469. *President.*] It is your duty to give evidence that you are asked for by members of this Commission. You have no need to fear any results from whatever evidence you may give. The Commission itself will see that you are safeguarded in the matter of giving evidence? The person named is Mr. Scott; he is a friend of mine and a friend of Mr. Young's.

8470. *Mr. McGowen.*] Do you remember a certain anonymous circular being issued having reference to matters connected with Bayview House and its management? I do.

8471. Do you remember when that circular was sent out? I remember seeing it on a certain Monday morning.

8472. Was that after you left these papers with me on the Friday? Yes.

8473. Do you remember me asking you if you knew anything at all about this circular? Yes.

8474. Do you know anything of it? I do not.

8475. Do you deny the authorship of it? I do most certainly.

8476. Is there anything more you care about stating to this Commission with regard to this inquiry? No; I think it would make no difference if I did. I do not consider that I have had fair play in this matter at all.

8477. Have I seen any of your witnesses in this matter? Only one—Mackenzie. As far as you are concerned it was my desire that you should interview the witnesses. I was under the impression that I should have been allowed to have been present throughout the inquiry. When this was refused me I considered it would only be right that you should see my witnesses.

8478. Did I refuse to see them? You did.

8479. *President.*] You said just now you consider that you have not received fair play from this Commission;—what do you mean? I consider that in a Commission of this sort, while Dr. Manning is a member of it, and present to hear what my witnesses say, that I could not get fair play because his presence amounts to intimidation, for this reason: That a number of my witnesses must be drawn from those who have been attendants at Bayview House or those who are attendants there at the present moment. Those who have been attendants, or many of them, are now looking for other situations; those who are attendants will not give evidence while Dr. Manning is here for fear of results.

8480. Do you not think that this Commission, being fully seized with the facts connected with the case, will give fair play to everybody concerned? I am not certain about that part of it. There are witnesses who should have been brought forward who would not come.

8481. Do you know of any witness or witnesses, either in Bayview House or who have been there, who desire to give evidence before this Commission, and who have been refused the opportunity? [*No answer.*]

8482. Putting it in another light, what witnesses have been removed out of your way? Copley, for instance.

8483. Do you know that Copley has gone to South Africa? I do not know where he is.

8484. Is there any other witness besides Copley? I decline to mention any other names because they are girls, and it might injure them in the way of getting other situations.

8485. With regard to the question put to you by Mr. McGowen having reference to the alleged ill-treatment of Case No. 1, can you tell the Commission more particularly any ill-treatment of this patient than was reported to you? He was put in a place to sleep which he regarded as a stable. I think that is quite sufficient for a charge of ill-treatment, especially when it has been going on for something like twelve months.

8486. Do you say that it has been going on for twelve months? Yes.

8487. Is that really the nature of the ill-treatment of which you complain? Yes.

8488. This building you refer to as a stable, on which you say you saw cobwebs, I was under the impression that you saw these cobwebs from the inside;—is that so? No; it was from the outside.

8489. When you say that the window opening in that room appeared to you to have been originally used for the purpose of putting hay into the stable-loft, would it surprise you to know that the building has never been a stable at all? Very much so indeed.

8490. Would it surprise you to know that this building has received the sanction of the medical officers of the Government for the purposes to which it is put? That may be.

8491. Would it surprise you to know that the Inspector-General of the Insane and the official visitors have approved of this room as a suitable place for cases such as Case No. 1? No; that would not surprise me.

8492. Would it surprise you to know that evidence given before us is to the effect that the stable belonging to Bayview House is in a different place altogether? I think that question could be set at rest by bringing Dr. Tucker before this Commission.

8493. Do you know that Dr. Tucker is now in London? I know he was in Sydney shortly before the Commission was appointed, or just about the time it was.

8494. One of the witnesses who has given evidence before stated that he always tried to get information about his sister (Case No. 35), that he made inquiries from the attendants of the institution; that he could

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could not get all he wished to know from them, but that you could give him every particular about the working of the institution up to within the previous twenty-four hours from when the questions were asked;—he said as much as that you knew everything that was going on, and if at 10 o'clock in the morning you desired to be acquainted with certain facts you could let him know all he desired by 4 o'clock in the afternoon;—is that the truth? I certainly could tell him or anybody else a good deal of what was going on there.

8495. Could you tell in the afternoon what had transpired at Bayview House in the morning? Hardly that, but I certainly was posted up as well as I could be, and I had a great deal of information of what took place there.

8496. If you could get this daily information, must you not have had some person in the building who told you all that was going on? I had a great deal of trouble to find it out, but I got it.

8497. Did you get this kind of information daily? Certainly, I got information daily at one time before this investigation took place. I had conversations with the nurses before the 20th May; I knew about Case No. 1 in March, and since then evidence has come out bit by bit.

8498. Further than that, the gentleman previously alluded to swore on his oath that Mr. Gearey could tell him within twenty-four hours all he wanted to know concerning his sister;—is that true? That may be his opinion.

8499. He said further, when asked if he had reason to believe that Gearey had special means of getting information about Bayview House, said, "Yes, I had";—now, Mr. Gearey, I should like to know exactly why you have taken such a deep interest in this institution and in Case No. 1; you must have gone to a great deal of trouble to get your witnesses and evidence together, and did you do all this with a pure motive, and in the interest of the public? I never had any other reason.

8500. Did you do it out of malice against Dr. Vause? No; I never saw him before, and had no malice against him.

8501. Was it purely with the desire to do what you thought right and proper because of certain circumstances having come under your observation that you took the action you have taken? Exactly.

8502. *Dr. Garran.*] Have you not told Mr. McGowen that you saw these cobwebs from the outside? Yes.

8503. Where were you standing at the time you saw them? Just in front, near the closet, and then I was walking up and down across the yard, between the closet and the room.

8504. From where you stood could you see back to the window? Yes, when I walked round, and as soon as it was broad daylight.

8505. When you were standing near the closet, were you near enough to see the cobwebs? No.

8506. Did you see them when you walked round the building? Yes.

8507. What is the size of the window in that building? About 2 feet square.

8508. Do you mean to say, although this is larger than the size we have had given us in evidence, that such a window could be used for putting hay into a loft? Yes; forty years ago hay used not to be bundled; it would be put into a room like that in a loose condition.

8509. Is it your impression that this window in the earlier days was specially put in the walls for the purpose of taking in hay? I am quite certain that it was.

8510. In giving your former evidence did you not speak of the condition in which you found Case No. 1 on the morning of the 20th May when the door was opened? I spoke about him as I saw him when the attendants brought him out of the room, about 10 minutes after my arrival in the yard. I did not see him until he was brought out.

8511. Did you not enter the room yourself? No, not up to that time.

8512. Did you ever complain to any witness that you were not receiving fair play before the Commission? No.

8513. Do you think you are not receiving fair play in not being allowed to be present during the whole of the inquiry? Certainly, when Dr. Vause is allowed to be here.

8514. Do you not think that Dr. Vause is in a very different position to you in this matter;—do you not know that he is the accused person and has much at stake? I do not think so; after what I have done I think I have as much right to be sitting here as he has. He has had the opportunity of examining my witnesses, and I should have the opportunity of examining his.

8515. Do you know if Josephine Mackay wrote a letter, stating that all expenses would be paid to witnesses giving evidence? No.

8516. Have you any idea where she could get such information as that? Not the slightest.

8517. *Dr. Vause.*] Did the Witness Young tell you that he had seen the evidence given before this Commission? Yes; he told me he wrote that report too. I asked him to come and see the report. He told me he knew all about it, as he wrote it.

8518. Did Mr. Young tell you he had seen the evidence given before this Commission? I was not alluding to the evidence.

8519. Will you answer my question, yes or no. Did Mr. Young say he had seen the evidence given before this Commission? No, he did not.

8520. Did you say that Dr. Tucker was in Sydney shortly before the inquiry was commenced? Yes.

8521. Did you know that the Government patients were to be removed before their removal took place? Certainly I did.

8522. How long before? A few days before.

8523. Not more than a few days? I do not think so.

8524. Did you know a month before they were removed? No.

8525. Did you know three weeks before? No.

8526. Did you know it a fortnight before? I knew it when I saw it in the *Sydney Morning Herald* and *Sydney Daily Telegraph*.

8527. Did you not know it before the statement appeared in these newspapers? No.

8528. How did you become acquainted with Case No. 1 in the first instance? I decline to answer that question.

8529. *President.*] I think you had better answer that question. It is a fair one for Dr. Vause to ask, and surely your answering it cannot do you any harm.

8530. *Dr. Vause.*] How did you become acquainted with Case No. 1 in the first instance? I met him at the Town Hall at a ball. He was there, and shook hands with me.

8531. How often did you see him. Two or three times.

8532.

8532. Two or three times at a ball in the Town Hall? No, only once there.  
 8533. Where did you last see him? Publicly in the street.  
 8534. Did you shake hands with him then? No.  
 8535. How often have you shaken hands with him? Once.  
 8536. Did you ever visit his house? Never.  
 8537. Were you on terms of intimacy with him? No.  
 8538. Will you tell the Commission what benefit he has ever been to you? None at all.  
 8539. Have you ever received any benefit from his hands? No.

[Witness withdrew.]

Mr.  
H. Gearey.

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Eric Sinclair, Esq., M.D., sworn, and re-examined:—

8540. *Dr. Manning.*] I want to ask you a few questions about the meaning of the word "seclusion." Do you know what the English and Scotch definition of that term is? Yes.  
 8541. Has it always been the custom here to follow the English and Scotch precedent as far as the meaning of seclusion is concerned? Yes.  
 8542. Does that mean isolation by day? Yes.  
 8543. Have you ever had any conversation with the official visitors on this subject? Yes, frequently.  
 8544. Have they at any time, or any one of them, suggested that "seclusion" meant isolation by night? No, not by night.  
 8545. Never? No.  
 8546. Can you give us any reason why entries should only refer to day seclusion? If it were applied to night it would be necessary to put down all the patients sleeping in single rooms, and this would form a large proportion of the whole establishment. Many of these patients put in single rooms at night are not put in for reasons for which patients are put into the same rooms in the day-time. There are a number of reasons why patients are placed in single rooms at night. A number of patients are much better treated by being in the single rooms, and it would not be fair to say that these are in seclusion. A large number of those patients occupying the single rooms are private patients. They are not in seclusion at all. If we put them down as being in seclusion it would be a misleading statement.  
 8547. Is it a fact that a large number of inmates at the public asylums regard sleeping in a single room as a special favour? Yes.  
 8548. Are there some patients who ask for these rooms as soon as other patients are discharged? Yes; a large number ask when they can get these single rooms.  
 8549. In a modified degree, is putting a patient in seclusion in the day-time equal to putting a patient in prison? Yes.  
 8550. Does that apply to the night? No; in cases where patients are locked up at night in single rooms there is an advantage, because such patients are kept by themselves. To use a common simile, it is putting patients in the same position as we would put ourselves in asking for a room in an hotel. We would like to be by ourselves, inasmuch as we would like a room to ourselves.  
 8551. In the day-time, are the patients who are shut up in the single rooms at night allowed to walk about in the open air? Yes.  
 8552. Are they only shut up at night when other patients are shut up? Yes.  
 8553. Is the seclusion of patients noted in the medical journal chiefly for the purposes of comparison? That is the only advantage that can arise from noting cases in the medical journal, and the reason why such entries are made in the journal is that the authorities may compare with one another as to the results of treatment.  
 8554. Is it the custom for the hospitals in one country to compare with other hospitals in every country where asylums are used for the purposes of obtaining the general results of treatment? Yes.  
 8555. And to see thereby that no objectionable degree any mode of treatment is carried out to a great extent prejudicial to the patient? Yes; that applies only to the amount of seclusion and not to individual cases.  
 8556. If seclusion by night was recorded would all chance of comparison be lost? Yes; altogether.  
 8557. How many single rooms are there at Gladesville? About 160.  
 8558. Are there about 800 patients? Yes; a little over 800.  
 8559. There are twenty-six single rooms at Rydalmere and 400 patients, and if the seclusion by night at Rydalmere were counted would it compare favourably with the amount of seclusion at Gladesville? No; that would not be a fair comparison.  
 8560. If seclusion were counted at night, would not Rydalmere appear with nothing like the amount of seclusion, or under one-third the amount of seclusion, as there is at Gladesville? Yes.  
 8561. Would not that infer that Rydalmere would be a much better managed institution? Yes.  
 8562. Whereas might not the very opposite be the fact? Yes.  
 8563. Would it serve any useful purpose to report the number of patients in single rooms at night? It would be of no value to anyone. It would be of no value to us, to you, or anybody else. It would only tend to mix up the people in the institution to such an extent that I do not think anyone would be able to distinguish the real amount of seclusion.  
 8564. If all cases placed in the single rooms at night were entered in the books of the various institutions what would be the number of names you would have to submit to the official visitors? If we were to note them all I think there would be a total annual entry of many thousands.  
 8565. Do you think with that number of names before them the official visitors would know anything whatever of the cases into the nature of which they wished to inquire? No; they would not know the patients in the interval.  
 8566. Would presenting the names of them be of any service whatever? It could not possibly be, unless they ascertained to what the names referred.  
 8567. Must they know all about the patients before they would be able to judge in any shape or form of the nature of the cases? Yes.  
 8568. Are you quite sure that when a patient is taken out of the dormitory at night and placed in a single room, that a record of the transaction is kept? Such an occurrence is always noted by the night-attendant.  
 8569. If a patient is taken out of one dormitory during the night and put into another, is that fact noted in the night-attendant's report? Yes.

Dr.  
E. Sinclair.

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- Dr. 8570. Are those reports always filled? Yes.
- E. Sinclair. 8571. Are they always accessible to the official visitors? Yes.
- 4 Jan., 1895. 8572. Is there any difficulty, as a rule, in getting patients to go from the associated dormitories to the single rooms? Yes.
8573. Is there more difficulty, as a rule, in getting patients out of the single rooms to make way for those removed from the dormitories? Yes.
8574. As a rule, is the greatest complaint in the morning, not from the patient who has been put into the single rooms, but from the patients who have been taken out to make room? Yes, that is the fact.
8575. Are you obliged, for want of room, to remove patients from these single rooms on occasions of this kind? Yes; as a rule all the single rooms are filled at night, and if cases occur during the night where patients must be removed from an associated dormitory, we have to look at necessities, and remove the patient from the single room who sleeps there as a matter of privilege or by choice.
8576. Are you aware that the Lunacy Commissioners in England and Scotland have not seen any necessity to depart from the meaning of the term seclusion as defined in 1869? Yes.
8577. Has there been a new Lunacy Act in the meantime? Yes.
8578. Have the conditions in regard to restraint been altered? Yes.
8579. Was the new Lunacy Act passed in 1890? Yes.
8580. With regard to a patient being in seclusion, or having been in seclusion, is not the case-book often a valuable aid in guiding official visitors in respect of the discharge of patients? Certainly, because it shows the kind of patient he was on such and such a date.
8581. If these cases of seclusion were entered as having been in seclusion by night, would the entries be of any value in arriving at a conclusion of this kind? No; because there would have been no distinction made as to whether the patients were quiet or otherwise.
8582. Do you often make an entry in the case-book showing if certain patients under certain conditions occupy single rooms? Yes.
8583. Are these entries looked upon as proper and necessary in showing the medical treatment to which a patient is subjected? Yes; such entries show the different stages at which the disease has arrived.
8584. Are these entries valuable aids to the officials in discharging patients? Yes; they show that if seclusion had been necessary on a recent date, no matter the condition of the patient at the time the application for discharge was made, that such a patient is not fit to be discharged.
8585. Supposing seclusion is resorted to by night, would a record be kept? Yes; such things would be recorded in some way.
8586. *President.*] Supposing there was an outbreak in one of the associated dormitories, and a patient or patients became so troublesome that it was necessary he or they should be removed to a single room or single rooms, do you think a case of that kind ought to be recorded? Certainly; it is recorded, too. It appears in the night-attendant's report.
8587. Are these reports seen by yourself or the other medical officers when they make the rounds of the institution? They are seen by us; they are brought into the office the first thing in the morning.
8588. Are these reports then inserted in the case-book by you? Yes, if they are of sufficient value.
8589. Are these case-books open for inspection by the official visitors? Yes; and they occasionally look at these records.
8590. In an ordinary case, when the patient is recovering, and when the patient is placed in a single room, is there any necessity for recording such a case if it is under ordinary treatment? Not unless the patient is sent to a single room in the day-time.
8591. Do you not think, for comparison's sake, that it is very desirable that all such cases should be notified in the case-book, so that they may be brought prominently under the notice of the official visitors? I do not think so, for they would have nothing to do with the treatment of such cases.
8592. But have they anything to do with the discharge of the patient? Practically nothing; their duties are to see that the asylum is properly conducted, and that all the facilities for the treatment and comfort of the patients are properly used.
8593. Do you know what the original intention was in regard to the proper use of seclusion? I think it was to prevent the use of seclusion as a means of punishment, and to keep patients from being deprived of enjoying the association of other patients, or from exercise in the open-air.
8594. Do you think the original intention was to prevent abuses? Yes.
8595. Take another case: Suppose a patient has been for some time in an institution, and subsequently he is removed to a single room, and kept there night after night for months together, do you not think that the change should be recorded, and a statement made that he is kept in continuous isolation? If a man is put into a single room that fact will be notified in the case-book. It does not mean that he is placed in what you would call seclusion.
8596. Supposing a patient, without his own consent, were put into one of these rooms for treatment, should there be a record of that circumstance? Yes; it would appear in the case-book.
8597. Invariably? Almost invariably.
8598. If such a case continued using a single room month after month should that case be recorded? Yes; I think it should be.
8599. There has been some little difference in the evidence of the official visitors with regard to this matter of seclusion; some draw a distinction between acute cases and an outbreak at night as to which should be recorded. The chronic cases are regarded as simple cases of medical treatment: what I want to know is if you always understood that seclusion applied to the day-time only? Yes.
8600. Is that the general understanding everywhere? Yes; in every country I know of.
8601. How do you account for the fact that in clause 71 of the Lunacy Act, containing these words, "as to whether any patient is under restraint or in seclusion, and why," there is no special definition in the way of an interpretation clause, or that there is no common understanding as to the meaning of the word? I think there is a common understanding.
8602. In schedule 9 of the Act is there not a form of the medical journal in which it states, amongst other particulars, "that patients who are, or since the last entry have been, under restraint or in seclusion, when and for what period, and reasons, and, in cases of restraint, by what means"? Yes.
8603. Do you fancy that applies to the whole twenty-four hours of the day? No. I take the common sense, or what I call the common sense, meaning of the term seclusion. That means, if a patient is taken from

from his fellows, whether sleeping in a dormitory or a single room, and placed by himself, he is in seclusion.

8603 $\frac{1}{2}$ . Supposing this were to happen at 5 o'clock in the afternoon, that a patient was then removed from his fellows and put in a single room, would you regard that as seclusion which should be recorded in the medical journal? Yes.

8603 $\frac{1}{2}$ . Do you think that seclusion, as mentioned in the Act, refers only to patients secluded between 6 a.m. and 6 p.m.? Yes; or from the time patients get up in the morning until they go to bed at night. All patients do not go to bed at the same time.

8603 $\frac{2}{2}$ . Do you not think it is as important to record cases of outbreak or violence at night as it is during the day? Yes; and that is done by the night-attendants. They include all these matters in their night reports, which are seen the first thing the following morning by the medical superintendent.

8604. Do you not say that if the records in the night-attendant's report are of sufficient importance they are transferred to the case-book by the medical superintendent? Yes.

8604 $\frac{1}{2}$ . Do they then come under the notice of the official visitors? Yes.

8604 $\frac{1}{2}$ . Is every form of mechanical restraint recorded as well as every important case of seclusion? Yes.

8604 $\frac{2}{2}$ . In a case of acute melancholia would this prescription [*produced and marked Exhibit B*] be suitable? Yes.

8605. It contains spirit of chloroform, tincture of opium, tincture of ginger? Yes; I see it does.

8605 $\frac{1}{2}$ . Do you think that an extraordinary prescription for a patient who has suffered from acute melancholia? Certainly not. The quantity of opium is so trivial that it could not be injurious in any shape or form. It is so homœopathic in quantity that it would do neither good nor harm.

8605 $\frac{2}{2}$ . It has been reported that this was a dangerous prescription, and that it was altogether of a suspicious character—do you apprehend that there would be any danger in using it? Not at all.

8605 $\frac{3}{2}$ . Another point the Commission would like to hear you upon is this: Is it not the custom in institutions, similar to the one under your control, to administer medicines to the patients in their food and drink? Yes; doing so is a great advantage to the patients.

8606. Is it not a fact that patients refuse to take medicines when administered in the ordinary way? That is the case; and unless they are given either in the food or drink they will not get the full benefit of these medicines.

8606 $\frac{1}{2}$ . *Dr. Garran.*] Have you ever been to Bayview House? Not for some years; but I have been there more than once.

8606 $\frac{1}{2}$ . Do you know the single dormitories of this institution? Not sufficiently well to speak of them.

8606 $\frac{2}{2}$ . From what you recollect of them, do you consider they are practicable for the purposes to which they are put? Of course Bayview House is a smaller place than the public institutions. There is not room for the same amount of classification. From what I remember of Bayview House it seemed to me to be suitable.

8607. Did anything in it strike you as being objectionable? No.

8607 $\frac{1}{2}$ . What is the custom of night inspection in the Government institutions? The patients are seen every two hours.

8607 $\frac{2}{2}$ . Is that considered to be generally sufficient? Yes, unless a man may happen to be specially suicidal, and then he would need more frequent visitation.

8607 $\frac{3}{2}$ . Apart from special instructions, do you consider visitation once every two hours is sufficient? Yes.

8608. Supposing it became necessary to put a patient in a single room, week after week, and month after month, would you consider it to be your duty to report this circumstance to the relatives of that patient? No; I should not go out of my way to report it. If I were asked by members of his family I might tell them. If I were not asked, I should not consider myself justified in saying anything at all about it.

8608 $\frac{1}{2}$ . Would you report the fact in the medical journal? No; I would state it in the case-book, as part of the medical treatment.

8608 $\frac{2}{2}$ . Would you leave this to the official visitors to find out if they so chose? Certainly I would; the case-book is open to their inspection. We do not tell the official visitors everything that has been done.

8608 $\frac{3}{2}$ . Do you think Dr. Vause is blamable if he failed to make a report to the official visitors or to the members of the family of any patient he had to keep in an isolated room? No, not if there was a necessity to keep the patient there.

8609. From your experience of a public institution, do you find it absolutely necessary to use single rooms? They are absolutely necessary and advisable.

8609 $\frac{1}{2}$ . Do you approve of nothing being in these rooms except the mattress, pillows, and rugs? In acute cases such bedding is all that is necessary.

[Witness withdrew.]

Frederic Norton Manning, Esq., M.D., sworn and examined:—

8610. *President.*] Are you Dr. Manning, the Inspector-General of the Lunacy Department of New South Wales? Yes.

8611. How long have you held that appointment? Since 1879. Previous to that date my official title was "Inspector of the Insane," and my duties were to inspect the asylum at Newcastle, and one or two other places; but after the Lunacy Act was passed in 1879, I became Inspector-General. It was then that all the Government institutions were placed under my inspection and in my charge, and it was then that I first became officially connected with Cook's River Asylum and had the inspection of it.

8612. Were the duties of your position stated very fully in the Act consolidating and amending the law relating to the insane? Yes.

8613. In the discharge of your duties have you had frequent opportunities of making yourself acquainted with Bayview House Asylum? Yes.

8614. As a matter of fact, have you made a large number of reports in connection with this institution, more particularly having reference to the Government patients placed there? Yes.

8615. Were arrangements in existence for placing Government patients in Bayview House before you were appointed Inspector-General? Yes; some years before.

8616. As President of this Royal Commission I think it desirable, in taking evidence, although you are a member of the Commission, to ask you some questions in connection with special cases which have been

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brought under our notice from time to time, and first of all I will direct your attention to Case No. 1;—will you be good enough to afford the Commission information on this case? Yes; and at the outset I will hand in a copy of the report I made to the Government of the day on that case. The report is as follows:—

Sir,

Lunacy Department, Inspector-General's Office, Gladstoneville, 30 May, 1894.

In accordance with the directions of the Chief Secretary, I do myself the honor to report on the papers herewith in the case of \* \* \*

Under the provisions of the Lunacy Act it is my duty to inspect the Licensed House for the Insane at Cook's River "once at least in every six months." With a view, however, to a special supervision of the Government patients, who are more immediately under my care, and in order to see that patients are neither illegally admitted nor unnecessarily detained, my visits have been made more frequently than is required by statute, and I find that since the end of November, 1892, when \* \* \* was admitted to Cook's River, I have paid fifteen visits to that institution, these visits, owing to special causes, being somewhat less frequent than usual during the current year.

At each of these visits I have seen \* \* \*, and as my visits have invariably been unannounced and made at no fixed time, and as I have usually proceeded direct to the wards, it is impossible that any special preparation of the patient or of his surroundings could have been made. I have, at these visits, seen \* \* \* in bed, in the sitting-room, or in the gardens and grounds, and as I have had official relations with him for some years and felt a personal interest in him, I have examined him somewhat attentively.

I have always found him in the immediate charge of one, and occasionally of two, special attendants, who have appeared to me both patient and tactful in his management. He has been free from any marks of bruises or sores. The bruise seen by Dr. Anderson Stuart was accidentally received, as shown by Dr. Vause in his report. He has had sufficient bedclothes while in bed, and when up was dressed as tidily and carefully as his very restless condition and destructive habits would allow. For some months after admission he was in an acutely maniacal condition, with extreme restlessness and exhaustion; and he most certainly would have died during this period unless he had been unremittingly and carefully attended to. In this I believe all the medical men who have seen him, and are mentioned in Dr. Vause's report, will agree. Then followed a period of comparative calm, with some return of reason and greatly improved bodily health, during which he knew all who visited him and spoke with comparative coherence; and lately, for some weeks, though the bodily strength has in the main continued, there has been mental decadence, with actively filthy, debased, and destructive habits, and great restlessness and excitement; all these symptoms, as I now learn, being increased at night and attended by great insomnia.

The difficulties attending his case at night I was not aware of; but that they were very great is now certain, unless his transfer to Callan Park has served, as is possible, to increase his mental excitement.

Dr. Blaxland reports that the case, especially at night, is one of the most difficult he has ever had to treat in his now somewhat lengthy experience. The rooms, in one of which \* \* \* had been sleeping at the time of Dr. Anderson Stuart's visit, and referred to as stables, were built by Mr. Tucker, for the special purpose hereinafter indicated, before my connection with the Lunacy Department, and were subsequently somewhat altered. The building is detached and ugly, but it is dry, panelled with wood, and neither ill-lighted nor devoid of ventilation; and I have only to add to Dr. Vause's description of it that the ceiling is packed with sawdust, so as to make it cool in summer and warm in winter. The rooms in it are not counted in the general accommodation for which the house is licensed, but are intended for the temporary seclusion of violent, noisy, and restless patients, who may be suffering from epileptic excitement, alcoholic mania, or other exceptional forms of mental disturbance, and for such cases they are fairly suited, the objection of being detached having some compensating advantages in the increased quietude.

It has been stated to me, and somewhat insisted on, that on the morning of Dr. Anderson Stuart's visit both rooms were occupied. From the very full inquiries I have made I am convinced that such was not the case. The only patient besides \* \* \* who has occupied one of these rooms at any time during the last three months has informed me that he occasionally does so voluntarily, and when he so wishes is allowed to have his bed moved there. Though generally rational and perfectly well conducted he is subject to hallucinations of hearing and delusions of persecution, and at times selects one of these rooms in preference to his own dormitory for the sake of quiet, and because he considers himself safer and freer from annoyance by his imaginary enemies.

I can see no objection to \* \* \* being placed in one of these rooms as an occasional measure or for the continuance of this practice for a brief period, always under proper conditions as to the details of treatment; but I am very decidedly of opinion that when Dr. Vause found that he had a most difficult and trying case, requiring exceptional treatment at night, and taxing the limited resources of a comparatively small establishment, so as to interfere with the rest and comfort of other patients, he should have taken steps to inform both the private medical attendant of \* \* \* and his family, and myself, so that new and special arrangements, pecuniary and otherwise, might have been made, and rooms set apart, and structurally altered if necessary, in the new house lately added to the establishment.

I should certainly have objected to any continuation of the existing arrangements if they had been brought under my notice, and I cannot but think that Dr. Vause would have acted with greater propriety if he had fully informed me of the whole circumstances of the case at my visits to the institution, and when I made inquiries as to \* \* \* bed-room, and other particulars. It was clearly the duty of the Medical Superintendent to bring under my notice any departure from usual methods of treatment.

With regard to the mode of treatment employed, I have to point out that placing a patient by himself in a room at night is one frequently and rightly adopted in institutions for the insane. The presence of an attendant is liable in some cases to altogether prevent sleep, and personal interference in any form is often so much resented that isolation is absolutely necessary.

Interference at the hands of attendants was perhaps especially to be avoided in this case, as, notwithstanding the mental failure, the long ingrained habits of command to a considerable extent remained. There appears to be no doubt but that an attendant was always on duty at night in a sitting-room near where \* \* \* was sleeping, whose main, if not sole, duty was to look after \* \* \*.

This attendant was provided with milk, cocoa, and other necessaries, with the means of keeping these hot; and if he carried out the directions given to him (and detailed to me separately by both the men alternately employed) with strictness and care, there is probably little to criticise as regards this part of the arrangements, except that the visitations to the room should have been more frequent than once in every two hours.

There is the evidence of Dr. Vause and the attendant that flannel underclothing and flannel night-suits were supplied and used, though very frequently torn; but the fact remains that the bedding was coarse and insufficient, and that a grievous mistake was made in not supplying and keeping up the supply of blankets and blanketed sheets or rugs, especially as the room was not artificially warmed, though these blankets, &c., probably would not have been used, and almost certainly would have been torn to pieces, as patients in this condition are singularly insensible to cold or other bodily sensations.

In treating patients of the character indicated whilst isolated at night, short straw or hay frequently renewed is the only material which can safely be used for mattresses. The coverings of these are frequently, sometimes nightly, torn and the contents taken out, and if these are horsehair, kapok, or other close material, they tend to suffocate the patient when burying his head or falling off to sleep among them.

During my now somewhat long official acquaintance with Dr. Vause, I have been impressed with the fact that he has in the past been both careful and humane in his treatment of his patients. That he is not illiberal in money matters, and that he does not pursue his calling altogether in a mercenary spirit, is shown by the fact that he has on several occasions received patients at the request of medical practitioners and others at rates of payment which could not have been remunerative, and that he has repeatedly kept his patients without remuneration at all long after the friends have given him notice of their inability to continue the payments, especially if there was a hope of restoration or relief.

In this connection I may point out that the payment for maintenance in the case of \* \* \* was certainly not too liberal, and can, under the special circumstances of the case, scarcely have been remunerative. The cost at Callan Park is likely to be greater, notwithstanding the special resources of a large establishment.

The establishment at Cook's River has now been in existence for about twenty-seven years, twelve of these under Dr. Vause's management, and during all that long period has enjoyed a large measure of public confidence, so that the number of private patients has gradually increased. This confidence has arisen from the absence of serious complaints,

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the more than average freedom from accidents, the favourable testimony of discharged patients, the satisfactory recovery rate, the comparatively low mortality, and the opinions expressed by medical practitioners who have visited it.

That it has many shortcomings in structure and arrangement, and serious limitations in its means of usefulness, that its management has occasionally been faulty, and that the members of its staff have not always been well selected or satisfactory in conduct, is true, but it is equally true, that when attendants or nurses have shown themselves unfit for the service they have been promptly discharged, and that there has been no general neglect or defective management.

The Chief Secretary is probably not desirous of any report from me on the general question of private asylums, especially as I have dealt more or less fully with this question in letters and reports during the last twenty-four years, to which I can furnish reference if necessary, and to which I have little to add.

In a disease like insanity, so different in its degree, so varied in its manifestations, and attacking all sorts and conditions of men, no system or manner of treatment should be altogether set aside; and private asylums have a useful place in any asylum system, especially where there are no lunacy hospitals managed by trustees, and set apart especially for paying patients, such as those at Cotton Hill, near Stafford; Barnwood House, near Gloucester; and St. Andrew's Hospital, Northampton, in England; or the Royal Hospitals at Montrose, Dundee, and other places in Scotland.

Moreover, there are people who, for various reasons, prefer them to public hospitals, and avail themselves of their provision when they would not send their relatives and friends elsewhere.

The inspection of the details of private asylum management by officials must always be a matter of great difficulty, and if it is inquisitorial and conducted with a fault-finding attitude or unduly suspicious proceedings, defects and abuses will be concealed.

Perhaps one of the greatest safeguards is the frequent visitation by friends and relatives interested in the welfare of the patients, paying for their maintenance and anxious for their restoration.

The Principal Under Secretary.

I have, &c.,

F. NORTON MANNING.

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8617. With regard to the foregoing report, do you still adhere to the opinions expressed therein? I have nothing to alter.

8618. In that report one matter has struck the Commission; it is that you blame Dr. Vause for not having reported the circumstances connected with Case No. 1 more particularly than he did;—do you still adhere to that opinion? Yes; I think Dr. Vause should have reported fully to me and also to the medical attendant of the patient's family, who visited Bayview House frequently.

8619. Were you aware that the patient was placed in a single room at night for treatment? I was aware that he was placed in a single room for treatment at the commencement of his residence there. Shortly after he went to Bayview House he occupied a single room occasionally, possibly for some two or three weeks. Then I understood that he was not in a single room, but in an associated dormitory—indeed, I saw him there on two or three occasions—and then that he was sleeping in a small dormitory off the large dormitory, with an attendant sleeping in the large dormitory. Then I made inquiries as regards where the patient was sleeping, and I was told by Dr. Vause that his bedroom had been changed, and that he was sleeping in a dormitory below. Dr. Vause added that the patient *occasionally* occupied a single room. I was not aware that he was in a single room for a long period, as I stated in my report to the Government.

8620. Were you aware that he had been sleeping in this single room for months, night after night? Not until I was made aware of where he was sleeping, and the matter was placed more fully before me.

8621. Do you state that you were perfectly satisfied with the attendance on that particular patient? Yes; his attendants seemed to me to be fit men for the position. In the case of one of them, Doherty, I find, on looking up my notes, that he was previously taken at Gladesville as an attendant on my recommendation, because I considered his prior services at Cook's River warranted me in coming to the conclusion that he had been a good and satisfactory attendant.

8622. According to your report, you were satisfied with the amount of night-watching provided at Bayview for Case No. 1;—is that so? I think it might have been better, by the visits being made more frequently.

8623. Is all you know on this point obtained from hearsay and report? Yes; but I satisfied myself that there were night attendants, and that the patient was visited every two hours.

8624. It has been stated in evidence by a dismissed attendant, who was previously at Bayview, that there was no night attendance on Case No. 1, but, on the other hand, he was locked in the room at night, and not seen again until the next morning;—is such a statement in consonance with the information you received? No; I questioned both special attendants concerned separately, and they, in effect, told me the same on this point as they told the Commission.

8625. You have stated in your report that the night attendant was provided with cocoa and milk, and other necessaries, with the means of keeping them hot;—was your information received from other sources, or do you know this of your own knowledge? It was from information I received from the attendants and Dr. Vause.

8626. With regard to the flannel under-clothing and flannel night suits and bedding, as mentioned in your report, is that also stated on reports made to you? Yes; except that so far as the rugs are concerned, I believe I saw the identical rugs used by the patient. They were pointed out to me by the attendant and by Dr. Vause as the rugs used.

8627. Have you not observed, while sitting as a member of this Commission, the great contrast in the evidence on this subject and the statements you heard yourself—the difference, I mean, of the description in the night clothing as given in evidence by Professor Anderson Stuart, Mr. Sager, and Mr. Gearey? Yes. I, however, saw three full-sized rugs, with shreds and patches of blankets on them. The blanket, for the most part, was torn off these rugs. On that account I found fault with them—not as regards the size.

8628. Is there not considerable discrepancy in regard to these articles as described in the evidence? Undoubtedly. I may say one reason why I believe these to be the rugs is that, if any attempt had been made to substitute others, something less warm and more satisfactory would have been shown to me.

8629. Do you believe the naturalness, so to speak, of these rugs was an indication that they had been used in circumstances similar to those that would surround Case No. 1 at that particular time and stage of his disease? Yes.

8630. In your report, which is now part of your evidence, do you state that the treatment of private patients at Cook's River is, on the whole, satisfactory? Yes.

8631. As a result of that, do you think the institution enjoys a large measure of confidence? Yes; the number of patients when Dr. Vause took it over was small; it has increased largely under his management.

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8632. Do you also state that there has been very few cures amongst Government patients—only four, while Dr. Vause has been at Bayview? Yes; I did state that. I account for this by the fact that the Government patients sent to him are mostly incurable cases.

8633. Is it your opinion that Bayview Asylum, as an institution for the purposes to which it is applied, is not quite up to date as far as structural requirements are concerned? It is not up to date structurally. It is an old private house modified and altered for the purposes to which it is now put. Such an establishment could never be as satisfactory as a place specially built for this particular purpose.

8634. Taking into consideration these shortcomings, of structure and arrangements and small faults of management occasionally, are you still of the opinion that Dr. Vause has been successful in the general management of the institution? I am still of that opinion.

8635. Referring again to Case No. 1,—if the circumstances had been fully known, would the treatment adopted have met with your approval? If I had known that it was necessary to place the patient in a single room for months together, I should have thought it advisable, considering the situation of the single rooms, which, although quite sufficient for their objects and ordinary purposes, are certainly an out-building, and liable to be a source of objection to people who do not understand questions of insanity; and considering also that Mrs. ———, as I understood, wished her husband to have special night attendants, because she was afraid of his becoming frightened if left alone, I should, I say, have thought it advisable to make arrangements with Dr. Vause, in consultation with the medical attendant of the family, to have a special attendant stationed outside the room door or in an adjoining room, in like manner to the custom followed at Callan Park. At the same time, I do not consider that this special arrangement for an attendant to be constantly outside the door is absolutely necessary. I do not think Case No. 1 would have been any better with an attendant so immediately near him while he was locked in; but, considering the wishes of his friends, I think the same should have been done at Bayview House as has been done at Callan Park. I do not think he suffered in any degree from being placed where he was at Bayview House.

8636. Do you think that, under all the circumstances of this unfortunate case, the facts should have been reported fully to you so that, other provisions might have been made? Yes; I think such a course, if followed at the proper time, would have saved all this trouble.

8637. From your long experience in these matters, and after hearing all the evidence in connection with the room in which Case No. 1 slept, what is your opinion in regard to the urinous odour and other circumstances mentioned by some of the witnesses? I have seen, and have been in, that room very frequently, and I have never smelled any bad smell there. I consider that room is cleaned very fully and completely by being scrubbed, and, I think, as far as the odour is concerned, it certainly compares favourably with similar rooms I see occupied by dirty patients in the public asylums.

8638. Do you remember the evidence given by Professor Anderson Stuart on this point, and that, in support of his opinions, he quoted a distinguished authority regarding urinous smells and the changes necessary;—do you think the quotations were applicable to this particular case? Not at all to this special class of patients.

8639. In other words, is the treatment of dements and acute cases quite different? The treatment of acute cases is quite different, and must be carried out on altogether different principles.

8640. Did you hear the evidence given by two municipal officers who were present at Bayview House when Case No. 1 was removed from this room on the morning of the 20th May last, when they said this was so filthy that it would be condemned by any municipal authority? Yes; I heard evidence to that effect.

8641. Do you think persons with general civic experience are competent to pronounce a reliable opinion on a room occupied by a patient in a condition like that of Case No. 1 was then? I consider that they could not. If these officers paid a similar visit to single rooms at the Government asylums, I will undertake to say they would meet with smells worse than anything they would come in contact with in a municipal inspection if these visits were paid in the early morning.

8642. Is it the unavoidable character of these cases, and the mode of treatment adopted, that such things should occur? Yes.

8643. Has that patient improved since he was taken to Callan Park? He has improved in bodily health, but his mental condition now is as it once was at Cook's River.

8644. In other words, is he following the usual stages of the disease? Exactly so. There are relapses at one time, and he gets better at another.

8645. *Dr. Garran.*] Am I to gather from your answer to the President that you did not find fault with the bedroom occupied by the patient so much as with the fact that there was not an attendant constantly close by? Yes.

8646. On any medical grounds do you think he suffered in this treatment? I think he did not.

8647. Did he suffer from any bad treatment in any way? Certainly not. I stated in my report that he was in such an exhausted and emaciated condition when first admitted, and for some weeks afterwards, that unless he had received the very best of treatment, both scientifically and generally, he could not have arrived at the improved condition he subsequently did. I consider he was well treated.

8648. Something has been said concerning the meaning of inspection at night;—do you think if an attendant listens at the room door, hears no noise, and arrives at the conclusion that the patient is quiet, is that adequate inspection? I think it is, and much better than opening the room door.

8649. Do you give the attendant a general order to open the doors? No; general orders are not given to open the doors. The attendant very often is told not to open the door.

8650. Am I to gather from your evidence that any change which came over the patient after he was removed to Callan Park was not due to improved medical treatment? Yes; I do not think the improvement was due to better medical treatment.

8651. Nor from improved comfort in his surroundings? No.

8652. If a sanitary inspector dropped into one of these single rooms at 6 o'clock in the morning, after it had been occupied all night by an acute maniac, do you think he would give a favourable report? He could not give a favourable report.

8653. Have you discovered any cure for this evil, or do you find it very difficult to avoid it? It is difficult to avoid it.

8654. Did you see the statement in Professor Stuart's report to the effect that he distinctly recognised a stale urinous smell in the room? Yes.

8655. Do you think it is an easy matter to distinguish stale from fresh urine in these cases? I think it is possible for a medical man to do so occasionally; but certainly in a number of cases the urine is alkaline, and practically stale when passed. Therefore it is impossible to distinguish urine recently passed, much more urine passed for several hours, especially in general paralytic patients.

8656. Did you consider the bed-clothing sufficient for Case No. 1? No, I did not.

8657. In what respect? I think it was wanting in warmth. Either rugs with blankets inside them, or blankets themselves should have been provided.

8658. Do you think Dr. Vause was under any obligation to inform the relatives of the patient that he had been removed to the single room? No; I do not think it would have been advisable to inform the relatives except through the medical attendant of the family. I think Mrs. \* \* \* being so highly sensitive, and so very anxious about her husband, it would have been nothing short of cruelty to inform her, but the family medical attendant should have been informed.

8659. Is the single room on the male side at Bayview House equal in convenience to those at the Government asylums? Yes; it is. It being detached and an outbuilding puts it beyond the supervision it might otherwise have.

8660. At the Government asylums have the attendants any special orders to reclothe noisy and restless patients after they have taken off their garments at night? The rule in all acute cases is not to disturb the patients if there is any sign of them going to sleep.

8661. Do you think, if Case No. 1 was left alone after he had removed his pyjamas, there was any blame attaching to the attendant? No; there might be occasions if a patient was wakeful to reclothe him, but as a rule it is not advisable to disturb such a patient.

8662. Was the attendance the patient received at night while in Bayview House inferior to that of the Government asylums? No.

8663. Are there any general instructions to attendants with respect to the cleanliness of patients? The instruction in all acute cases is not to disturb a patient if he shows any sign of going to sleep.

8664. If the attendants did not disturb the patient when they saw he was going to sleep did they act in accordance with custom? They did what was quite right.

8665. If this room or the patient was in an unsatisfactory state in the morning was it any reflection on the attendant? Oh, no.

8666. *Dr. Vause.*] From the 7th of January until Dr. Ramsey, who was acting for me, left Bayview, should he not have reported the fact that Case No. 1 was sleeping in a single room, as I was not in a state of health to perform the ordinary duties of Medical Superintendent? I think he should have done so.

8667. Would not the fact of this matter not being reported to me indicate that the treatment was proper and usual in the circumstances? It is difficult to answer that question, because of his not having much experience in matters of this kind.

8668. Do you not think that if there had been anything unusual or improper in the treatment, Dr. Sinclair or Dr. Ramsey would have reported the case? I do not think there was anything improper in the treatment, or they would have reported undoubtedly.

8669. Do you remember me telling you I had informed Dr. Scot-Skirving that Case No. 1 occupied a single room at night? I do not remember that; I have no recollection of it.

8670. Did you approve of the construction of the new buildings erected by me at Bayview? Yes; I think on the whole the new buildings are satisfactory.

8671. *President.*] Have you a distinct recollection of Case No. 35, which has occupied the attention of this Commission? I have. The patient was first admitted to Gladesville and placed under my care on 1st April, 1875. I produce the medical certificates on which she was admitted; they are signed by Dr. Fortescue and Dr. Spencer [*Exhibit D—see Appendix*], and a copy of the case-book notes [*Exhibit E—see Appendix*] relating to her. She was discharged on December 24th, 1875, to the care of her father under a bond for her safe keeping and peaceable behaviour, being then still insane. She was admitted to Bayview House on 31st May, 1881, on certificates signed by Drs. Fortescue and Hodgson [*Exhibit F—see Appendix*], and at the request, under section 8 of the Lunacy Act, of her father. She remained at Bayview until she was allowed out on leave to her father's care under the provisions of section 82 of the Lunacy Act, on 12th December, 1882, and remained absent under this section till 7th August, 1884, the request for her leave being duly signed at intervals of three or six months, and one of them being made by Dr. \* \* \* the patient's brother. She was taken back to Bayview on 7th August, 1884, and readmitted under the original papers signed in 1881, such readmission being in all respects in accordance with the law. Provision for absence is made by section 82 of the Lunacy Act. Leave is granted by the Inspector-General for a definite time, and is renewed from time to time on the recommendation of a medical practitioner. The usual time allowed on each such recommendation is three or six months, and under this system patients often remain on leave for years; three or ten years occasionally, two or three years frequently. At any time whilst on leave the patients can be returned to the hospital without any fresh order or certificates. The original papers are in force. In 1891, her father being dead, a question arose as to who had legally the charge of the patient, and an application was made to me under section 85 of the Lunacy Act, by Mr. \* \* \*, one of the patient's brothers, to discharge the patient to his care. Mr. \* \* \*, her eldest brother, and Mr. \* \* \*, solicitor, her trustee, and the person who had made the last payments for the patient being advised of this application opposed it, and as it seemed to me that Mr. \* \* \* stood, so far as the 85th section of the Lunacy Act was concerned, in *loco parentis*, I declined to discharge the patient to Mr. \* \* \* care. Section 85 of the Lunacy Act reads as follows:—"If the person who shall have signed the order or request on which any patient shall have been received into any hospital or licensed house is dead or is incapable by reason of insanity, absence from New South Wales or otherwise, of giving an order for the discharge of such patient, then the person who made the last payment on behalf of such patient, or the husband or wife of such patient, or if there is no husband or wife, or if the husband or wife is incapable as aforesaid, the father, or if there is no father, or the father is incapable as aforesaid, then the mother, or if there is no mother, or the mother is incapable as aforesaid, then anyone of the nearest of kin for the time being of such patient may in writing give such direction as aforesaid for the discharge of such patient, and such patient shall be forthwith discharged accordingly." I should here mention the other general provisions for the discharge of patients from institutions for the insane. These are as follow:—1st. Any person who has signed the request for admission

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admission of a patient under section 3, or the order for admission under section 6, can direct the discharge of this patient, and the patient must be at once discharged unless the inspector or the medical officer of the asylum in which the patient is, certifies that the patient is dangerous or unfit to be at large; but the Inspector-General can at any time override this certificate of the Superintendent, and discharge the patient in spite of it. (See sections 34 and 36.) 2nd. The Inspector-General or any one official visitor, may, on the recommendation of the Superintendent, discharge any patient, whether recovered or not. (See section 87.) 3rd. The Inspector-General, or any official visitor, may discharge any patient to the care and custody of a relative or friend, at the request of such relative or friend, and on the recommendation of the Superintendent. (See section 88.) 4th. On receiving a certificate from the Inspector-General, the official visitors, or the Superintendent, that any patient is detained without sufficient cause, the Chief Secretary may order the discharge of any patient. (See section 91.) 5th. Any Judge of the Supreme Court may order the discharge of any patient on being satisfied as to certain evidence brought before him. (See section 90.) It will be seen that the provisions for discharge are very ample. The person who places the patient in the institution, the Inspector-General, the official visitors, the superintendent, the Chief Secretary, and any Judge of the Supreme Court, each and all have power to discharge under certain conditions. Mr. \* \* \* being unable to induce any of the official visitors, or myself, to discharge his sister, or to take any steps in regard thereto, had the option of going to the Supreme Court under section 90, or else to ask for an interpretation of section 85. He chose the latter, and the Court decided against him, and in favour of Mr. \* \* \*, the trustee, and Mr. \* \* \*, the eldest brother of the patient, who opposed the application to the Court. The case was heard on July 3rd or 4th, 1891. After the suit was over, the trustee (who was a solicitor) came to me, and seeing that there was some legal difficulty under section 85, which might again be raised, requested the patient's discharge under section 34, and her readmission under section 8, on a "request" under his own hand as her trustee, and two medical certificates signed by Drs. Ashwell and Long in the usual course. This I agreed to, and the documents in connection therewith are now produced. [Exhibit G—See Appendix.] They are in proper legal form. The date of discharge and readmission was 30th August, 1891. I produce certain official papers in this case. [Exhibit II—See Appendix.] I consider the patient to be decidedly and undoubtedly insane, and quite unfit to be at large except under some special care. The trustee being dead, the patient's property has been brought under the charge of the Master-in-Lunacy, who now holds the elder brother responsible for its management, and himself pays the charges for maintenance. Under present circumstances, Case No. 35 being insane, and unfit to be at large, I should not consider myself justified in discharging her, except at the request of her elder brother, and with the consent of the Master-in-Lunacy to the arrangements which might be proposed for her care and custody. If she were sane now, or should at any time become so, she would be immediately discharged. The question of discharging a patient still insane, especially when this patient is possessed of property, is a very serious one, and imposes on me, as Inspector-General, and also on the Superintendent of any hospital for the insane, or licensed house, very serious responsibilities. The person who has placed the patient under care—husband, father, son, guardian, as the case may be—expects, and rightly expects, that this insane person will not be handed over to someone else without his consent, and to do so would open up interminable legal difficulties, and expose the Inspector-General, or the Superintendent, to legal action.

8672. Do you think the younger brother is a proper person to have charge of his sister? Decidedly I do not.

8673. Do you think there is any credence to be attached to his statement, as given in evidence, that he is her favourite brother, and that it is her own wish to be discharged to his custody? I doubt that very much.

8674. Do you think, on the whole, that case No. 35 is better provided for at Bayview House than she would be under the control of her brother, who asks for her custody? I consider that she is.

8675. Is there any doubt whatever that she requires to be under control? She must be under some sort of control.

8676. Do you remember the evidence given before this Commission in connection with Case No. 30? I do.

8677. Can you furnish the Commission with any further particulars in connection with that case? Yes; I hand in certain official papers in the case. [Papers handed in and marked Exhibit I. See Appendix.] The question of custody is also the main point arising in the case. The question has, however, been raised in a somewhat different way; Miss \* \* \* applied to me for her sister's discharge on the ground that her sister was sane and fit to be at large, and when I declined to discharge the patient, as did also each and all of the official visitors, believing her to be insane and unfit to be at large or entrusted with the management of her own property, Miss \* \* \* went to the Supreme Court under sections 81 and 90 of the Lunacy Act, to which I will refer. The applications were opposed by the patient's sons, and the Court decided that Case No. 30 was not sane (section 90), and that it was not for her benefit to be removed from the Colony (section 81). I am of opinion that she is still decidedly insane and unfit to be at large, and unfit to manage her own affairs, and can give my reasons for this if necessary. The patient's son has several times seen me, and appears much interested in his mother's welfare and happiness, and I am sure that he will attend as a witness before the Commission if summoned, coming from \* \* \*, where he now resides. He has informed me that when his mother arrived in \* \* \* from \* \* \* she was moneyless and almost clotheless and very insane. He tried at first to keep her in his own house, but found he could not do so, owing to her peculiarities, and that all the son's were consulted before he placed her in Mr. Harcourt's asylum in Victoria, on the closure of which she was removed to Bayview House. I have had very frequent interviews with Miss \* \* \*, and consider that she is quite unfit to have charge of her sister. Miss \* \* \* is extremely peculiar, and if not insane, she is certainly on the borderland. She would have no influence over her sister, or any power of restraining her actions after a short time, and, on the whole, I can hardly imagine a more unfit guardian for the patient, even if her sons did not object. I have never seen nor heard anything to induce me to believe that Case No. 35 and Case No. 30 were not properly and kindly treated at Bayview House. I have heard complaints from Case No. 30 as to not being allowed sufficient money to spend, as to her sister, Miss \* \* \*, not being allowed to see her more frequently, as to her dissatisfaction with this or that nurse, on minor questions, and on a number of other

trivial

trivial matter, but I have no substantial or well-founded grievance; and the same with case Case No. 35. Her complaints are that she is not allowed to go with her younger brother; that one or other of the patients annoy her; that her bed-room has been changed; or that she does not like a certain nurse for some trivial reason.

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8678. *President.*] Have you had any personal acquaintance with the sons of Case No. 30 at all? They have called on me in Sydney, and asked how their mother was getting on.

8679. Did they always appear to be deeply interested in their mother's welfare? Yes; and the sons are men of standing, in responsible positions. One is in \* \* \* and the other in \* \* \*

8680. From the evidence given in her case can there be any doubt about the mother having been placed under restraint in England? She was under restraint both in England and in Victoria.

8681. Do you think Miss \* \* \* should be refused the custody of her sister, Case No. 30, on the ground that she is not fit to have charge of her, and also because her financial position is not satisfactory? Yes; I consider Miss \* \* \* would be quite unable to control her in any way.

8682. Does the evidence seem to show that Miss \* \* \* has not adequate means, irrespective of what she would get from the patient's income if she had to take care of her? I understand that to be the case.

8683. Do you remember Case No. 34? Yes. As to the case, however, I am not able to give much information. I found her in bed in one of the dormitories on the 27th May, 1892, and apparently properly cared for. I made a note that she was evidently failing, and not likely to live many days. She was suffering from serious brain mischief. This is the only time I saw her. No complaints were made. The mortuary spoken of in connection with this case was erected at my request, as I considered it a necessary appendage to an institution of this character, where it is imperative that the dead should be removed from the wards as soon as possible. It was passed, and approved by me on the 23rd December, 1880, and I have repeatedly seen it since in good order, and consider it sufficient for its purpose. Dr. Vause has removed it to another site since its original erection.

8684. Is the evidence given by her cousin to the effect that the dead body of this patient was not properly treated, but that it was placed in a stable containing a quantity of hay, in accordance with your knowledge and experience of the mortuary? No. If the mortuary is properly kept it is a sufficient and proper building for its purpose.

8685. Are you acquainted with any other of the matters referred to by that witness? No; I am not. I know nothing concerning the other complaints she made.

8686. Do you remember Case No. 2? That patient who has been mentioned in the evidence as improperly detained in a single room, has been a patient in the reception-house at Cook's River, and at Gladesville. I produce the notes of his case from the latter place. [*Exhibit "J," see Appendix.*] He was an extremely able man in a large business, and the first sign of his insanity was that he neglected his business and desired to become a Member of Parliament. Before the general election was completed he was in the receiving-house. This was in November, 1882, and from there he made a most extraordinary escape. He removed a pane of glass, 9½ x 10½, from a first-floor window, got through this small opening, reached the ground in safety by means of ropes made from his sheets, at the great risk of his life, and was found walking about Darlinghurst in a blanket. When sent to Cook's River in November, 1883, he made false keys from wire to fit the doors, and displayed extraordinary ingenuity and daring about escaping, which he succeeded in doing. Then he was sent to Gladesville on 22nd January, 1883, where, secreting a tablespoon from the dinner-table, he made it into a sharp instrument, with which he removed the lock of a single room from the inside, got into the corridor, and only by accident was prevented from strangling a night attendant with a rope he had made from his sheets for the purpose. On the 23rd May, being somewhat quieter and better, he was transferred to Cook's River, at the wish of his friends, and was soon afterwards discharged from there. In February, 1886, he was readmitted to Gladesville, and in September of the same year was allowed to be absent on leave. From 1886 to 1891 I saw him at least once a month. He regarded me as his personal friend, and whilst he never complained of being placed in a single room, either at Cook's River or Gladesville, he repeatedly expressed his thankfulness that he had been prevented when maniacal from killing himself or some one else. He was sent back to Gladesville at the end of 1891, and was removed in a dying condition on 17th February, 1892. He died a day or two after. During the first few months of his illness in 1882 and 1883 it was absolutely necessary for his own safety, and that of others, to place him in a single room, and there was no place where he was safe at Cook's River during the night except the single rooms.

8687. Do you consider that this case required treatment in a separate room? Undoubtedly he did. He was in a single room while at Gladesville, and he was not safe anywhere else at Cook's River except in a single room.

8688. Was he an excitable patient? He was; and at that time might have injured himself or anyone else. It was only by an accident that he was prevented from strangling an attendant. He was extremely anxious to remove the lock from his door. He sharpened a spoon into an instrument with which he removed the lock of his door, and escaped into the corridor, where, as I have already said, it was only by accident that he was prevented from strangling an attendant with a rope made from a sheet.

8689. The evidence given by a witness named Dickson is slightly different to this, for he says that Case No. 2 was quiet and easily managed;—could that be so? At times he might have been perfectly quiet and not difficult to manage, but when he made such an extraordinary escape from the reception house it could not be said that he was quiet and easy to manage.

8690. Did you see him frequently while he was at Bayview House? Yes; and much more frequently afterwards. He came to see me at least once a month for several years.

8691. While he was at Bayview House were you aware that he was put in a single room? Yes; there was no other place where he could be put with safety.

8692. *Mr. McGowan.*] Were you aware that this patient was placed in a single cell? Oh, yes; I knew at the time. He was placed there for a time every night in the week. I think he was under this treatment for several weeks; but altogether he was not at Cook's River for very long.

8693. A month? Yes. He was also put in a single room at Gladesville.

8694. Did he sleep in the same cell as was occupied by Case No. 1? He slept in one of the two.

8695. Do you consider the cell was warm enough for him? I think so; he had ordinary bed-clothes.

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8696. *President.*] Do you know anything about Case No. 3, mentioned in evidence before this Commission? No, I do not. I remember seeing him at Cook's River, and that is all.

8697. Do you remember Case No. 6? I have a somewhat intimate knowledge of the case spoken of by witnesses Mackenzie and Watt, and by Dr. Creed. He was the first admitted to Callan Park on December the 3rd, 1886, and was transferred to Cook's River on the 20th January, 1887, the reason for transfer being that his wife was dissatisfied with the arrangements made for him at Callan Park. In May, 1891, he went home on leave of absence, and was returned to Cook's River in March, 1892, as his wife was not able to get him properly taken care of at home. The extreme importance of this patient's life, from a pecuniary point of view, was repeatedly impressed upon me by his solicitor, Mr. \* \* \*, and by the patient's wife. The situation was explained to me: It was some complicated legal question, the details of which I have forgotten, but as I gave a definite opinion that the patient could not live three years from admission, and my attention had been specially called to the case, I watched it with some interest; and I am almost sure that I never paid a visit to the institution without specially seeing and speaking to and examining this patient. He has always been partially paralysed in the lower extremities, and with more or less incapacity for holding his water. He is taken in a chair (except in wet weather) to the billiard-room pavilion in the garden, and there I have generally seen him—clean, free from offensive smell, and in fair health. It is impossible to move or change him hastily at official visits; and it is not stated that this was done. He must, despite all care, have been wet several times a day, and require changing. His trousers would necessarily get stained and require frequent washing, but I have never seen them either wet or offensive, and there is no better proof of the care with which he has been treated than that he has lived so long beyond expectation.

8698. Do you remember the evidence given by Mackenzie in this case? Yes.

8699. Mackenzie said this patient did not receive proper attention as a rule, but that he was prepared when he was seen by you or other visitors;—is that probable? I do not see how it was possible to make any preparation, for I nearly always saw this patient in the pavilion at the far end of the grounds.

8700. Mackenzie was asked if it was his impression that this patient was seriously neglected and he said "Yes." Do you think he was mistaken in this conclusion? I think so; for if he had not received every attention he would not have lived.

8701. Do you remember Case No. 4? I remember him; but I know nothing of the case beyond seeing an aged gentleman in a condition of dementia.

8702. Is there any other case to which you wish to refer? Yes, Case No. 23, which has been so often spoken of during these proceedings. I produce the notes of her case—[*Exhibit "K."* see *Appendix*]—whilst at Gladesville from April 25th, 1881, to March 29th, 1883, and at Parramatta from March 29th, 1883, to April, 28th, 1884. To show that, though not a very violent patient, she constantly required a single room. Dr. Godson adds to the notes in the case-book, the following remarks for my information,—“Up to the time of her transfer she was a continual source of worry and anxiety to all in charge of her, being at times, however, much worse than at others. She was extremely filthy in habits, destructive, and constantly exposing herself to all and sundry. It was only by incessant watchfulness and care that she could be kept moderately decent in appearance. On account of these habits she at all times occupied a single room at night, being quite unfit for association. Several of the nurses here recollect her and describe her habits as infinitely worse than any other patient ever here.”

8703. *President.*] Is there any other case you wish to bring before the Commission? Yes. In Case No. 20 I produce certain official papers, including a report signed by two official visitors and myself. [*Exhibit "L,"* see *Appendix.*] This patient was an epileptic having fits only very occasionally. She was sent from Gladesville to Cook's River on the 7th of August, 1894. The fact that she was subject to fits being mentioned at the time in the papers sent with her. This fact was very properly communicated by Dr. Vause to the person who was matron when she was admitted, and by her to several of the nurses, as appeared at the inquiry, but it was not told to the new matron, Miss Jones—since dead. No fits occurred at Cook's River for some time, and when the patient after the excitement of seeing friends, got restless, excited, scared, and restive, a condition which is a frequent prelude to an epileptic fit, this was not recognised, and the matron unfortunately directed the nurses to place her in a single room in which was a movable iron bedstead, with the result of a broken arm. It was an extremely unwise act to place a restless and excited patient in a single room with an ordinary bedstead. It was especially unwise that an epileptic should be so treated, and if the bed had been made up on the floor as it should have been, the accident could not have happened. The accident was the outcome of an unfortunate chain of circumstances, and disclosed certain requirements in the institution which we indicated in the report. I desire to point out that there was a special night-nurse (Brennan) at this time, who visited and saw the patient and spoke to her at 12 o'clock, and visited the room and listened at the door at 2 and 4 o'clock and found the patient then quiet. At 5:30 the night-nurse went into the room and found the patient in bed covered up with the bed-clothes but awake; and that is the only accident which has ever occurred in these single rooms was under this arrangement.

8704. In that report on this patient's accident is it stated that the patient was visited several times during the course of the night previous to the morning on which it was discovered that she had a broken arm? It is, and she was so seen.

8705. We are told that this accident must have occurred between half-past 5 and half-past 6 in the morning, as the blood was still wet on her gown, and further that the patient made no complaint, but said, "What is the matter. How have I done this. I remember waking and finding my arm hurt, but I do not know how I did it."—is that so? Yes; that is her explanation as stated in the report.

8706. The report goes on to say, "when the matron came she sent for the doctor. The patient told the matron she had been fighting with the landlord and had a difficulty about paying her rent, and afterwards said she went to sleep and woke up with her arm paining her, but did not remember anything else";—was that the case? Yes.

8707. What was the actual finding as the result of the inquiry? (1.) That a recording clock which Dr. Vause had some time before undertaken to supply was an absolute necessity, so as to record and check the visits of the night-nurse. (2.) That some want of care had occurred in placing this patient who was an epileptic and restless in a single-room with a bedstead, though this appeared to be partly due to a recent change in the officer filling the position of matron, and to the fact that the patient had no fits since admission,

admission, so that there was only the Gladeston report, to which the matron had not access on this point. (3.) That the associated dormitories should be lighted at night as is the case in the hospitals for the insane.

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S708. Have you any further case you wish to refer to? Speaking of accidents, I may now state that Cook's River has been singularly free from severe and fatal accidents. I produce a list [*Exhibit 'M'—see Appendix*] showing every accident involving the slightest cutting of the skin or other more serious injury in ten years. This is taken from the records, and is, I believe, in all respects, complete. All serious accidents are reported to me when they occur, and the minor ones are entered in the medical journal kept at the institution.

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S709. *Mr. McGowen.* Is the poisoning case included in the list? Yes; considering that some of the patients are epileptics, some lose all control of themselves in their passions, some are suicidal, and all astray in their mind, the list is creditably small. It includes two fractures and one death in ten years. I will read you two or three extracts from Asylum reports for 1894. The first are from Murray's Royal Asylum at Perth, which contains about 100 private patients, and is held in high consideration. It says:—

Unfortunately the year now ended has been remarkable for a very unusual number of accidents and escapes. No fewer than four patients sustained fractures—one broke his leg by tripping over a chair, one fractured his thigh by rolling out of bed, one broke a rib in falling from a window-seat on which he had been standing, and one was found to have the small bone of the fore-arm broken, probably caused by having been held during a paroxysm of mania. With the exception of the first instance, these patients were in such mental condition that they were unaware of the hurt which they had received, and maintained that there was nothing amiss.

The following is the report of the Visiting Commissioner, made in the same year these accidents occurred:—

The asylum was found in excellent order. The accommodation provided, both in the main asylum and at Kincarrathie, is comfortable and well suited to persons accustomed to conditions of affluence and refinement. The life of the patients at Kincarrathie is in every way such as is usual in a well-appointed private mansion. The patients are managed with kindly and considerate care, and they receive skilful medical treatment. The books and registers were examined and found regularly and correctly kept.—JOHN SINCLAIR, *Commissioner in Lunacy.*

The following is the record of accidents in the Scotch asylums in 1893. I am quoting from the report of the Scotch Lunacy Commissioners, published this year:—

The whole number of accidents reported to us as having taken place during the year 1893 was 105. Of these 9 ended fatally. In the case of 3 of these patients the death was suicidal; 1 by setting clothes on fire, and 2 by running off and throwing themselves in front of passing trains. Of the 6 fatal accidents which were not suicidal, 3 were due to falls, and 3 to asphyxia, caused by turning over in bed during an epileptic fit. There were 3 cases of unsuccessful attempts to commit suicide. In 43 cases the accidents involved fracture of bones or dislocation of joints. These were occasioned in 25 cases by falls; in 8 cases by struggling with fellow patients or attendants, or by assaults of fellow patients; in 5 cases the injury was unintentionally self-inflicted; and in 5 cases the causes were not ascertained. Of the remaining accidents there were 17 injuries to the head; 2 cases of flesh wound, abrasion, bruise, burn, or scald; 2 cases of internal injury unintentionally self-inflicted; and 24 injuries of an unimportant character.

Dr. Vause's list compares favourably with the returns from Scotland, where the asylums are universally acknowledged to be among the best in the world. It is, so far as my experience goes, impossible to conduct an asylum for insane people without accidents.

[The further examination of this witness was adjourned until the following day.]

TUESDAY, 8 JANUARY, 1895.

[The Commission met at 11 a.m. in the Board Room, Chief Secretary's Office.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
ESQ., M.D., INSPECTOR-GENERAL OF THE  
INSANE.

ANDREW GARRAN, Esq., LL.D.  
JAMES SINCLAIR TAYLOR MCGOWEN,  
Esq., M.L.A.

Dr. Vause was in attendance to hear evidence and examine witness on his own behalf.

Frederic Norton Manning, Esq., M.D., continued:—

S710. *President.* Referring to the Licensed House for the insane at Cook's River in general terms, were you appointed when it was opened? No, it was opened before I came to the Colony.

S711. When did you first become acquainted with it? Some time about the year 1869.

S712. At that time were there very few Government patients in it? I think there were none at the beginning of 1869, although at that time there had been some correspondence in view of taking Government patients there.

S713. Was that to be under the provisions of the Lunacy Act? No.

S714. Would any arrangements for sending patients from a Government institution to Bayview House about that time be made with the Government? Yes; Bayview was a licensed house, and the Colonial Secretary had power to transfer patients under the old Lunacy Act.

S715. Was the reason for sending Government patients to Bayview House to relieve as far as possible the overcrowding of the Government institutions? That was the sole reason.

S716. Since you have had the opportunity of officially visiting this institution, have you always found that the number of attendants and nurses has been sufficient in regard to the number of patients? Yes; it has been my duty to inquire into this, but with their appointment to special duties, their discipline, hours of service, &c., I have nothing to do so far as Cook's River is concerned, although these matters come under my cognisance and control so far as the public institutions are concerned. I call periodically for a return showing the number of attendants and nurses and other members of the staff at all the institutions, and I have received these from Cook's River with the others. The staff has varied with the number of patients, but has always stood at one nurse for every three or four private female cases, one attendant for every three or four private male cases, and one nurse for every nine or ten Government cases. Taken

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all round it has been about one nurse or attendant for every five or six cases, and this is without counting cooks (2), laundresses (2), coachman, gardener, painter, carpenter, and outdoor labourers and house-servants. I have at some of my visits counted the number of nurses and attendants on duty, and have found that there were always within one or two of the number on the returns, and these one or two would be accounted for by those on night duty or on leave; and sometimes there was the full number on duty. Some of the outdoor staff, gardener, coachman, &c., are made available for ward service on Sundays and other occasions. I consider this staff ample. The proportion of ward attendants and nurses in the public hospitals, not including cooks, laundresses, gardeners, gatekeepers, messengers, &c., never exceeds 1 in 10, and I have great difficulty in keeping it up to that amount because of the objections to the expense. At Rydalmere and Parramatta it is only 1 in 12 or 13; at Newcastle only 1 in 14 or 15. In all these calculations I include both the day and night staffs. I may incidentally point out that although the hours in asylum service are long, they are less than in ordinary domestic service; that there is no hard labour; that the nurses find time to knit, sew, &c., the attendants to smoke, play billiards and cricket, and that both are frequently out of the institution walking or driving with patients.

S717. In the course of evidence given to us, it has been stated by a number of witnesses that notice to some extent of your visitations and the arrival of the official visitors was always given to the nurses of the institution;—were you ever aware of that being done? No. Perhaps it will be as well to tell you my arrangements in visiting the institution at Cook's River. They have been as follows:—I have never given the slightest notice except on the rare occasions when I visited to hold some special inquiry, and desired Dr. Vause, or some one else from whom I required information to be at hand. I have always travelled by cab, arrived at irregular times, and my ten or eleven visits annually have been sometimes paid near together, and sometimes with rather long intervals. Officially, or rather by Statute, I am only bound to visit once in six months. I have never paid less than ten visits annually. I, as a rule, go to the office first, at the main building. Some four or five times in fifteen years, not more, and these chiefly during Dr. Vause's illness, and when he could not accompany me through the wards, and it was desirable and necessary for me to obtain information as to certain patients before going to the wards, I have gone to Dr. Vause's house first. I may here state, in justice to Dr. Vause, that my relations with him have always been friendly, though on an official basis; that I felt very sincere sympathy for him when the assault was made on him by a patient, especially as the mental shock was very severe and dangerous; that I then visited him on several occasions without going to the asylum at all, but that I have never then, before, or since taken a meal in his house. I would not go into this matter at all so far as I myself am concerned. Returning to my official visits, I sometimes examine the statutory books first, and this perhaps takes me less time than it does the official visitors, for I am officially notified of all admissions and discharges beforehand, and copies of all the admission papers are sent to me within forty-eight hours of each admission, and sometimes go straight to the wards. I generally see the private female patients first, but sometimes I commence at the Government wards, and sometimes with the male private patients. I have never been kept waiting, and am always admitted as soon as I ask. I start sometimes without the matron or doctor, and they follow me soon after. I consider it quite right that certain minor preparations should be made when official visitors are coming, such preparations. I mean, as putting away towels and dish-cloths, tidying the dresses of patients, seeing that they are not in indecent positions or exposed, and if at the moment wet or dirty that they are changed. Such preparations are only right and seemly. They are made or should be made in every institution, and they deceive nobody who has the least experience. It is impossible to put an institution which is in bad order into good order in ten or fifteen minutes, and I defy nurses to make many changes in the dress of insane patients without the inspecting officers being made aware of it by their own observation or by the remarks of the patients themselves or of others. There are always patients in such institutions who delight in detailing to official visitors any shortcomings or shift of the management or of the nurses, and to flaunt the information in the faces of the Superintendent or staff. I have, as a rule, found the institution in good order, and both the private and Government patients duly and properly dressed and attended to. I have noticed things I have not approved of at times, and I have expressed my opinion, with the result that any shortcomings have been remedied by the next time I visited the institution. At my visit I have invariably seen all the patients, and once or twice a year I have checked the register and ticked off every name thereon, when I have seen and spoken to every patient, sending for all such as were in the laundry or otherwise absent from the wards. I have on every occasion seen all those in bed, all in seclusion, and all in restraint, and I have carefully examined the medical journal to see that the entries there as to seclusion or restraint corresponded with what I saw. I have never known any case removed from seclusion at my visit or found a room dirty and foul, as it probably would be had a patient been recently removed, and I have no reason to think that any deception was practised as to removing restraint on the occasion of my visits. I should regard either of these practices as most serious offences, and I listened very attentively to the evidence of nurses to see if statements as to this were made and substantiated. I have known case No. 15 to be restrained, and have seen her in camisole and muffs, and I have seen case No. 32 in restraint occasionally, the entries in the medical journal showing it to have been necessary in her case, owing to destructive habits and a tendency to denude herself. In neither of these cases was there any attempt to deceive me as to the course adopted, and the entries were made in the medical journal. When complaints are made they are always listened to. Some, it is obvious at once, are due to delusion or are unreasonable; but all not unreasonable are inquired into either on the spot, or, if serious, the patient is seen apart in the visiting-room and the matter fully gone into. I have not visited the institution or its wards at night, and in this I have followed the practice of the English and Scotch Commissioners in Lunacy, whose proceedings I am thoroughly acquainted with having been in frequent correspondence with them, had several personal interviews, and, so far as the English Board is concerned, knowing one or more members intimately. It is not considered advisable to visit at night, except complaints as to something wrong have been reported, and night visits unduly excite patients. It is extremely inadvisable for men to go through the women's wards at night. Such a course is rightly avoided by even the Medical Superintendents of asylums, and if there is anything seriously amiss it is sure to be reported. I do not think visitations should be made in too critical a spirit or with too fault-finding an attitude; these only put the management on edge, and are met by subterfuge and concealment. Neither do I think that in the case of a private asylum, and as the Government Inspector, I have any right to interfere as to details of management or as to minor matter of building and construction, so long

as the general results are good, and general principles which are universally acknowledged as correct are adhered to. I think, however, that all complaints should be fully investigated, and that every lapse and every accident should be not only noted and inquired into, but should be made the text for special improvements as to structure of buildings and general management where any defects in either are shown. This is the principle on which I have acted. So long as Dr. Vause has shown me good results, and I have had few or no complaints, I have not troubled him as to details. In a private asylum the responsibility rests with the Medical Superintendent and proprietor. In the Government asylums my position is somewhat different. I must necessarily, to some extent, share the responsibility, and I am obliged to go more closely into the details of management.

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8718. Were you in the habit of making your official visits in conjunction with the official visitors appointed by the Government, or alone? Always alone, except on occasion when there might be special matters to inquire into, and then occasionally I invited one or more of the official visitors to assist.

8719. Have you made many of these visitations? Only one to this institution itself. On one or two other occasions we have met and talked over our views on matters connected with Cook's River Asylum.

8720. Had either of these inquiries any reference to cases where the patients had been cruelly treated, or met with accident, or were they in connection with defects in the buildings? No.

8721. What had they reference to? One referred to the poisoning case, which was a defect in management, and not in the building; one was Case No. 20, another matter of management and not the building; and another occasion was when Dr. Hetherington was in charge, when neither the official visitors nor myself felt satisfied with the attention paid to the bedding. An official report on the subject was forwarded to me from the Chief Secretary's Office, and on reading this I asked the official visitors to meet me, and, if necessary, take steps to prevent any recurrence of such matters in the future.

8722. Has Dr. Vause always been ready to make any improvements suggested in connection with the building and with the general sanitary arrangements of the institution? Yes, he has. Dr. Vause has always been ready to meet any views I have expressed as to structural changes in the buildings, but I have for various reasons, and especially during the last few years, since I have regarded the removal of the Government patients as inevitable and right in principle, been very chary of suggesting any improvements in the buildings for Government patients involving expense unless accident or injury to patients showed these to be absolutely necessary. In former years, when I have suggested or insisted on improvements which I considered essential, the expense involved in carrying these out has been used as an argument against the removal of the Government patients and the reason why the contract should be extended for a longer period. Dr. Vause has, at his own will and initiation, carried out various alterations to the buildings for Government patients, and in other parts with my consent, but not always with my ready concurrence—first, because I did not consider the improvements essential; and second, because I considered that the money, if expended at all, might have been expended on matters more immediately essential and necessary.

8723. Am I to gather from your official reports that you always have regarded the institution as a makeshift rather than a permanent home for Government patients, or in other words that the building is not adapted, according to modern ideas, to the purposes for which it is employed? For Government patients it has always been regarded by me as only a makeshift expedient, but I have always looked upon Bayview House as a permanent home for private patients. When the additional buildings were put up, a calculation was made on the basis that a three years' contract, and the option for a two years' renewal for the housing and care of Government patients, would result in the buildings paying for themselves during that time. In view of this calculation the buildings were put up in a more or less temporary fashion, because it was supposed that they would not be used for more than five or six years.

8724. Have you always been satisfied with the night nursing—I mean as the result of your inquiries made from time to time? I have from time to time made inquiries as to the nursing of and attendance on patients at night, and although I have not altogether approved of the arrangements, I have not, for reasons above stated, and so long as the general results were good, felt it incumbent on me to direct changes. The system of attendants and nurses sleeping in the dormitories with patients is not in accordance with my views; but it is the rule in all private asylums with which I am acquainted, both in England and Scotland. It originated, no doubt, in the valet or ladies maid, or other servant, undertaking this duty; and the medical superintendents of private asylums, where the attendant and nurses sleep in small rooms attached to the dormitories, are able to point to better results, so far as accidents are concerned, than were visits are periodically paid to these dormitories by night patrols, as is the case in public asylums. I have been informed at Cook's River that, in all cases of sickness or excessive mental disturbance, special night attendants were provided as required, and I believe this has, as a rule, been the case. The efficiency or sufficiency of this must depend almost entirely on the care and supervision exercised by the Medical Superintendent. I was aware that there was no regular night patrol at Cook's River, and with the attendants and nurses sleeping in the dormitories, this was not absolutely necessary. So far as the single rooms were concerned, the patients, except occasionally when night attendance should have been provided, were eight or ten chronic cases of insanity, isolated by reason of noise, violence, dirty or destructive habits, and in robust health—nothing could have been done for them at night; they would have been in no way benefited by visitation, and, indeed, in the majority of cases, it would have been quite impossible and dangerous for any single nurse to have opened the doors. In some cases they would be irritated and disturbed by such procedure. No accident has ever occurred to any of these patients in the absence of a night patrol. I am speaking of a period of twenty-five years. Some of the patients who occupied these single rooms have done so for years—one from 1876 (Case No. 52), another (Case No. 15) since 1881, others from 1883 to 1886 (Cases Nos. 22, 23, 63, 43, and 33), and had previously been in single rooms at Gladsville and Callan Park.

8725. As you are aware that evidence has been given to the effect that certain improvements have been made to the single rooms on the female side, and that there is now a regular night patrol to watch the cases in the isolation rooms, do you think these are superfluous? I do not say that.

8726. If everything was satisfactory before, and only chronic cases sleep in these rooms, is there any necessity for this extra night patrol? I do not think there is any absolute necessity for visiting these people during the night, but if I had charge of the institution I should prefer, for the general safety of the place, especially as regards fire, to have a night nurse.

8727. Do you think such was imperatively necessary at this institution? I do not think it was imperatively so.

8728.

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8728. Do you know whether the change was brought about through the intervention of the official visitors? It was not effected on my recommendation.
8729. Have the changes been made since the publicity given to Case No. 1? Yes, I notice that; but still I felt I had nothing to do in the matter so long as the number of attendants and nurses was sufficient, and I considered it to be ample. I have not felt called upon to speak of the general distribution of these attendants at any time.
8730. Do you consider that the patients should be dressed tidily when they are taken to see their friends, or when they are inspected by the official visitors? I think so, decidedly. I knew that patients at Cook's River were dressed decently when taken to the visiting room to see friends. I have seen them obviously so dressed when their friends were visiting them, and I consider such a proceeding quite proper and right. It is one of the rules of all well-conducted asylums.
8731. Do you think this attention to the clothes is any aid to their ideas of decency, and that in consequence they like to meet their friends? Some do. They, as a rule, see their friends for a few minutes, and behave perfectly right and well, so much so that the friends often go away with a wrong idea as to the mental condition of the patients. The patients on these occasions pull themselves together, as it were, and behave very well.
8732. What is the general health of the patients at Cook's River? The general health of the Government patients at Cook's River compares favourably with that of patients in the Government institutions, and the death rate is lower. The death rate among the Government patients during the last ten years has averaged 4.40, or less than 4½ per cent. (22 deaths with an average of 50 patients), whilst the death rate among women in the hospitals for the insane has been 6.16 per cent for the same period. I hand in three returns [*Exhibits N, O, and P—see Appendix*] which are important. The first shows the percentage of recoveries, the percentage of relieved, and the percentage of deaths at Cook's River for ten years, 1884 to 1893 inclusive. The second, a similar return, showing the percentage at the Government hospitals for the insane during the same period, and the third, which is taken from my report for 1893, similar percentages for both the Government hospitals and Cook's River taken together. These show that whilst the recovery rate at the hospitals has averaged 42.95 for the ten years, that at Cook's River has averaged 47.92, that the percentage relieved at the Government hospital has averaged for the ten years 4.63; the percentage of those relieved at Cook's River for the same period has been 14.28, and that the death-rate at Government hospitals for ten years has been 7.00, and at Cook's River for the same period 5.82. These returns include both males and females.
8733. Are not statistics rather deceptive, considering the large number of Government patients in Government institutions and the small number in this? Still, these figures cover a period of ten years.
8734. Are the Government patients at Bayview House—the women, of course, I mean—nearly all chronic cases? Yes; they are.
8735. How many recoveries have there been amongst the Government patients? None for the last ten years.
8736. Is that the result you anticipated from the character of the cases sent there? Yes; from the character of the patients sent. I know they have been selected by the medical superintendents at the public asylums.
8737. In other words, have the medical superintendents of the Government asylums selected cases for Bayview House which were to a large extent hopeless? Yes; because they did not wish Dr. Vause to score a recovery when there was any chance of scoring it for themselves.
8738. *Dr. Vause.*] But he has scored recoveries in spite of that!
8739. *President.*] Is not that very unfair to Dr. Vause? Perhaps it is; but, on the other hand, Dr. Vause has always been extremely anxious not to send cases in which he had any hope of recovery to the public institutions.
8740. We have had some most contradictory evidence from the official visitors regarding the meaning of the terms "seclusion" and "restraint" in the Lunacy Act;—will you give the Commission your views on the meaning of these terms and their applicability to the various circumstances of patients in hospitals for the insane? Yes; the words "seclusion" and "restraint," as used in the 71st and other sections of the Lunacy Act, have a special and technical meaning. This must necessarily be so, since every patient in an asylum is in seclusion in the ordinary meaning of the word. He is secluded from sane people and from the world at large, and every patient is also in restraint. He is shut up and restrained from going where he pleases or doing as he likes. The Legislature would, under these circumstances, have made special provision as to those in seclusion and restraint, if their view in the section above mentioned had some special meaning. What that meaning was was left for authorities in management to determine, and after very considerable discussion the English Commissioners in Lunacy, in 1859, and the Scotch Commissioners, some years later, in 1873, laid down certain definitions and made certain rules as to the recording of seclusion in the medical journals which have been adhered to ever since, and have been adopted by all medical superintendents in Great Britain, and by authorities in America. I hand in certain papers [*Exhibit O—see Appendix*] which will show that the definitions by the English and Scotch Commissioners are practically the same, and that seclusion means "placing a patient during the day in a single room, or other locality alone, and with locked doors"—or, more briefly, "compulsory isolation by day." Section 71 of our Act is taken almost *verbatim* from the English Act, and when it became law the English definition as to seclusion was adopted here at my direction, and has ever since been adhered to in all the institutions for the insane under my directions as Inspector-General. It has never been the custom here to count anyone as secluded at night. It would be quite impossible, in practice, to do this without counting everyone sleeping in a single room, and some 500 or 600 names would have to be entered on the lists for no useful purpose, and with no distinction of cases. Seclusion being mentioned with restraint implies that it is regarded as in some measure coercive or punitive, and it can only be so during the day. There is nothing punitive or coercive in placing a patient to sleep by himself at night. From one-third to one-eighth of all asylum inmates do so, and about half the single rooms in all asylums, when they are fairly numerous, are occupied by patients perfectly quiet and well conducted, who are allowed to have a single room as a special favour. It is a very frequent request made by patients that they may be shifted from an associated to a single room, and they look out ahead and ask, "May I have so and so's room when he leaves?" There is seldom or never any difficulty in getting a patient to go to a single room at night, and if one has to be shifted during the night into a single room it is not he who,

who, has a rule, has a grievance to place before the doctor next morning, but the patient who was shifted out of the single room to make way for him. All patients shifted from associated to single rooms, or from one associated room to another, by reason of quarrels or other causes, should be, and are entered in the public hospitals in the night reports for the information of the Medical Superintendent. Seclusion is entered in the medical journal as an exceptional mode of treatment, and not so much for the information of the visiting officials with regard to individual cases as for purposes of comparison with the practice in other asylums, both in the same country and in other countries. Seclusion is a practice to be discouraged as much as possible, and if the amount is large in comparison with that in other asylums, it is time for visiting officials to inquire why it is so, and in their reports to draw attention to the fact. If sleeping in a single room by night is to be considered seclusion here, there will be no means of comparison with English, Scotch, and American asylums where the practice is different, and no means of comparing one asylum here with another, as the amount of seclusion will depend on the number of single rooms, since every one of these is sure to be occupied by the special wish of patients. For instance, there are 800 patients and 157 single rooms at Gladesville, and 400 patients and 26 single rooms at Rydalmere. If seclusion is counted as applying to sleeping in single rooms at night, the amount at Gladesville will be three times that at Rydalmere, though it will probably be the better conducted institution of the two, and the superintendent may be keeping what is really seclusion within narrower limits. Again, to count it as applying to the night, will serve no useful purpose. Whilst it applies to the day use, the visiting officials can check the few cases, see that those in single rooms correspond with the entries in the medical journal, and, if necessary, inquire into these cases. If it is made to apply to the night, at each visit some 650 names will be laid before the visitors, and these patients of every sort and kind, quiet, convalescent, dirty, destructive, aggressive, &c., without the least chance of any proper check or inquiry. Then, too, the entries frequently made in the case-books as to patients being in seclusion which are acted on by officials when seeing patients for discharge as valuable records to guide as to the fitness or unfitness for discharge, will be useless and misleading. The Commissioners in Lunacy in England and Scotland are either medical practitioners, with large asylum experience, or barristers at law who have served for some years as secretary to the Commissioners. The conclusion arrived at as to seclusion was not settled hurriedly, and they have seen no reason, apparently, to alter the definition arrived at in 1859 in England, and in 1873 in Scotland. The New Lunacy Acts have been passed in the meantime, and the definition of restraint was altered in 1890, after the passing of the new English Act. Dr. Vause has carried out exactly the same practice as obtains in the Government asylums. As to restraint, a special regulation was made by the English Commissioners in Lunacy on the Lunacy Act of 1890 coming into operation. I hand in a copy of this [*Exhibit R—see Appendix.*] In this there is no limitation as to day or night use. Whenever restraint of the kind mentioned is used, whether by day or night, it is entered in the medical journal; and this course has also been adopted here under my directions. I produce a copy of the case-book order. [*Exhibit S—see Appendix.*] It was drafted by me on the lines of that in force in England, and was approved by the Colonial Secretary, in accordance with the provisions of the Lunacy Act, section 56. If a medical superintendent considers placing a patient in a single room at night as part of the treatment, or if he thinks it will serve to elucidate the general history of the case, he may very properly enter the fact in the case-book 8741. How do you account for the contradictory evidence given by the official visitors on this subject. These gentlemen are appointed for the purpose of investigating cases of seclusion and restraint; this is specially their function. How is it that they do not agree in the technical meaning of the word? I think the meaning should be understood very much more fully than it appears to be by the official visitors. 8742. Are you aware that in all Acts of Parliament, technical terms and particular words, having special meanings, are fully explained in a special interpretation clause? Yes. 8743. Are you aware that neither in the English nor the Colonial Lunacy Acts does this clause appear? I am aware of it, and that is the very reason why the Lunacy Commissioners in England and Scotland defined the meaning of the term seclusion, and the same reason led me to so define it here. 8744. I have no doubt that was the proper thing to do; but do you not think that special cases of outbreak amongst patients, occurring at night, should be referred to in the medical journal as being in seclusion, as well as cases which are recorded as having occurred in the day? I do not think it should. It is right and proper that patients should not be moved from the dormitory at night into a single room, or from one dormitory to another, without the medical superintendent being fully aware of the fact. He is informed of it, too; for what is done in this respect is reported by the attendants, whose night reports have to be on the table of the medical superintendent every morning. This being so, I see no necessity for these cases to be made matters of entry in the medical journal, the entries in which are mainly intended for purposes of comparison. It would be impossible for the visiting medical officers to enter very minutely into each case, and if these were entered they would serve no useful purpose. The necessity for seclusion must be judged of mainly by the medical superintendent; and if his views as to the amount of seclusion do not agree with the views of other people and other medical superintendents, and he is using seclusion more than is necessary or more than is used elsewhere, then is the time for the official visitors to ask why, and call upon him to give an account of the practice. 8745. Are you aware that originally a record was kept for quite different purposes than those of comparison—that abuses took place in institutions by a too frequent application of seclusion, hence the necessity to keep a record? Yes; and the record was kept for purposes of comparison. No doubt seclusion was used for the purpose of saving expense, and people were locked up in rooms to save attendance and supervision; but the medical journal was not intended as a check on individual cases, but to show that medical superintendents did not resort to it to an undue extent. 8746. Do you agree with the opinion held by some that the object of the Legislature, in making special provision in schedule 9 of the Act, for recording cases of seclusion and restraint in a special column and under a particular heading, was not only for purposes of comparison but also to prevent abuses? Undoubtedly. Now, if I found at one institution too many people in seclusion or restraint, applied to too large a number of cases, I do not inquire into individual cases, but I say to the medical superintendent, "What are you doing with so large a number of people in seclusion?" If I receive a satisfactory explanation the matter is allowed to drop. If I get an unsatisfactory explanation I very often remove a certain number of cases from one asylum to another to try what can be done by change. 8747. Do you regard it as a most important matter that this record should be kept? I consider it most important that a record of cases occurring in the day should be kept.

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8748. Why by day only? In cases of violence and outbreak, why distinguish between day and night? Because when they are placed in bed in their rooms and are locked up, they are not in what is termed seclusion.

8749. Supposing there is a violent outbreak at night, do you not think a record of these cases should be kept for the information of the official visitors? I do not think so. Such a practice would lead to a lot of confusion, and I think the Medical Superintendents see all that happens.

8750. Do you know if outside practitioners are called in for consultation with regard to patients in Bayview House? In private asylums it is the custom for friends to send their own medical practitioners occasionally to consult with the Medical Superintendent, and especially in the case of severe bodily illness. And if they do not do this, it is the custom for the Medical Superintendent, for his own safety and satisfaction, to call in a consultant and charge his fees in his accounts to the friends. Occasionally the friends of patients send their own doctor to see patients in the public asylums, and the Medical Superintendents have special instructions from me to call in a specialist in bad eye cases, in special diseases of women, and in cases requiring dangerous operations, but the Medical Superintendent has always assistance at hand in his colleagues for consulting purposes, which is not the case at Cook's River, and in bad cases I am asked to see the patients in consultation in the public institutions.

8751. In cases requiring special treatment at the Government institutions are the services of specialists obtained? Yes, when necessary.

8752. Referring again to the Government patients at Bayview, what is the general class of cases sent there from the public institutions for treatment? As a body, they are all chronic cases of insanity, and have for the most part been some years in the Government Hospitals for the Insane before being sent. In asking the Medical Superintendents at Gladesville, Callan Park, or Parramatta, to nominate cases for transfer, I have not indicated that the cases should be incurable, but I think the Medical Superintendents have generally selected incurable cases, since if they had selected curable ones they would have lost the credit of the cure and Dr. Vause would have scored it. The recovery rate is a matter of much anxiety and interest to all Medical Superintendents, because their credit much depends on it. The first question always asked me when I requested a Medical Superintendent to nominate a case for Cook's River was, "May I send a single-room case?" and I have said, "Yes" or "No" according to the number of these Dr. Vause had under his care. By a single-room case I mean one habitually or frequently requiring a single room at night. I have considered it right that a fair number of such cases should be sent to Cook's River. These cases, as a rule, are decidedly more expensive to keep than ordinary cases. Dr. Vause has had, what I consider, a high rate paid for maintenance, and it was my positive duty to see that the Government got as far as possible the value of its money. Besides, single rooms in the public hospitals are always fewer than is really required; they are expensive to build, and therefore more difficult to get from the Government than associated dormitories, and it was my duty therefore to relieve the public hospitals of single-room cases, when possible. If any of these cases get quieter and better at Cook's River, as they not infrequently did, so that they could sleep in associated dormitories on the occurrence of vacancies, other single-room cases would be sent. The number of cases generally requiring single rooms, at Cook's River, has been from seven to ten, and I may mention, that in arranging for the transfer of the patients from Cook's River to the Government hospitals at the close of 1894, when the contract terminated, I specially selected nine to go to Gladesville and Callan Park, because they were so bad that they could not be properly accommodated at Rydalmere, where the other forty-one had been sent. The single rooms for women, at Cook's River, were built in 1869. They are fairly ventilated; the spaces between the studding, all round, are stuffed with sawdust, having a large proportion of carbonate of lime mixed with it, and they are therefore much warmer than wooden rooms generally, and the division walls are impervious as to sound, or nearly so. Though not now up to a modern standard in some respects, at the time they were put up they were equal, as regards ventilation, space, and general arrangements, to any of the single rooms in the Government establishments, and decidedly superior to more than half of these. The single rooms in the Government hospitals have of late been much improved, some within the last six months, but some are still defective, and with these in existence in Government asylums, to have insisted on improvements in the single rooms at Cook's River, especially with the Government patients under notice of removal, and in the absence of accidents and complaints, would have savoured of oppression. That they are safe rooms is shown by the fact that no suicide or accident of any kind has, so far as I am aware, ever happened in any one of these since they have been in use—twenty-five years; except in Case No. 20, as to which I have already spoken, and in this case the accident was due to an epileptic patient being left with a movable iron bedstead under an unusual combination of circumstances. I am not in favour of the indiscriminate lighting of single rooms by gas, and I do not think what has been recently done at Cook's River either necessary or advisable. I think a small proportion of the single rooms should be lighted by gas, or rather that it should be possible to light them for special cases. At the division for women at Parramatta there are ninety-eight single rooms, and of these twelve can be lighted. The matron reports that only a few are ever lighted, and these only occasionally for new comers, who are frightened at first, and for sick and other special cases. I hand in memoranda [*Exhibits T and V—see Appendix*] by Dr. Sinclair and Dr. Blaxland, as to the lighting of single rooms at Gladesville and Callan Park.

8753. Are you satisfied with these rooms under ordinary circumstances? Yes. Cases of insanity vary very much, almost as much as men vary, but as a rule they sleep best in a dark or at all events a very dimly lighted room. It was one of my earliest observations at Gladesville that the patients in single rooms were always most noisy and sleepless on bright moonlight nights, when the light got into the rooms through the ventilating and other openings, and this is, I think, a general experience. My reasons for not insisting on, or suggesting alterations to the single rooms and other parts of the institution, I will give later on.

8754. We have had some contradictory evidence with regard to the food supplied to the Government patients at Bayview Asylum, have you been present occasionally when meals have been taken by the patients, and will you give us the result of your experience in this respect? Yes. The food supplied has been always, so far as I have observed, good in quality and abundant in quantity. Compared with the food in the Government asylums, I should say that the supply, especially of meat, was decidedly more ample, and the dinners altogether better. Whenever I have been present at dinner-time with the Government patients it has been even unnecessarily abundant, so far as meat was concerned, but I have always been given to understand that any surplus was taken back to the kitchen and reused as stews or hashes,

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hashes, as is done in private households. There was usually soup, and sometimes pudding. The vegetables and bread were always sufficient, and the former varied in kind. As a proof of the sufficiency of vegetables, I may mention that I only remember one case of purpurous patches on the hands at Cook's River, an ailment to which insane patients are specially subject, and which is not uncommon in the public asylums. It is quite and absolutely impossible that any special preparations could be made at my visits, except a bottle of pickles. Dr. Vause never knew, the matron and nurses never knew, and I never knew myself, when I should see the dinners five minutes beforehand. It depended on my general arrangements, and whether it was convenient for me to do so or not. I find from my journal notes of twelve occasions during the last three or four years when I have seen the dinners served in the Government division. I went less frequently into the dining-rooms for private patients for obvious reasons. I have frequently seen the dinners in course of preparation in the kitchen. The cooking, in my opinion, has varied at different times. At one time Dr. Vause had a man cook, a Frenchman, who cooked admirably, and whose blanc-manges or minor dishes for the patients were excellent, and after his discharge, through difficulties with the other servants, he was allowed to come back, partly, I think, at my suggestion. At other times there has been the ordinary Hibernian artist, but I cannot say that the cooking has ever been bad. I have twice had complaints from private patients after discharge, one was from Case No. 64, as to the breakfasts, and the want of variety thereat. This patient was insane from drink, and especially fastidious at breakfast-time, as all such people are. The other was from Case No. 49, and was mainly as to the cooking. This lady is especially dainty and fastidious, and as both she and Case No. 64 recovered and left the institution, having gained in weight, I did not attach very much importance to their complaints. On the other hand, several private patients, after discharge, told me that the food was ample and good. One specially came to me a day or two since to insist on this, but shrank from appearing before the Commission. His only criticism was that it was less varied than he got at home. I hand in two dietary scales for the Government patients at Cook's River. One of these is in Mr. Tucker's writing, and is the dietary approved when the Government patients were first sent there, and the other is the dietary which has been in use for the last two or three years; and I hand in, also, the dietary scale for the Hospitals for the Insane twenty-five years ago, when the Cook's River dietary was approved, and the changes since. [*Exhibit V—see Appendix.*] The dietary at Cook's River has been altered in various particulars since it was first agreed to, and particularly as to variety in food and as to the increase in butter, and the substitution of this in part for dripping, and of jam for treacle. These alterations, which are decided improvements, have been made by Dr. Vause. As dripping and treacle have been spoken of in the evidence, I may explain that when the dietary was first agreed to, the patients in Government asylums got no butter at all, and had to eat their bread dry or with dripping only. Butter was first given in small quantities, and also treacle, as well as dripping, and as butter has gradually become cheaper, dripping has been only used in comparatively small quantities. It is still difficult, however, to get really good butter at cheap rates, and as I consider good dripping much better than bad butter, and an excellent form of food, of which a liberal supply is available, I have never thought it advisable to ask for the substitution of butter for it at Cook's River, even if I could have done so under the peculiar circumstances under which the contract has always been renewed.

8755. Concerning the clothing of Government patients, have you always been satisfied with the amount of clothing supplied? The clothing of the Government patients has, to my mind, always been ample in quantity, but I have occasion to criticise it in some particulars. I have considered that the dresses were at times not sufficiently light for the summer weather, that the quality of the material was poor, and that the dresses were sometimes worn to a very shabby condition, and I have at times, and when necessary, expressed my opinion on these points. I have never seen patients underclad considering the time of year, or in any way suffering from cold. The supply of petticoats has always appeared ample, and it is very easy to a practised inspector to see this. I have never had complaints from patients as to insufficiency of clothing. The other complaints are not unfrequently made. These, for the most part, have been as to the kind of material, the want of new and lighter boots, and as to little matters of collars, ribbands, &c. On these points I have occasionally asked the doctor or matron to humour the whims of the patients, and at my next visit I have been shown the article specially got. Scarcely a visit passes without some minor complaint of this kind, but I have heard no real grievance as to clothing, and seen none. It is most difficult to keep certain classes of patients, or certain individual patients in particular phases of their malady, clean or tidy. They are careless and destructive, dirty, and indecent, and it is almost impossible to keep them clad or tidy. It is necessary to employ canvas jumpers or overalls in some of these cases, and in some cases these jumpers are all the patient has on except, perhaps, some torn underclothing. For such patients it is not at all uncommon; indeed, it is necessary and right, and is done in the public asylums, to give the cast-off clothing of the better class patients to these patients, so long as it is sufficiently warm and clean. It is only delaying by a few days, or even a few hours, the passage of these garments to the rag-bag, and making them serve a useful purpose in the meantime. Those patients who are almost always partially unclad, and whose persons are exposed when a nurse is for a moment away, do not appear to suffer cold. Their activity and constant movement keeps them warm in some cases; there is a singular insensitiveness in others, and, curiously, colds, bronchitis, inflammation of the lungs, and other similar ailments, are almost unknown among this class. Even infectious diseases seem to attack them less, and the influenza, when prevalent in hospitals for the insane, for the most part, if not entirely, pass them by. At my visits of inspection I have at times examined the bedding, removing it from one or two beds taken at random in the dormitories, with the special object of seeing if the sheet was clean and dry, and the supply of bedding sufficient. At these times I have seen the bed and the blankets, and always considered the latter sufficient for the time of year; sometimes they were more than sufficient, and it has been explained to me that the extra blankets were left on at the wish of individual patients. I have never had a complaint made to me of insufficient clothing at night. The clothing for private patients is mostly supplied by friends; but sometimes it is left to Dr. Vause to supply, and is then, so far as I have seen, suitable and sufficiently varied.

8756. Do you know of any case or cases where the clothing of private patients has been used for Government patients? As to the statement that private clothing has been worn by Government patients, I know nothing, though I can easily imagine that discarded pieces of finery, or cast-off dresses of private patients, have been so appropriated. Especially as they would in some cases be accepted with pleasure

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and worn with much satisfaction. As to the clothing of Government patients, or of the kind supplied to Government patients, being occasionally used for private patients, I am aware that it has been done, and with, in my opinion, perfect propriety. Case No. 28, who has been mentioned as wearing the so-called Government clothes, was a Frenchwoman, and was brought from New Caledonia, where her husband lived. I refused to admit her to any one of the Government hospitals in accordance with a general rule precluding the admission of insane persons brought by friends from other colonies to the public institutions here, and after a time the French Consul made an arrangement with Dr. Vause to pay £1 per week—less than the Government maintenance rate—for this patient's residence at Cook's River, where she was admitted in October, 1890. She was a destructive patient; her small stock of private clothes was soon exhausted, no more was sent, and after a time all payments on her account ceased. Dr. Vause and the French Consul applied for her transfer to a public asylum. This I refused, and only consented when it was shown to me by inquiries through the Police that the patient's husband had become a resident in this Colony. She was transferred to Parramatta in January, 1894. Meantime the patient was for some months fed, clothed, and looked after entirely at Dr. Vause's expense. The clothing was such as is provided for the Government patients, and the patient was kept in the ward set apart for Government patients. This patient is still at Parramatta, wears Government clothing, and is maintained at the Government expense. I have seen, on one or two occasions, what I believed to be the ordinary winsey used for Government patients on another patient, Case No. 44, whose name has also been mentioned in this particular. She is a very elderly woman, over 80, imbecile from birth, and of faulty habits from bladder weakness, and needs a large number of dresses so that she may be kept dry and clean. The dresses I have seen have been nicely made, evidently made specially for her, and, in my opinion, were quite suitable. This patient is always thoroughly well attended to, and has special care owing to her feebleness. Case No. 45, now deceased, has also been spoken of as wearing the so-called Government clothes, but I know nothing of this.

8757. Do the complaints we have heard in reference to private patients being kept in the Government division refer to those sleeping in the seclusion cells, or do you know of any case where private patients have been placed in the associated dormitories? I have mentioned that Case No. 28 was placed with the Government patients and the reason why, and I may go on now to mention other cases so placed. When the Government decided to remove seventy-five of the patients from Cook's River in 1890, a dispute arose as to which patients were to go. Dr. Vause would have liked to select them, when probably he would have chosen those to go who were most troublesome and expensive. Some of the friends of patients wished them to remain at Cook's River, and, foreseeing a difficulty, I decided, as fair both to the Government and Dr. Vause, that I would remove the seventy-five patients who had been at Cook's River the longest, and I commenced to do so. The friends of four or five, however—I think five—after trying to persuade me to alter my decision, decided that sooner than have the patients removed, when they are comfortable and happy, they would contrive to pay a larger amount. They had previously been paying small rates to the Government, and Dr. Vause arranged to allow them to remain at smaller rates of payment than his ordinary private cases, so that I only removed seventy or seventy-one out of the seventy-five. Two or three of these patients remained in the ward for Government patients—one, Case No. 14, has been there ever since, and is there still. She is paid for at the rate of £1 per week. Her friends have lately written to me stating that they had received letters endeavouring to make mischief, and informing them that the patient was in the Government division, a fact of which they were perfectly aware. Another case of a private patient mentioned as being in the Government division is Case No. 13, who is there sometimes for weeks together by day, but does not sleep there, or take her meals there. I know the case well, and have seen no reason to object to the course pursued. An institution for the insane should, like other institutions, and the world generally, be conducted on the principle of the greatest good for the greatest possible number. Case No. 13, by her language, her habits, and her conduct, would, for days and weeks at a time, be a grievous offence to the quieter lady patients. She is herself quieter and less offensive with and to the Government patients, and she gets the value of the money paid for her, and is, I believe happier on the whole, and in a more congenial company in the Government division. I have seen other female patients in the Government division occasionally, and on rare occasions, and have inquired as to the reason. Whenever a patient becomes unbearable in the private division, or would be benefited by removal to the Government division either by night or day, or has specially desired to go to the Government division to sleep, I can see no objection to the removal. The Government hospitals are regulated in this way. And I may mention that for a very long time two of the single rooms at Cook's River were allotted to private patients, and one of these, Case No. 58, slept in one for many months at her own wish, having a bedstead and bedding brought from the private wards.

8758. Do you desire to put in certain documents and reports so that they may appear as an Appendix to your evidence? Yes. The correspondence which I produce [*Exhibit W—see Appendix*] shows how and when the Government patients were first sent to Cook's River, and to some extent how and why fifty of them have been allowed to remain there. I would note specially the following points:—1st. That my recommendation to an annual license was overruled. 2nd. That my recommendation as to the period of the license and of the Government contract being made to begin and end at the same time was not accepted, so that on termination of license the contract was in existence, and on the termination of contract the license was in existence, and it was, therefore, impossible to insist on alteration at either period. 3rd. That when I have opposed the renewal of the contract the matter had been decided off-hand and over my head, so that I have never been given an opportunity of making conditions as to improvements in connection with the renewal if it was to be granted. 4th. That improvements, when insisted on, have been used as arguments for prolonging the duration of the contracts or for its renewal. 5th. That I have always held, and stated in the strongest way, objections to the system of farming-out Government patients, though I have always expressed an opinion that private asylums, in the absence of endowed hospitals for the insane for private patients, are a necessity, and a useful adjunct to an asylum system in providing for a special class who cannot, under existing conditions, be adequately provided for in the Government institutions. 6th. That I have always reported favourably on the general management of Cook's River and of the treatment of the Government patients therein, this being only right and just to the proprietors, who have never given me an opportunity of using any statement as to mismanagement as an agreement or lever for removing the Government patients.

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8759. Having glanced at these papers, I find that you object to the continuance of the contract;—is that so? I have, generally, on the grounds of economy. It was made originally for four years, with the option of a renewal for two years; but it has been continued from 1874 until the present time.

8760. I also find you state, as a reason for the continuance of the contract, that some peculiar political influence was brought to bear on the various Governments;—do you think that is the case? I have had reason to think so.

8761. Do you personally desire to see the contracts concluded, so that the Government patients may be transferred to the Government institutions as soon as possible? Yes; I consider I owe a duty to the Government, inasmuch that I should see that insane patients are maintained at the cheapest rate possible. In that view I recommended the transfer of patients back to Government asylums whenever there was room.

8762. So strongly that you reported as follows: "The system of farming out patients is one to which there are great and well-founded objections. It is wrong in principle, since the cost and maintenance of the insane poor should never be a matter of commercial speculation. It is costly, and it is liable to abuses which are impossible in providing for the insane in public institutions";—do you hold that opinion now? I still hold it.

8763. In this special report to which I am referring [*see memorandum to the Chief Secretary, Exhibit W*], do you state that in the twelve years during which 125 patients were farmed out, the Government paid £87,750, exclusive of burial fees, all charges for transfer, &c.; further, that up to December, 1894, the charges for the fifty patients would amount to £23,400, making a total of £111,150, and that it was not difficult to show that the licensees of Cook's River had during the twenty years enjoyed a profitable monopoly? I reported that to the Government; for I considered that the buildings, as originally put up, should have been paid for in the first five years.

8764. Did you also report that the annual rate paid at Cook's River was £1 2s. 6d. per week? Yes; it was originally £1 5s., but latterly it has been £1 2s. 6d. per week per patient.

8765. Would that amount to £58 10s. per patient per annum? Yes.

8766. Do you deduct from that collections made from patients and their friends by the Master in Lunacy, which, in 1892, amounted to £2 6s. 10 per patient? Yes.

8767. Thus, leaving the actual annual cost of maintenance per patient at £56 3s. 2d.? Yes.

8768. What has been the average annual maintenance rate for the last ten years in hospitals for the insane? Per patient it has been £31 15s. 11d.; and deducting from that £3 16s. 11d. per patient as the average collections made by the Master in Lunacy during the past ten years, it leaves a total cost of £27 10s. per head.

8769. Do you add to this £7 7s. for rent of buildings, and 15s. for repairs to buildings carried out by the Government Architect, amounting to £3 2s., thus making the annual cost of maintenance £36 1s.? Yes.

8770. Do you think that is a liberal calculation for the rent and repairs? Yes, I do; very liberal.

8771. Does that leave a difference in cost per patient, comparing private with public asylums, of £20 2s. 2d.? Yes.

8772. And has this been going on during the last twenty years? Yes.

8773. Was this course followed because there was no provision in the Government institutions for these patients, or, in other words, was it a matter of necessity that you paid this extremely high rate? Yes; there have been but few opportunities of removing patients from Bayview House.

8774. On this account did you protest most strongly against the continuance of the contract? Yes; three years ago I protested, but I was not then in a position to do more than protest. I, however, recommended that the Government should make provision for these patients, and that the contract should terminate at the end of December, 1894.

8775. I find that you point out in your memorandum that it is much less costly to maintain insane women than insane men;—has that anything to do with dress and general management? The food supply is less, the clothing costs less, and nurses are paid a lower wage than male attendants. This is recognised in England where the difference in cost is reckoned at 1s. per week in favour of women, and it is even more in this country, as was seen by Mr. Tucker when he asked £1 8s. and £1 5s. a week for men, and £1 2s. 6d. a week for women.

8776. I see you point out carefully in your report that the patients at Cook's River are chronic cases who are not criminals, while those in the Government establishments include criminals, and a very large proportion of acute cases;—would this make a serious difference in the cost of maintenance? It would undoubtedly. The chronic cases require much less attention than the acute cases.

8777. Are criminal lunatics much more costly than the ordinary chronic cases? Criminal lunatics are much more costly.

8778. Do you say that female patients of the chronic class are maintained in the Government asylums at a considerably less cost than £34 a year each, counting all charges, and including interest of money as rent of buildings and cost of repairs of every description? Yes; I come to that conclusion on what the females cost at Parramatta, which is less than at Gladesville or Callan Park.

8779. I notice that in this report you enter very fully into the totals of cost;—do you point out the difference between £56 and £34 per year for 125 patients during the twelve years from 1875 to 1886, and for fifty patients during the eight years from 1887 to 1894 inclusive, to be as follows: 125 patients at £56 per year for twelve years, £84,000; fifty patients at £34 a year for eight years, £22,400,—at total of £106,400? Yes.

8780. Then 125 patients at £51,000; fifty patients at £34 for eight years, £13,600, is a total of £64,600, so that the actual difference in cost has been £41,800? Yes; that is the difference in cost.

8781. Did these matters appear in your annual report for 1892, and were they brought under the notice of the Government of the day? Yes.

8782. Do you sum up the whole matter in these terms: "So that in twenty years the Government has paid £41,800 to the proprietors of Cook's River in excess of what the Government patients sent here could have been maintained in the Government establishments—and to what purpose"? Yes.

8783. Do you still hold the same views? Yes; I do.

8784. I would now like to ask you a few questions about private lunatic asylums;—do you not say in your report that, "In a disease like insanity, so different in its degree, so varied in its manifestations, and attacking all sorts and conditions of men, no system or manner of treatment should be altogether set aside; and private asylums have a useful place in any asylum system, especially where there are no

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lunatic hospitals managed by trustees and set apart especially for paying patients such as those at Coton Hill, near Stafford; Barnwood House, near Gloucester; Northampton in England, or the Royal Hospitals at Montrose, Dundee, and other places in Scotland? That is my opinion.

8785. Therefore do private asylums play an important part in the treatment of these cases? Yes; undoubtedly they do.

8786. Do you think there should be careful conditions surrounding the management of these private asylums? Yes.

8787. Especially in cases where there are no lunatic asylums managed by trustees, as in England and Scotland? Yes. I consider the ideal asylum for private cases to be asylums like those I have mentioned in England and Scotland. These possess special endowments, which have been given by wealthy individuals. They are managed by unpaid directors or trustees. The medical superintendents are appointed by them, and these officials have no interest in the financial matters beyond their own salaries. The rich patients are paid for at high rates, and the poor at low rates, and benefit by the endowment. If people have large incomes, and wish to spend two or three thousands of pounds per annum in the maintenance of patients, these endowed hospitals very often will not take such patients. I remember one case which came under my notice the last time I went home, where the Countess of Durham paid as much as £3,000 a year for maintenance. The patient had every luxury available; she kept her coachman and footman, her maid, and had a special suite of rooms when she was well. When she was ill she occupied a bare panelled room, and had much the same arrangements made for her as Case No. 1 had at Bayview House. She passed from one stage to another in her mental condition, and with the change she was removed from every comfort and luxury to the isolation and silence of a panelled room, and then back again to her well-furnished apartments.

8788. Do many patients prefer a private institution to a public hospital? Yes. It is impossible for private patients to be put in public hospitals without mixing to some extent, and at times, with the public patients. When having intermissions of sanity, they do not like to mix with the public patients. It is, too, a source of great annoyance to the patients and their friends if, after recovery, another patient calls at their residence and says, "I knew you at Gladesville," Callan Park, or so on. Naturally, therefore, people who can afford to pay prefer to send relatives to a private asylum, and that, in my opinion, is one of the reasons why Bayview House would be better and do better without Government patients.

8789. In the case of private asylums, has there always been some difficulty about official inspection of the details of management? There always has been, and there always must be, where there is a matter of profit in question.

8790. Do you think if inspection is inquisitorial, and conducted with a fault-finding attitude or unduly-suspicious proceedings, defects and abuses will be concealed? That may be so. Another reason I see for private asylums in this Colony, where there are no endowed asylums, is that the Government will not provide special luxuries for people who wish and would prefer to pay for them. It is a most difficult matter to get from the Government special furniture and other articles required for the use of private patients. I may mention that in America, in one or two of the States, private patients are taken into public asylums, so long as they only require one room, but they eat and live with the ordinary patients. The authorities refuse to take patients if they require more than one room.

8791. In one of your reports, amongst the mass of documentary testimony you have laid before the Commission, I see there is some reference made to the failure that has attended, in France and elsewhere, the farming out of patients;—will you state the particulars connected with the failure to which you refer? Yes; while on the European continent, I went to see the establishment of the Brothers Labitte, and to ascertain something of its management. The insane from two departments in France were sent there for treatment; but the system broke down entirely, as it was found that abuses crept in, and that the patients were stinted in minor things. In fact, the whole system broke down.

8792. Are there any other institutions similar to the one at Cook's River in the Australasian Colonies at the present time? There is one in New Zealand.

8793. Have you visited it? No.

8794. Have you seen reports from it? Yes.

8795. Are they of a satisfactory character? Yes; the institution is somewhere near Dunedin, and Dr. MacGregor, the inspecting medical officer, sends me his reports.

8796. Is there any other institution or establishment licensed under the Lunacy Act in New South Wales besides Bayview House? Yes; there is a small licensed house at Ryde, managed by Sisters of Charity.

8797. Was this house built for the special purpose? No; they have three patients only; it was licensed for six. There are also two houses licensed for one patient each, known as Swiss and Woodland Cottages at Picton.

8798. What provision is made for the visitation of these places? They come under my visitation; I visit the cottages where the patients are chronic cases—feeble old ladies—once every six months. I go to the house at Ryde about once every three months.

8799. Do the official visitors also visit these houses? No.

8800. Under the provisions of the Lunacy Act, do not the official visitors have to inspect every institution? No; there are no official visitors to Rydalmere and Newcastle asylums.

8801. Are they appointed only for certain institutions? Yes; for certain institutions, and then the appointment is not mandatory. The Act says the Government may appoint one or two or more official visitors.

8802. Did you approve of the boarding-out system so long as it was carried out under proper conditions? I thought private asylums, years ago, valuable institutions in the absence of endowed hospitals, but I do not approve of boarding out insane patients.

8803. Do you regard the cases at Swiss and Woodland Cottages, and at Ryde, as boarded-out patients? No; I take it that boarding out means where patients are boarded out by the Government. In these cases, the arrangements are made by the friends of the patients. In the case of the two cottages, the patients lived there some years before the Lunacy Act came into operation. A license was granted to the houses under the Act, so that there would be no necessity to remove these aged ladies from the people with whom they have lived for so many years.

8804. If you did not issue a license in that manner, would the way be open for evading the intention of the Act? Yes; I know one or two cases where persons wished to get licenses, but the patients were sent into

into the asylums. Naturally, as you may imagine, the friends of patients keep them out of the institutions as long as they can.

8805. Is there a branch of the Bayview Asylum at Narrabeen? Yes.

8806. Is that licensed? No; the 32nd section of the Act deals with this matter. That section says:—

The superintendent of any hospital for the insane or licensed house may with the consent in writing of the Inspector-General send or take under proper control any patient to any specified place for any definite time for the benefit of his health, and also permit any patient to be absent from any such hospital or licensed house upon trial for such period as may be thought fit; Provided always that before giving any such consent the Inspector-General may require the approval in writing of the person who signed the order or request for the reception of such patient or by whom the last payment on account of such patient shall have been made. In case any person so allowed to be absent for the benefit of his health or on trial for any period do not return at the expiration thereof, and a medical certificate as to his state of mind, certifying that his detention as an insane person is no longer necessary, be not sent to the superintendent or licensee of such hospital or licensed house such persons may at any time after the expiration of the same period be retaken as in the case of an escape.

8807. Is there any provision for the inspection of patients while at Narrabeen? No; not while there. They are only there for a month or two, under supervision of course, and they are either then taken back to Bayview House or discharged. These provisions are copied from the English Act, where they are inserted so that patients may be taken to the seaside and other places in the hope of obtaining a beneficial change.

8808. I see from your report that you say, "The Government and the patients farmed out have been singularly fortunate in having to deal with Dr. Vause during the last eight years, but this has been by accident only, since the patients under the contract with the Government were sold to him without the consent of the Government, and there is nothing now to prevent the contract from being transferred to someone else, who may be but little fitted for the charge. Dr. Vause has proved himself to be a friend to the patients, particularly in many cases where the private patients were unable to pay, and to the best of his ability endeavours to perform the duties and responsibilities of medical superintendent." Do you adhere to that opinion? Yes; I have said that and I still think it. I wish to point out now that, though I have been desirous of getting the patients back from Bayview, yet I have never been able to find an argument to use as a lever for their removal from anything I saw in the way of neglect or mismanagement. Dr. Vause has given me no opportunity in this direction. Notwithstanding the fact that I have been desirous of getting the patients back, it is my duty to say that Bayview House has been well conducted.

8809. Is that your opinion still? It is.

8810. Notwithstanding the evidence you have heard *per contra* while sitting on this Commission? Nothing to the contrary has been proved to my mind.

8811. As regards the general management, do you still hold the same opinion? Yes.

8812. *Dr. Garran.*] When you first knew Bayview House, how did it compare with the Government asylums? It was decidedly in advance of them. The Government asylums were in a wretched condition. You have no idea of the condition in which they were. They were overcrowded to such an extent that one could scarcely go into the dormitories without treading on patients. Beds were so scattered all over the floor that you could not walk through the wards.

8813. Did Mr. Tucker really start the improvements? Yes; in the earlier stages. When these buildings were first put up they were better than the Government institutions in many respects.

8814. If you had desired to send a friend to an asylum then would you have preferred sending him to Bayview House? Yes.

8815. Was it not until the lavish expenditure of late years that the Government asylums were on a better footing, and able to accommodate the patients? Yes; besides in the early days it was almost impossible to get good medical officers. When first I came here I had to some extent to pay medical assistants out of my own pocket. I had to invite them to come and live with me. The first assistant I got at Gladesville was one of the medical officers at the Sydney Hospital, and I had to invite him to come and live with me. Now things are very much altered, and I can obtain both efficient medical officers and attendants.

8816. Notwithstanding these facts, are you clearly of opinion that the general management of Bayview House is fairly satisfactory? Yes.

8817. Has your opinion been shaken by the evidence of nurses you have listened to as a member of this Commission? Not in the main point.

8818. Do you know Case No. 15? I do.

8819. Was she in a Government institution before she was sent to Bayview House? Yes; she was at Gladesville.

8820. Have you heard in evidence that she was put to sleep in a single room at night while at Bayview House? I have.

8821. Was she a similarly difficult patient before she was sent to Bayview House? I cannot tell you accurately what her condition was at Gladesville without looking up the books. I know she has gone back to Gladesville, and I shall have no difficulty in getting you full particulars about her in the course of a day or two, and will do so. [*Exhibit X—see Appendix.*]

8822. Have you been cognisant of this patient being put naked in a single room at night? I have known she was put in naked, but with suitable rugs and bedding; there is no other way of dealing with her.

8823. Are there similar cases to this now in the Government asylums? There are.

8824. Are these dealt with in a similar way? Yes, and provided with suitable bedding.

8825. With all you resources at the public institutions, have you any alternative than to treat such patients in this way? There is no alternative that I am aware of. If you restrain these patients they get no sleep, and are worse the next day, whereas by treating them in this manner they get a fair amount of sleep during the night, and a greater degree of quiet during the day.

8826. Do you, by adopting this mode of treatment, apply the minimum of restraint on them? Yes; by putting them into a room by themselves they get a certain amount of sleep; they would get no sleep at all if you used any form of restraint.

8827. Have you tried to induce such patients to wear night-dresses? It would be a very dangerous experiment; they would tear them up, and most likely tie them round their throats.

8828. Do you think, in regard to their own safety, it is expedient to put them in these single rooms at night without clothing? I do, provided that warm and suitable bed-clothes are provided.

8829. Could you bring any reproach against Dr. Vause for following this practice? No.

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8830. What is the rule at Government asylums for bathing ordinary female patients? They get a warm bath once a week. The dirtier cases get a bath when it is required. A good many are bathed every morning; this is necessary. A good many patients get a shower-bath when they wish. The shower-bath is open to them, and they use it when they like.

8831. Can you trust patients to bathe themselves? There is always an attendant present.

8832. We have been told that the rule at Bayview House is to bathe the Government female patients once a week—every Saturday afternoon;—is that practically the same as at the Government institutions? It is practically the same.

8833. *Mr. McGowen.*] On page 10 of the Lunacy Act, clause 39, it states "there shall be kept in every licensed house a book, to be called the medical case-book, in the form and manner directed by the Colonial Secretary, in which the superintendent shall make or cause to be made certain entries";—is that book kept at Bayview House? Yes, it is.

8834. Does the same clause state that entries of the mental state and bodily condition of each patient, together with a correct description of the medicine and other remedies described for the treatment of his disorder, shall be made in this book? Yes.

8835. Is that carried out at Bayview House? It is carried out; I will not say it is carried out at the asylum in every case and in every particular, but I believe it is fairly carried out. I have looked at the case-books in the public institutions, and have occasionally pointed out that the medicines are not so fully entered as I would like to see them. I have done the same at Cook's River, and, as a rule, there the remedies are entered.

8836. Would the giving of the medicine in the poisoning case at Cook's River have been entered even if it had not had fatal results? Yes; if a patient was given a sedative that fact would be recorded. If she did not have a special sedative but was subject to fits, there would be the general treatment of the case—a bottle of medicine would most likely be supplied and particulars of that would be recorded in the case-book.

8837. We have had it in evidence that on a number of occasions medicine was given to Case No. 12 at night;—was this recorded? Yes; the medicines in that case were recorded. I have seen the records.

8838. To the best of your belief, were the provisions of this 39th clause carried out strictly at Bayview House? Yes; in the main. I will not say that every dose of medicine was recorded, but I know the majority of them were. Occasionally I have called the attention of the medical officers in public institutions to certain omissions and they have always said as an excuse that they were overworked. As a rule these cases have been fully recorded at Cook's River.

8839. In clause 69 of the Lunacy Act it is stated that every licensed house shall be visited by the Inspector-General at least once in every six months and with or without any previous notice, "and every such visit shall be made at such hour of the day or night and for such length of time as he shall think fit, and also at such other times as the Colonial Secretary may direct";—have you ever made a night visit to Bayview House? No.

8840. Regarding that part of section 71 of the Lunacy Act "as to whether any patient is under restraint or in seclusion, and why"—do you say you do not consider putting patients in these rooms in the night-time and locking the door as seclusion and restraint? No; that does not come within the meaning of these terms, as defined by the English and Scotch Commissioners, and as I have thought it desirable to apply here. I have given this particular portion of the Act very great consideration, and I have done what I consider to be best for the benefit of the patients as a whole.

8841. Do you not say, generally speaking of other patients, that if they are sleeping in a dormitory that they are in seclusion? They are all in seclusion.

8842. Must not these patients put in a single room to sleep and locked up there be in greater seclusion than the patients in the dormitories? Yes; undoubtedly.

8843. Do you also say that Dr. Vause has carried out the practice in force at the Government asylums as far as Government patients are concerned, when putting these patients in these rooms? Yes; whenever patients have been put in single rooms in the day-time the fact has been notified; when put in at night the fact has not been recorded.

8844. In the Government asylums are the patients visited by night attendants? Yes.

8845. Did you know there were no night attendants at Bayview House? Yes.

8846. Did you know that these single rooms are filled regularly every night? I knew that there were from eight to ten patients sleeping there every night, and understood that generally there were one or two rooms empty. Private patients slept in these rooms for months together at their own wish.

8847. Do you know also that these patients were locked in these rooms at night, they were not seen by any attendant until they were taken out the following morning? I know that they were not seen after 10 o'clock at night until they were taken out in the morning. The matron before going to bed herself used to see them at 10 o'clock.

8848. At what time are these patients taken out in the morning? It varies according to the season of the year. It is different in summer to what it is winter. From 6 to 7 and 8 o'clock, according to the time of year.

8849. Are they in these rooms, then, from six to eight and ten hours? Yes.

8850. Did you protest against this course of treatment, knowing that it was different to that followed at Government asylums? No; I knew the cases, not only as a class, but individually. As far as Government asylums are concerned, the patients in the single rooms are mainly acute cases—cases of an altogether different class to those under treatment at Bayview House. I dare say there are more than ten cases in each of the Government asylums whose rooms are passed by an attendant every hour in the night. Even then the doors are not opened.

8851. Still an attendant passes the door at stated intervals? Yes.

8852. Are there any acute cases at Bayview to your knowledge? As a rule they are chronic cases. I have said I always understood that if there were cases in the acute stage, or if patients were suffering from any unusual mental or bodily sickness, at Bayview House, there was always a night nurse in attendance.

8853. Was Case No. 15 an acute case? No; a very chronic one. She has occupied a single room since the year 1881.

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8854. Do you know if Case No. 12 was placed in a single room at night? I do not know; but, judging from what I have seen and heard of the case, I consider it would have been quite proper treatment to put her in a single room.

8855. Do you know if Case No. 45 was in a single room? No.

8856. Or Case No. 49? No.

8857. After Case No. 45 had fits, was she placed in a single room? I never heard of it. She is an extremely gentle little body, and was never likely to be placed in one of these rooms.

8858. In the case of fire, and seeing that these structures are lined with sawdust, that there are no night attendants nearer than the nurses sleeping in the dormitories, what chance would patients have of escaping or being taken out of these rooms? If I had the management of the institution I should have always had a night watch.

8859. Did you know that Case No. 1 was placed in a seclusion-room on the men's side? I have gone into that matter very fully. I knew that Case No. 1 was placed in the room when he was first admitted to Cook's River, that he was there for a fortnight or three weeks, and then that he was removed to an upstairs room.

8860. We have had it in evidence from nearly all the witnesses that he occupied this isolation room for at least about six months;—were you aware of that? No. I understood when I made inquiries that he was there occasionally; I did not know he was there for any length of time.

8861. Were you given to understand that a night attendant was in the room? I was told there was a night attendant whenever he was in a single room.

8862. Did you hear Dr. Blaxland's evidence, and the evidence of other witnesses, with regard to the quantity of night-clothing the patient destroyed. According to the evidence of the patient's son and the attendant Doherty from eighteen to twenty different suits of pyjamas and night-shirts were supplied to him while at Bayview House, and yet in two months while at Callan Park, according to the evidence of Dr. Blaxland, he destroyed 118 articles of apparel and bed-clothes;—from this evidence have you reason to believe that he was naked in his room at night during his stay at Bayview? I think he was very often naked. I do not say he was ever put into the room naked, but I feel perfectly certain he was very often naked in the room. I have seen him naked in his room since he has been at Callan Park.

8863. Do you think he was more destructive in Callan Park than he was at Bayview House? I think he was worse in all respects in the earlier part of his residence at Callan Park. The removal of the patient did him harm, and he was worse in consequence for a time than he was at Cook's River.

8864. Do you also say that Case No. 49 complained about the food;—did she complain about anything else? Yes; she complained about the bathing. She objected to the nurses being present while she had her bath. She based her objection to me on the grounds that bathing in the presence of the nurses was scarcely decent. I also ascertained that she had an idea that they might drown her while in the bath. I had reason, however, to think this was a delusion, as, you will remember, Dr. Crago said when giving his evidence.

8865. Did she ever complain to you of having to sleep in the single rooms? No. When I found she had complaints to make I invited her to come and see me; but she never complained of having been put in a single room.

8866. What was the greatest number of Government patients at Bayview House at any one time? I think 125.

8867. What percentage of this number would be females? All of them.

8868. In your report, as referred to by the President, do you not say there were political and extraneous influences exercised to get and keep patients at Bayview House? Yes, or words to that effect.

8869. Do you know who used, or how these influences were used? I have nothing definite to tell you on that subject.

8870. Can you tell the Commission how and by whom you were informed that this political influence was brought to bear? I know on one occasion that a Government of the day was in difficulties, and I was told that renewing the contract to Bayview House saved the Government from defeat.

8871. What Government was that? Really, at this time I do not know for certain. I do not know whether it was Sir Alexander Stuart's Government or which Government it was. It was some years ago.

8872. As a high public officer, having to report to the Ministerial head of your department, can you not state the reason you had for forming such an opinion;—will you not admit that it is a sweeping charge to make, when you, as Inspector-General of the Insane, say that by the granting of a certain contract a Government was saved? Perhaps it is a sweeping statement, but I had other reasons which led me to this conclusion. It was not difficult for me to see, when I interviewed the Minister in power, that he had had advice other than mine.

8873. Did you not say, a while ago, you never had a really good reason other than that of expense to remove Government patients from Bayview House—or, in other words, that you had no fault to find with the treatment and general management of patients? I had no other cause than that named.

8874. I notice there is a great similarity in all your annual reports—I have the last three issued; did you not say, in answer to a question, that the death-rate was better at Cook's River than in the public institutions. I see on page 9 of your 1891 report that the death-rate at Cook's River was 12.37; Parramatta, 8.73; Callan Park, 8.58; Gladesville, 5.95, and so on;—does this not show that the death-rate at Cook's River was the highest of all? The death-rate at Cook's River was higher that particular year, but my statement is founded by striking an average of the death-rates for the last ten years. You cannot arrive at a reliable average by taking any one year specially.

8875. It is also stated on page 11 of that report that accommodation is provided in the public hospitals on a basis of 600 cubic feet of dormitory space per patient, this being the lowest compatible with health;—is there that amount of cubic space per patient at Bayview House? Yes; but it was not so originally. On one occasion on relicensing I took objection to the provision at Bayview House, and had the cubic space per patient extended to 800 feet for private patients, and to 600 feet per patient for Government patients. That has been maintained ever since.

8876. There is another matter in your annual reports—that is, the cost of maintenance of patients? I see you omit the cost of Government patients at Cook's River when stating the average annual and average weekly cost of maintenance per patient at the public hospitals;—why is that? Because I am dealing particularly with the public hospitals for the insane.

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8877. I see you make a comparison between the other hospitals excepting Cook's River? As far as the recovering and death-rate are concerned, I include Cook's River.

8878. Why do you not state the cost of maintenance per head at Cook's River? I always have stated that every year as £1 2s. 6d. per week per head; it was always the same. I do not put that in the columns with the figures referring to the cost of maintenance at the public institutions, because it would be unfair in this way: the cost at Cook's River includes the cost of lodging. In the Government establishments the cost mentioned is the cost of maintenance exclusive of the cost of buildings; I could not put the two together. I show the figures relative to the cost of maintenance at the Government institutions in the form in which they appear, so that they may be used for comparison with the maintenance rates at other institutions in other colonies and elsewhere.

8879. Do you not point out in your report that the weekly cost of maintenance for insane patients at Gladsville was 12s. 11d. per head in 1870, and 12s. 4d. per head in 1893; at Parramatta, (collections not deducted in both cases) 9s. 1½d., and 9s. 7¼d. in 1893? Yes.

8880. Yet you do not in either of these columns show the cost of weekly maintenance per patients at Cook's River;—how is that? Because, as I have said, these calculations set forth in columns refer to the public hospitals for the insane, and only include the cost of food and clothing. The returns you quote do not include the interest on the total cost of the public buildings. In making up these returns I compiled them not only for my own information and the information of the New South Wales Government, but also for comparison with the weekly cost of maintenance per patient in the institutions of the neighbouring Colonies and in England.

8881. Does the return showing the average weekly cost for ten years, from 1884 to 1893, embrace only and all the Government patients at the public institutions? It embraces the cost of the patients in the Government hospitals, but not the cost of the patients at Cook's River. I cannot admit that the return is incorrect or misleading, because it deals only with the hospitals for the insane.

8882. Is not Cook's River a hospital for the insane? No; it is a licensed house.

8883. But do you not make a comparison including Cook's River, so far as the death-rate, discharges, and cures are concerned? Yes; that is quite right too, for comparative purposes with similar results in other institutions.

8884. Is the only reason of your doing this because you cannot make allowance for the cost of buildings and interest on loans? Yes; in making these calculations I did so for the purposes of comparison with the weekly cost of maintenance in other parts of the world. There is no boarding out of patients in other parts of the world. At the same time there has never been any secret about the fact that the Government has paid at the rate of £1 2s. 6d. per patient per week for patients at Cook's River. That fact has been mentioned in many of my reports.

8885. Have you had any reason to remove the patients from Bayview House other than on the score of expense? No.

8886. Do you not show in your 1893 report that the percentage of recoveries on admissions and readmissions at Cook's River compares satisfactorily with other institutions? Yes.

8887. Do you not say that the recovery rate was 65 per cent. on the admissions, which exceeded the rate at other institutions? Yes.

8888. Why is the recovery rate counted on the admissions in this manner, while the death-rate is calculated on the average number of patients resident? That is the usual statistical form of making these calculations, and Mr. Coghlan, the Government Statistician, considers it right. The statistics are prepared similarly in England, and the same method has been accepted by the Government Statistician here. When Mr. Coghlan took office he asked me to see him. He looked over the figures I had prepared annually for years, and agreed that my method was the correct one. He now adopts my figures in his annual calculations.

8889. According to your annual reports for the last three years has not Bayview Asylum and the treatment of the patients there given every satisfaction? Yes.

8890. How then do you explain that clause in your report sent to the Colonial Secretary in December, 1893, which says: "The patients would have been as well housed, as well fed, as well clothed, and in every way as well, if not better cared for in the Government Asylums as at Cook's River, and there could scarcely have been fewer recoveries. The excess in cost has certainly not tended to the recovery of the patients, since there has not been a single instance of recovery or discharge since 1880—twelve years ago"? I do not think there is any discrepancy at all. I must tell you that it was necessary for me to make this statement, to some extent, when it was considered that on the grounds of economy it was not advisable to further maintain Government patients at Bayview. When I said that the recoveries could scarcely have been fewer, I was referring to Government patients. The recoveries at Cook's River have been amongst the private and not the Government patients.

8891. Does this statement refer particularly to Government patients? Distinctly so.

8892. Does your annual report, as laid on the Table of the Legislative Assembly, refer to private as well as Government patients? Exactly; and the recoveries have been private patients. I was dealing entirely with Government patients in my report to the Colonial Secretary.

8893. Have you any fixed rule when selecting patients for Bayview House? No; except, as I have said, I send patients requiring single rooms when I consider Dr. Vause has single rooms to spare.

8894. Do you have the sole selection of these patients? I ask the medical superintendents to send a certain class of patients, whether requiring single rooms or not, and I leave the selection of the individual cases to them.

8895. When do you think it advisable to make a change? If I find patients are discontented, or do not get on well with the officers, or for any other reason, I have them removed. There are cases—I could mention half-a-dozen—who periodically go the rounds of the asylums at one time at Gladsville, next at Callan Park, then to Parramatta, and then to Cook's River. There are some patients you cannot please, and change is agreeable to them. It costs very little, and often results in the patients being quieter and getting better. Whenever I am asked to make a change I comply, if there is any fair reason for it.

8896. Do you know if any instruments of restraint are used at Bayview House? Yes, and when they are the circumstances are entered in the case-book. Occasionally I see these appliances. I have always understood that they are never left in charge of the attendants, but that they are locked up by the matron or some other responsible person. This is the rule.

8897. As far as is required by the Lunacy Act are these books kept at Bayview House? Yes.

8898.

8898. In obtaining the services of attendants for lunatic asylums do you not think that care should be exercised in regard to the qualifications of persons appointed to such positions? Undoubtedly.

8899. Having heard the evidence given before the Commission by some of the witnesses from Bayview House, do you think they are suitable persons to attend on lunatics? Some of them I would not have engaged myself.

8900. Take the case of Bridget Morrissey, who was matron for five years;—was she a suitable person to have charge of an institution like that? She was a very fit attendant and a suitable nurse, but I do not think she was quite qualified for the position of matron. She was matron only for about two years or less. As a nurse she carried out her duties satisfactorily.

8901. Do you know the attendant Doherty? I do.

8902. Was he discharged from Gladesville? He was.

8903. And is he still head attendant at Cook's River? Yes. Since he left Gladesville I have looked up my notes and ascertained that he was appointed there mainly on my recommendation. He was one of the best attendants I knew at Cook's River during his former service there. I wrote to the Medical Superintendent at Gladesville and said he was one of the most satisfactory attendants in Dr. Vause's service.

8904. In his evidence did he not say he was discharged from Gladesville? Yes.

8905. Why? Because he did not get on well with the chief attendant. I have a letter from the Medical Superintendent at Gladesville which I will read. It is dated 25th November, 1894, and is as follows:—

Dear Dr. Manning,

In reply to your inquiries *re* John Doherty, I find he came to me with good papers from Cook's River and elsewhere, and was taken on here on probation. There is nothing against him in our register, but as he is noted on leaving as being not suited to the work, it is probable he was reported against by the chief attendant. He was here for three months on probation after doing six weeks temporary duty.

I remain, yours sincerely,

ERIC SINCLAIR.

8906. Does it appear that he was not suitable for Gladesville? No; perhaps he was not; but I may tell you this, people who have already been in one institution very often find that their ways are not as the ways of other institutions.

8907. They, joining another institution, no matter the extent of previous experience, are put at the bottom of the ladder, and they naturally object to having to begin at the beginning again? The officers in charge, especially people like the chief attendant and matron, would most probably report against these new comers for having objected to doing the dirty work or the work of juniors.

8908. In examination, did Doherty make any statement of this kind? No. Regarding this matter of attendants, I think it would be a better system and more satisfactory to all parties if the term of probationary service was longer. It is now twelve months instead of three in the public institutions.

8909. Do you know that such a rule was not in force at Bayview House? Yes; I know.

8910. In the case of Robinson particularly, who became head attendant in a short time after joining the institution? Yes.

8911. Do you believe there should be some particular qualification possessed by men holding these positions? I think you want a man of good character, of unquestionable sobriety, and then you must exercise your discretion afterwards in seeing whether he is fitted by temper and disposition, and other special qualifications.

8912. Having heard the evidence given by the attendants from Bayview House at various times, do you consider the majority of them, or a percentage of them, are fit to be in charge of insane patients? I think the majority are. One or two of the number I should not like. For instance, there is the girl Verity. She displayed temper at this table which would have been sufficient for me to discharge her from any institution.

8913. Do you remember the witness Jessie Urquhart;—was she a suitable attendant? I doubt if she had sufficient intelligence to properly fill such a position.

8914. Do you believe in nurses and attendants having some intelligence and some education? Undoubtedly. I think, as a rule, the people we have examined here are suitable for the positions they hold at Bayview House. You cannot judge accurately of their capabilities without having them under your own eye for some time.

8915. *Dr. Garran.*] When Case No. 1 was taken to Callan Park were you shown the room in which he slept? Yes.

8916. During his stay at Callan Park has he slept in any other room? In the earlier stages of his residence at Callan Park he may have been removed from one single room to another next door, on every second day, but that would be only while he was extremely dirty.

8917. So far as the interior of these rooms at Callan Park is concerned, are they better than the isolation rooms at Bayview House? No.

8918. Is case No. 1 still a single-room patient? Yes; undoubtedly.

8919. In what respects then is he better now than he was while at Bayview House? The only alteration is he now gets constant supervision through the night.

8920. *Dr. Vause.*] In estimating the cost of patients "per capita" is it not shown that the smaller the number the greater the cost? Undoubtedly, within certain limits. Four hundred patients can be maintained more cheaply "per capita" than 100 patients.

8921. Do you remember having fifty patients at Cooma? Yes.

8922. What did they cost for maintenance? I cannot tell you from memory; but it was a high rate owing to the difficulties of distance and other reasons.

8923. Do you think they cost £1 5s. per week per head? I think in the earlier stages they did, but afterwards I think the rate fell to about 16s. 6d. per head per week.

8924. Was that irrespective of the cost of buildings? Yes; allow me to say here that I did not in my report to the Colonial Secretary infer that such a very large amount of money had been made by the proprietors of Cook's River. I only showed that the patients could have been maintained at Government asylums at a certain cost, and therefore that a large amount of money would have been saved to the country.

8925. Are not the single-room cases generally more expensive than others? Yes.

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8926. Do you consider that there is an unusual number of wet, dirty, and destructive patients at Bayview House? No; I consider there was about the usual number, and I tried always to hold the balance as fairly as possible.

8927. That being the case, could they have been maintained at the cheapest rate in the Government institutions? The cases at Cook's River correspond almost entirely with the class of patients at Parramatta. They are mostly chronic cases, and a fair proportion of them are excited chronic cases. I consider the maintenance rate at Parramatta a fair guide as to what this class of patients costs the Government.

8928. Would it be possible to carry out the same rules in a small asylum as might be possible in a large Government asylum in regard to keeping attendants under probation for the same length of time? No; perhaps it would not.

[Witness withdrew.]

WEDNESDAY, 23 JANUARY, 1895.

[The Commission met in the Board Room, Chief Secretary's Office, at 11 a.m.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
ESQ., M.D., INSPECTOR-GENERAL OF THE  
INSANE.

JAMES SINCLAIR TAYLOR MCGOWEN,  
ESQ., M.L.A.

A. J. Vause, Esq., M.B. et C.M., sworn and examined:—

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8929. *President.*] We have received a statement from you dealing with the evidence which has been given before this Commission in connection with their inquiry into the allegations against the management of the Licensed House for the Insane, known as Bayview House, of which you are the Medical Superintendent. Does this statement embody your views in rebuttal of the evidence given and charges made against the institution? Yes.

8930. Does it contain a full statement of your reply on the whole inquiry? Yes; it is as follows:— Before dealing with the general evidence that has been adduced before the Commission it may not be out of place to state that on Dr. Tucker becoming desirous of relinquishing the proprietorship of Bayview Asylum, with the view of proceeding to Europe, and, as the result of negotiations, I purchased and became sole proprietor of the asylum and of all its appurtenances in the year 1886, the purchase money being £14,500. Prior to the sale to me I understood that no one but Dr. Tucker had any interest in the property as a proprietor or part proprietor, and from the date of my purchase up to the present I have always been the sole proprietor, no one but myself having any proprietorial interest whatever either in the property itself or in any of the money arising out of the conduct of the institution. During all that time it has been my constant endeavour in every way to add to and improve the accommodation of the premises and the comfort, and, as far as possible, the happiness of the patients placed under my care, and, as later on I propose to show, I hope to the satisfaction of the Commission by duly authenticated statistics, I look back with no little satisfaction to the excellent results I have succeeded in obtaining. Although this Commission has been appointed, as I understand, ostensibly to investigate my general management of the asylum, I cannot but feel that practically the main point at issue is the treatment of Case No. 1, whose unfortunate malady no one more deeply deploras than myself; and the evidence surrounding his case I therefore propose to criticise in the first instance. It would almost be impertinent on my part to urge upon the Commission, composed as it is mainly of gentlemen of such vast experience in the conduct of important public inquiries as are the members of this Board, the utmost importance of carefully discerning between evidence of absolute facts and statements that have been brought forward at second-hand or founded upon the ill-based opinions of persons of no experience in the management of similar institutions; but the fact of my own personal experience in the knowledge of cross-examination, unaided as I was, as a quasi-defendant, by professional legal assistance, will, I hope, excuse even a passing reference to this well-known principle of British jurisprudence. In considering also the whole of the evidence generally I would respectfully ask the Commission to bear in mind the demeanour of the witnesses generally; and, as to certain witnesses—the apparent instigators of these charges that have been levelled at me—I would also suggest that, as their actions have evidently by no means been disinterested, their evidence is so biassed that I feel sure the Commission will receive it with much caution, weighed as it must be against that of a phalanx of witnesses, both of undoubted professional reputation and of unshaken testimony. In justice to myself I might here mention that, in addition to anterior special devotion to the study of lunacy, I have had over seventeen years active professional experience in that branch, and I therefore claim to have gained considerable knowledge of this difficult subject; and I may mention incidentally that prior to my arrival in New South Wales I studied particularly at West Riding Asylum, Yorkshire, England, and at Morning-side, Edinburgh. In 1878 I became resident Medical Officer of Bayview Asylum for about twelve months, and subsequently, till April, 1882 (when I took charge of the establishment), I was constantly and professionally visiting the institution. The allegations against me with respect to Case No. 1, as far as I can gather, seem to be that I was receiving a substantial allowance for his maintenance, but that, from motives of economy, I habitually neglected him, allowed him to be continually locked up in a "stable" without adequate clothing or ventilation, and without any light, and also neglected to provide him with a utensil for micturating in, &c. Further, it is alleged that, also, I assume, on the supposed ground of economy, I failed to provide him with sufficient attendance. Were this true and unaccounted for, the very object I clearly must have had in view, viz., the ultimate recovery of this patient, would necessarily have been defeated, and, should I have been successful in my object, I submit it would have been of such manifest importance to me professionally, as the Medical Superintendent of Bayview Asylum, \* \* \* that it must be clear to the most casual observer that it was incumbent upon me to devote even extraordinary care in the treatment of this patient. On the question of cost of maintenance, I would refer the Commission to the evidence of Dr. Blaxland, Medical Superintendent

Superintendent of the Hospital for the Insane, Callan Park, who states that, after the removal of Case No. 1 from Bayview Asylum to Callan Park, his cost was more than at the rate of £327 per annum, and that if I received less than that rate I would not make much profit. When I say that I was receiving for the maintenance of the patient at the rate of £237 per annum, the inference to be deduced is, I think, too clear for argument. Now, as to the evidence of Professor Anderson Stuart, whose report to the then Premier and Colonial Secretary (Sir George Dibbs), after his visit on the morning of the 20th May last, was the incentive to the order being given for the patient's removal from Bayview Asylum, I propose to show, with all due respect to that gentleman, that it was founded upon erroneous impressions hastily conceived, and based upon theories the result of want of practical knowledge of the treatment of the insane. That Professor Stuart was "shocked" at the appearance of Case No. 1 on that morning one can well imagine, as it is quite evident from his official position that he must have had many opportunities of meeting the patient \* \* \* \* \* but then only when the latter was in the enjoyment of all his faculties. And this sudden "shock" may in a measure account for many of the statements as the result of the impressions made upon the mind of the witness at the time of the visit referred to, and which of themselves must to a certain extent discount the value of the evidence. Although Professor Stuart in no unmeasured terms gives his opinions as to what, in his view, should have been the proper treatment of the case, he naively confesses that, though he has been an Inspector of Asylums in various parts of the world (he does not say where, or for how long, and under what conditions) he had "intended to have made a study of insanity," but "changed his mind." Of what value, therefore, can be his evidence as to treatment, or as to the details of what he believed he saw, as opposed to the mass of evidence before the Commission of professional gentlemen and others who have had a constant and close experience of lunacy in all its minutiae, and who have emphatically approved of my treatment both of the very difficult case under consideration and of my management of the institution. Although Professor Stuart states that what he saw on the 20th May was an "absolute revelation" to him, the supposed revelation causing him to jump to the conclusion that the reports he heard were true, he admits that, immediately I understood from him the reason of his visit, I allowed him to go into the single room occupied by Case No. 1. He says that, whilst waiting for me, he observed that the patients were not under control, but he apparently did not know that those whom he saw were private patients, inclined to be perfectly orderly, who required no immediate control, and who were engaged in the simple occupation of passing from one apartment to another. Now, Professor Stuart states that, when Case No. 1 was brought out of the single room, he was supported by two attendants, and that the patient was shivering with cold. This latter statement is clearly an assumption, arising from not knowing the form which the patient's malady had taken. The evidence of Dr. Blaxland, Mr. Little, and others is, I submit, quite clear that the patient was suffering from muscular tremor, which Dr. Blaxland states was unusually marked in his case; and that the so-called "shivering from cold" was nothing of the kind, but was actually an element in the disease. Further evidence has been given that patients when attacked in this way do not easily catch cold or feel it, and that, in fact, it is most unlikely for them to do so. Professor Stuart lays much stress upon the fact that, when he entered the single room, he noticed a strong odour as of stale urine, and considers that the patient should be trained by rousing (and, practically, therefore, forced) to relieve himself, at any rate, three times a night. There, again, I submit, that the witness is entirely at fault in making such a general statement. The Hon. Dr. Creed, Dr. Blaxland, Dr. Sinclair (Gladesville), Mr. Little, Dr. Kingsbury, and others have all given evidence that in their experience of patients suffering, as was Case No. 1, from acute mania, it is always better for the attendant not to disturb them at all during the night, complete absence of any cause for irritation being most essential. Dr. Creed adds that it would be advisable to allow them, under such conditions, to remain dirty during the night rather than disturb them for either training or cleaning purposes. With the one exception, the absence of an awning from the single rooms to the main building (a distance of about fourteen paces), it is admitted in evidence by all the medical experts that the two single rooms, in one of which Case No. 1 was accustomed to be placed at night, are in a most suitable situation and in every way adapted for the purpose for which they were intended—to ensure to the patient absolute rest, undisturbed either by the presence of attendants or the proximity and annoyance of other patients. That these rooms were ever intended for or used as a stable I most emphatically deny, and, on the other hand, I equally emphatically assert they have only been used, as they were designed originally, as single rooms. Evidence is given by Doherty (chief attendant), Attendant O'Brien, and others that the patient became extremely irritable at night, even at the presence of an attendant, and that this irritation soon developed into violent and dangerous outbreaks. This would naturally retard his recovery, and I, therefore, in my capacity as Medical Superintendent, deemed it advisable in his best interests to cause his being placed at night—and at night only—in a single room. Professor Stuart judges that from the strong smell he noticed at the time that the room was badly ventilated, but this is accounted for by the fact that the urine of acute maniacs gives forth a strong ammoniacal odour; and it must be remembered that, according to the evidence, the patient was constantly in the habit of micturating on the floor; that he would not use a utensil for the purpose; and that, as Professor Stuart entered the room immediately after the patient had been taken out, there necessarily was not opportunity to clean up the place in the meantime. There is also abundant evidence that Case No. 1 was a wet and dirty patient to a degree, and that he was suffering from acute mania; and with this combination it is not surprising that Professor Stuart, Mr. \* \* \* (the patient's son), and Messrs. Gearey and O'Brien should have noticed what appeared to them to be the strong odour of stale urine, this giving the impression that the room had been neglected and allowed to remain uncleaned—an impression that I submit is without doubt absolutely erroneous. Positive evidence has been given by Doherty and others that these single rooms were in fact carefully cleaned out daily as a matter of course, and the official visitors who have inspected these rooms at various times and hours during the day have given evidence that they have invariably found them sweet and clean. As to light, part of the system of single-room occupation is that of keeping the patient in comparative darkness so as to induce sleep, if possible; and as in the mornings, especially, sleep is often broken by the admission of light into a sleeping apartment, it necessarily follows that light should be excluded therefrom as much as possible. Mr. Gearey's exaggeration of details is exemplified by his statement in his first evidence, that he could see cobwebs in the single room, although the other witnesses assert that the room was perfectly dark. Mr. Gearey's

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recall to give further evidence on this point, amongst others, produces the statement that he was referring to the external appearance of the shutter, but as the shutter is fixed on the inside of the window, with window sashes outside it, I fail to see how the correction avails him, especially as it is put forward almost at the conclusion of this inquiry. It is, however, positively denied that there were any cobwebs at all in the room, and I submit that this is the more likely case than otherwise. As to ventilation, although Professor Stuart considers the room was not properly ventilated, he is evidently induced to make this statement by reason of the strong—and to him apparently stale—urinous smell before referred to. As this witness states that there was not sufficient light in it to see by, his deductions on this point must, I submit, be also disregarded. As the Commission have no doubt seen for themselves, the ceiling is ventilated, two air bricks are let into the walls, and, if more ventilation be required, the shutter (2 feet by 18 inches in the clear) of the window can be easily opened. The Commission will, therefore, readily distinguish between a statement of there being insufficient ventilation—the result of a cursory glance—and the actual facts as seen by themselves on their visit to the asylum. Professor Stuart says that on the morning in question his impression was that the patient had a cold bath, also that he heard that he had a cold bath. I cannot see anything to justify that impression, and, in fact, the patient when first seen by him was coming from the sleeping-room to his day-room, and the witness does not state that he even tried the water in the bath. As against the statement of “impressions,” however, the evidence of the attendants is positive that not only did the patient not have a cold bath on that morning, but that he never did so, a warm bath only being given him. Professor Stuart recommends that a sloping asphalt floor should be used. But not only are asphalt or sloping floors not used in the Government asylum, but Dr. Sinclair and others state they do not recommend them. The floors at the single rooms at Bayview are of dark hardwood, fitted close together, and filled in between each plank, so that it is practically impossible for the urine to get below the flooring as suggested. A sloping floor would, I think, only serve as an encouragement to the patient to misconduct himself. Professor Stuart further recommends that the single rooms should be artificially heated. On the other hand it is evidence that Government single rooms are not heated, nor are any complaints made as to their coldness. In fact it must stand to reason that from the very nature of the rooms themselves they are invariably warm, and, as has already been stated, excited or restless patients do not feel or catch cold. As to the allegation of inadequate clothing, made by Professor Stuart clearly on seeing the tremblings of the patient, Doherty’s evidence is that the clothes which were seen on the patient had been placed over his pyjamas, which, of course, were not noticed by Professor Stuart. And even if they had not been worn, there is ample evidence of the destructive habits of the patient, who would not only strip himself but absolutely refuse to put them on again, frequently destroying them completely. As for the utensil—an indiarubber one—although the patient would frequently refuse to use it, it was there for him, and both Doherty and myself saw it on the morning of the 20th May, at the time when the visit was made. The fact that Professor Stuart and others did not see it is, I submit, hardly sufficient; it no doubt escaped their notice. Both Dr. Blaxland and Mr. Little say that the patient will not use the utensil provided at Callan Park. The evidence of the visitors as to the number and size of the coverings provided is conflicting, but as a matter of fact it is positively stated on the other hand that three strong canvas rugs of ample warmth were in use, combining space to more than cover the patient. Then, again, both Dr. Blaxland and Mr. Little depose that the patient prefers straw bedding to horsehair, and surely it is better to sacrifice sentiment to express wishes under such circumstances. It is now a well-recognised fact that in cases such as the one under notice a straw-filled bed tick is preferable to any other material. Professor Stuart admits that acute maniacs and paralytics should not be disturbed. The evidence that this was the condition of Case No. 1 is so conclusive that I may be excused from particularising the various expert witnesses on this point. That the patient had on the occasion referred to a blackened eye there is no doubt, and the fact has not been overlooked as one of much seriousness, but I venture to assert that the explanation by Doherty and O’Brien that the injury was self-inflicted through a recent fit of violence, is a correct one. Finally, Professor Stuart states that he considers the management of the single room and the treatment of the patient were, to quote his words, “certainly not” satisfactory, but almost immediately preceding this general statement, the witness, in answer to a question as to whether he thought there was justification in placing the patient in the single room in the manner deposed to, and as to whether the doing so might not lead to suicidal tendencies, replies that these are matters of which he has no particular knowledge. I now come to the evidence of Henry Gearey, a house inspector under the Sydney Municipal Council, who has taken so active a part prior to and throughout these proceedings, particularly as to Case No. 1. That a public official should have devoted so much energy (as he must have done) in “making inquiries for some considerable time” (such inquiries comprising numerous interviews at his own house and elsewhere with attendants who had been discharged from the institution either for incompetence or other good reasons) naturally evokes the inquiry, “For what reason has this remarkable interest been evinced?” That question in effect has, therefore, naturally been raised by the President of the Commission, and the answer—no doubt an apparently reasonable one—is forthcoming. The witness states in his examination-in-chief, in reply to the President’s question, “Are you interested in Case No. 1?” “I am, most decidedly; he is a very old friend of mine. I had heard he was being brutally treated, and I wished to know the truth or otherwise of the statements made to me.” These answers, if left unimpeached, would, I admit, assist in removing the impression from my mind, and probably from the minds of others, that the witness had some ulterior object in view when he began his researches, but the Commission will remember that after most of the witnesses had been examined, Gearey was recalled and re-examined as to certain allegations made by witness Young. It was during the recall I was enabled to put questions to him to which I wish now to specially direct the attention of the Commission. Whether the witness had forgotten his previous statements as to the ground of his interference I cannot of course say, but it now appears that the old friendship existing between him and the patient consisted of his once being introduced to that gentleman at the Town Hall when they shook hands, and on a subsequent occasion meeting him in the street, when the patient appears to have recognised him, but did not shake hands with him. He never visited the patient’s private house nor was he on social or intimate terms with him, and in fact he appears to know very little about him. It is clear, therefore, that in the everyday acceptance of the term, this alleged “old friendship” has no reality at all, and this being so, I submit that there must have been some ulterior motive for Gearey’s conduct that—for reasons best known to himself—he did not care to disclose. Whether it was that during the conversation at his house with some of his

his friends (whom he does not name) "over a few glasses of grog," when he says he first heard of the rumours relative to this patient, he was seized with the idea of seeking notoriety by identifying himself with that gentleman, is a question that I can only leave to the Commission when weighing the value of his evidence; but should the Commission come to the conclusion that the allegations made in Parliament by Mr. Jeanneret, prompted as they were by Gearey (so it is admitted), were untrue and unfounded, it follows that this also will negative any importance that otherwise might be attached to his evidence. As an example of the extravagant assertions—made without any knowledge of the conduct of lunatic asylums—and evident intentionally prejudicial statements—may be quoted his suggestion that there seemed to be no supervision over the patients—that "it was a kind of go-as-you-please arrangement." (This is in reference to the private patients whom he saw, whilst waiting for Professor Stuart's return with me to the single room). Then again, he states that he kept his eye on the single-room door "as arranged with Professor Stuart," as he felt that unless he did there might be an attempt to smuggle out Case No. 1. I submit there is not the slightest evidence of any substantial ground for suggesting such an extraordinary course, and I only mention this to show the biassed character of this witness' evidence. He goes so far as to say that there must have been a patient in the second single room, as he alleged he heard greening and moaning. That this was a piece of imaginary statement supplied with an object is made clear by the positive evidence of the regular attendants, who prove conclusively that no one was in occupation of this room on the 20th of May last at all. The witness' conclusion that, because the patient's clothes had been brought into the single room (a regular practice) and he afterwards came out with them on, he, therefore, must have been put in at night in a naked condition, is, I submit, utterly erroneous, the positive evidence of those best qualified to know being quite to the contrary. Gearey's evidence as to the bed clothing, the ventilation and lighting of the room, and the urinous smell (which he positively states was stale on the strength of his experience as a sanitary inspector, though not as an expert on lunacy matters), have practically been dealt with in my observations on these points in Professor Stuart's evidence, and they will naturally apply at this junction. I may point out, however, that, although Gearey says the room was "pitch dark," he gives previous evidence of its contents, the size of the bed covering, and by way of emphasising the allegation that there was no ventilation, he says the window had not been opened, as he could see unbroken cobwebs on the shutter. Although he states that the attendants had not time to get warm water for the patient's bath, he admits he did not test the water at all. The evidence in reply to this is that the patient was never supplied with a cold bath, but, on the contrary, always with a warm one. As Gearey states that had he failed to substantiate the charges concerning the patient his position under the Council would be endangered on the chance of his being considered, as he puts it, a meddling fool, may it not be inferred that he has not been too scrupulous in the many details he has given and the opinions he has offered before the Commission, in order to maintain his original statement? Then, again, he says that he had to bring great pressure to bear to get information (what the nature of that pressure was does not appear), and he apparently feels somewhat distressed, even disappointed, that the allegations he himself made were pooh-pooed. One allegation is that he supposed there was a desire that it should not be found out that the Hon. E. Grey, M.L.C., the Hon. H. Copeland, M.P., and others were shareholders. That this insinuation, made without any tangible ground whatever, has been totally dispelled by the direct denials given by the various reputed shareholders. I have no doubt will be held by the Commission. To illustrate the peculiar way in which these charges have originated, I would point out that Gearey states that his informant was a discharged servant of mine, but that the person from whom that individual derived his information has never been in the institution at all. Returning to the visit on the morning of May 20th last, Gearey states that the attendant (Chief Attendant Doherty) tried to push him away, and ordered him off the premises. Even supposing this were so, in the face of Gearey's admission that when he was asked what patient he wanted to see, he replied, "No one," it would not be a matter for surprise if he had been ordered off, as it would be obviously improper to permit total strangers to wander about the asylum premises without some ostensible reason or authority. He then tries to make out that afterwards, on his stating he was present on the order of Sir George Dibbs, Doherty went away, and after consulting with another attendant, the two came back with some clothes for Case No. 1. This is an evident attempt to support the statement that the patient had been left in the single room at night without clothing, and that the clothes were being purposely brought to remedy the supposed neglect. It is, however, explained by Doherty and O'Brien that the clothes were brought over in the usual course of routine, preparatory to taking the patient over to his day quarters to enable him to have his warm bath. It is asserted by Geary most strongly, that if the patient had been wearing any apparel previous to this it must have been very slight, but he cannot say what was worn underneath the flannel shirt, as it was buttoned up to the throat. He also hazards the positive statement that the patient had nothing at all on except, perhaps, a night-shirt before the clothes were brought into the room, although he admits that he neither went or saw into the room until after the patient was brought out of it. How, then, could he know this? Is not this evidence given solely for the purpose of supporting the charge of leaving the patient at night in a naked condition? But as against this sensational assertion there is the positive evidence of Doherty, that when he entered the room the patient was wearing his singlet and pyjamas, and that the clothes referred to by Gearey were then put on over them. This is corroborated in every particular by Attendant O'Brien, who also deposes to the fact that the patient's coat was buttoned up at the time, also that he had never been put into the single room in a naked condition. Gearey says the suit of clothes were old, and like the clothes of a working man who had come out of a factory. But contrary evidence is given that the suit was a dark brown tweed, that it had been in use for about two months, and that the patient had several other change suits to wear when required. Referring again for a moment to Gearey's statement that the ventilating shutter must have been closed for some time, owing to his being able to see unbroken cobwebs, I would point out that he is most strongly contradicted even by his own "mate" (as he terms him), J. J. O'Brien, who says, "it was a dark morning, not quite daylight, and I am of opinion that with a light thrown into the room through the open door no one could have seen any cobwebs." Mr. Sager (Secretary to the Board of Health), a member of the inspecting party on the day in question, also contradicts Gearey by stating it was impossible to have seen cobwebs. At the risk of being tedious, I must again refer to the attempted explanation of this remarkable discrepancy, offered by Gearey in his re-examination, after the recall previously mentioned. Gearey now states that he referred to cobwebs on the outside of the shutter.

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shutter. The shutter and ventilating space, however, are at the rear of the room, the shutter itself being on the inside. Now, to prove that this further evidence is a mere afterthought, I would direct attention to his examination-in-chief, for there he says: "When I first arrived at the building I could see that there was only one door, and I never took my eyes off that, for I had made an arrangement with Dr. Stuart not to leave that door till he returned." As Gearey states, he had an idea of the locality where Case No. 1 was sleeping, and naturally, in accordance with his instructions, his attention was directed in the first instance to the door, and from which he never took his eyes until the patient came out. The patient was then conducted across to the main buildings, facing the single room. Gearey is particular in stating that he examined the room for the purpose of ascertaining if any other clothes were there, but he does not mention one word of his having examined the rear of the building from the outside, and, in fact, Mr. Sager says that after seeing into the room they went across to the bath-room (in the main building). So that it seems quite clear on these facts that Gearey could not have examined the shutter from the outside, and, therefore, it follows that the explanation offered is not only erroneous but untrue, and is, I submit, put forward in order to account for the complete and unanswerable contradiction of his evidence. I submit that when charges of neglect are sought to be supported by such unreliable and untrue evidence, the Commission will take that into consideration before placing much reliance upon the testimony so given. I would now direct the attention of the Commission to the evidence of the witnesses Alexander Mackenzie and Maggie Macleod, both discharged attendants, and, by relationship, cousins. Although Mackenzie had only been in my employ three and a-half months, having been dismissed by me in March 1894, he has given a great quantity of evidence, but he is by no means a disinterested witness. It is highly necessary strictly to maintain discipline in a large institution such as Bayview Asylum, and as I considered Mackenzie had been guilty of impertinence—most uncalled for—towards Mrs. Gilchrist, the lady superintendent, I deemed it advisable to get rid of him. That he has gone out of his way to encourage Gearey in his attacks upon the asylum management, that he has grossly distorted and magnified the merest trivialities, and that he has been assisted in his endeavours by his cousin, Maggie Macleod, is, I submit, glaringly apparent. He admits that shortly after his dismissal he wrote to Gearey (in reply to a letter from him) saying that "he knew Case No. 1 was not getting justice, and to see that he got it would be far sweeter to him than any other form of revenge." With such a damning admission as that before the Commission, can any other conclusion be arrived at than that these attacks have gradually developed into a conspiracy to destroy the hitherto good reputation of the establishment, and consequently bring disaster upon myself? May it not also be inferred that the rumours about which Gearey has spoken emanated from the same source? The witness Macleod admits having received about July last a letter from Gearey requesting her to call upon him, and states that she did so. She, however, swears that on that occasion he was not at home, and wishes the Commission to believe that it was not till two days after she left my service (in September last) that she gave any information to him about the management of the asylum. Nurse Maggie Kennedy states in her evidence that she herself posted a letter to Gearey from Macleod. I might hear state, however, that it is not true that when I told Macleod to make arrangements to go I told her that the cause of my discharging her was that she had been giving information to Gearey. The statement being an absolute invention. As a matter of fact, I told her she was not suitable as a nurse, and I also told her I was dismissing her for striking Jessie Urquhart, a nurse. In connection with the preceding remarks, it is shown by the evidence of Josephine Mackay (discharged for allowing a female patient to escape from her care) that Gearey and Macleod had been influencing her to give evidence against the institution, and, in fact, admitted that Macleod made strong allusions to the probable chances of good situations after the termination of the Commission. Although this witness swore positively she did not try to induce others to come forward and give evidence against me, that she did not mention to anyone the rate of payment of expenses for attendance of witnesses, that the evidence of adverse witnesses was already typewritten, and that, in fact, she did not know that an inquiry was being instituted, she is confronted by her own letter to Rachel Kelly (a former nurse), written just prior to the commencement of the inquiry, in which she fully sets out all the above facts which she had so positively denied. When it is added that this evidence has been given on oath, it would seem that comment were needless. Fortunately, the recipient of the letter having had the honesty to decline to yield to the tempting bait of payment of expenses and one of the "best billets afterwards," appears to have forwarded it to the Commission, and its annexure to the evidence, coupled with the admissions preceding its production, are, I submit, strong grounds for absolutely discounting the malicious and perjured statements of the malcontent faction, who have combined in the attempt to close Bayview Asylum. In order once more to call to mind this remarkable letter of ex-nurse Mackay's, I take the opportunity at this stage of bringing it more forcibly under the notice of the Commission by including it *verbatim* :—

My dear Rae, Paddington, 2 Zulu-terrace, Thorne-street.  
I would have written long ago but I lost your address. There is a Royal Commission formed to inquire into the Bayview House, composed of the most influential men in Sydney, and we are all giving information against it. I hope you are still in sympathy with the patients, if so, it will be greatly to your advantage; but you must be quick, as the inquiry commences on Saturday or Monday. You will meet us all again—Jessie Fuller, Margaret McLeod, Bridget, Alice, Rose, Lizzie Verity. The only friends the Doctor has is Kitty and Nelly; go at once and see Mr. Gearey, the clerk, or if you come out to me I will take you; do not delay; I am going out to-night, and our evidence is printed in type. If you come out to me take the tram to Waverley, right to the terminus, cross through the Council Chambers gate just at the terminus, and anyone will show you the house, right opposite the Council Chambers—a little cottage. All our expenses will be well paid, and we will be able to secure the best billets afterwards through the interest of the Committee. They are knocking Dr. Manning off the list. They think he is in favour of Bayview.

Ever your loving friend,

JOSEPHINE.

Wire when you come out. If you do not come they can compel you; there is no Court-house business; just appear in the Town Hall before the Committee privately; 6s. a day expenses paid; call at Gearey's at once.—JOSEY.

As to evidence of witness of J. J. O'Brien, Gearey's mate, it is given so palpably as the result of that individual's opinions, that it can scarcely be looked upon in the light of unbiassed testimony. When he says that he made a close examination of the single room, and, as a consequence, is able to state that the walls are of brick, when, as a matter of fact, they are panelled with wood, some idea may be gleaned as to the general character and value of his evidence. Moreover, on his own showing, he is inexperienced as to the habits of wet and dirty patients. I, therefore, do not propose to make any further comments with regard to him. Notwithstanding the positive assertion of Gearey that the room was cold on the morning of the visit, Mr. Sager admits that it did not strike him as being either hot or cold, a point that will,

will, no doubt, not be lost sight of. Mr. Sager also contradicts Gearey's allegation as to the cobwebs, and, in fact, says it was not possible for them to be seen. It is quite probable that the suggestion that the patient slept in a stable may have arisen partly through the patient himself, as Attendant Peet deposes that he had often heard him say "I slept in a stable," in just the same way as other patients imagine they are being badly treated, and often assert they are in perfect health when of course the fact is quite the contrary. Robinson's attempt to make mischief with relatives of patients (see H. Watt's evidence as to the former calling on him with reference to Case No. 51) shows that his evidence is not straightforward, and therefore unreliable. His assertion that no provision was made for milk or cocoa at night is denied by Doherty, O'Brien, and Ex-attendant Watt. His omission to explain under what circumstances and when he saw patients come out of the single rooms without clothes on must necessarily destroy the importance of the evidence of this witness on this point. He, however, admits that he knows of no intimation being given as to the arrivals of official visitors. With regard to the habits of Case No. 1, the evidence of Mr. Little (chief attendant at Callan Park Asylum) and of Warder Kernaghan (of the same institution) may be specially noticed. Mr. Little is clear on the point of the patient being a very wet and dirty one, and that he actually prefers (if he can be said to have a preference) to dirty the floor; that the room smells very badly in the mornings, and that he will not use a hair mattress, but insists upon a straw one. He also says that the patient undresses himself as often as three times in one night, that he is very violent, and strongly advises and approves of his being placed in a single room to avoid company and so prevent unnecessary excitement. It appears also that now the patient is very shaky both in his hands and feet. Attendant Kernaghan corroborates these statements entirely. The evidence of my chief attendant, Doherty, and of Attendant O'Brien has, I submit, been given in a most straightforward manner, and has not in any way been shaken by the minute examination to which they have been subjected. Although I have already referred to them, I might point out that Doherty positively states that he was on night duty, and that it was his custom to visit the single-room patients nightly. If anything was necessary he would get it at once, but otherwise he would not disturb the patient. O'Brien says that the patient used actually to ask sometimes to be placed in the single-room at night, and that it is evident that in his calmer moments he must have been able to appreciate its advantages. He also corroborates Doherty when he denies that the patient's chest was exposed on the 20th May, and in fact says that the coat was buttoned up; he also swears that the patient was never given cold baths, but warm ones. I think I have now fully reviewed the evidence generally as to the treatment (and the alleged ill-treatment) of Case No. 1, and it only remains for me to point out that the medical and official testimony, which is very voluminous, fully supports me as to the manner in which I have handled the case. As to the opinion of Dr. Sir Alfred Roberts on the question of single-room treatment, I would respectively quote the following extract, which, I submit, completely authorises me as to the course adopted in the matter:—"By 'Seclusion' is meant the placing of a patient alone in any locked room or locality during the day-time. By 'Mechanical Restraint' is understood any restriction of the bodily liberty of a patient by some appliance, such as a sheet, rope, straight-jacket, towel or straps." It will be remembered that I have pointed out that Ex-nurse Maggie Macleod is a cousin of ex-attendant Mackenzie, to whom I have already referred, and who apparently has taken a strong part in the cabal against the asylum, but as some of her statements are so very deliberate, I cannot pass them by without comment. I may say at once that Macleod was certainly not discharged because of her having given information to Gearey, nor did I ever tell her so, the fact being that in the first instance I gave her a month's notice on the ground that she proved unsuitable, and I subsequently summarily dismissed her for striking one of the nurses. It is absolutely untrue that there were no observation holes to the single rooms as alleged by this witness, while it must be remembered that nurses were in attendance at each end of the single room wing who were able to see to any of the patients if required. A special night-nurse was always in attendance in the case of sick patients who were specially waited upon at night. The witness's statement as to the alleged stripping of the patients is clearly overdrawn; her allegations that the food was rough and insufficient are, I submit, recklessly untrue. In contrast with these charges I think the evidence of such a witness as Bridget Morrissey for instance, who had been a nurse and for some time matron of the asylum, being employed for five years altogether, may be accepted as correct, she giving a point blank denial to these statements. The fact that some of the patients when put into the single rooms refused to wear their clothing, and, in fact, denuded themselves, in which case they would be left to please themselves, has no doubt given colour to the charge, and this has been immediately seized upon by those interested as a good foundation for the statement that the patients were stripped quite naked. It has already been thoroughly explained that many patients prefer straw mattresses, so that after all there is nothing extraordinary. Although much has been made of the circumstances of these straw mattresses being provided, no doubt those ignorant of the requirements of such patients have at once jumped to the conclusion that such provision was made for the sake of economy. But this, I submit, was nothing of the kind, as I think will be quite apparent. As to sufficiency of bed-clothing, Dr. Manning says he "did not think the bed-clothing sufficient provided for Case No. 1," and yet everyone admits that there were three canvas coverings. Now, for the sake of argument, permit me to analyse this opinion. In the first place, canvas is of such a close-fitting nature that pipes are made of it in order to carry water, hence its properties as a non-conductor of heat must be enormous, inasmuch as it prevents all egress of moisture, the rapid evaporation of which is the principal cause of the feeling of cold in the human body. This being the case, I contend that only one canvas covering would be sufficient in a closed room for the maintenance of body warmth, but if we take into consideration the appearance of the thing I allow the matter assumes another aspect, and I venture to suggest it was in view of this other aspect, viz., that of appearances, that Dr. Manning made the assertions in his report that he did not think the bed-clothing sufficient. The mere fact of providing even half-a-dozen blanket-lined rugs could not be of a moment's consideration to anyone so much interested in the welfare of the establishment as myself. Dr. Manning says: "It was clearly the duty of the Medical Superintendent to bring under my notice any departure from usual methods of treatment." That may be quite true, but where is the "departure from usual methods of treatment"? If the single room were fit for occupation for one month, it certainly should be so for six months. The mere fact of unprepossessing appearance should not, I think, prejudice the room for useful work. For my part, I cannot see that there was any departure from "usual methods of treatment" in sanctioning the single room in question for the sleeping apartment

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Dr. of Case No. 1. Dr. Manning also says, "but the fact remains that the bedding was coarse and insufficient. I presume this statement was made prior to Dr. Manning ascertaining for himself that the patient could not be managed with less "coarse bedding," for I do not remember any evidence before this Commission to the effect that he was able to use less "coarse bedding." At Callan Park it has been stated that he destroyed thirty-nine blankets, and it must be borne in mind that we at Bayview had gone through all this experience before we arrived at the "canvas-lined rug" stage, but as I certainly was not anticipating a Royal Commission on my actions, a detailed account of the patient's destructiveness was not kept. The articles of bed-clothing used by him at Callan Park for months was, so far as I can ascertain, almost identical with the bed-clothing used at Bayview House during the patient's worst periods. Dr. Manning goes on to say that a "grievous mistake was made in not supplying and keeping up the supply of blankets and blanketed sheets or rugs, especially as the room was not artificially warmed." I must here say that the supply of "blanketed sheets or rugs" was kept up, and that the rugs stripped of their blanket lining, seen on the 20th May in the patient's room, was an unusual event; but evidently as a compensating balance, there were three of these rugs, one ordinary blanket-lined canvas rug being sufficient covering in a single room for anybody. That the supply of blankets was not kept up interminably needs, I think, but little comment. I may say that the supply of blankets was kept up for a considerable time, and at great extra cost. That, however, was not the reason for discontinuing the supply, but, on the contrary, more expensive articles were supplied, viz., blanket-lined canvas rugs, with the hope that the destructive habits might receive a check. This, however, did not take place altogether, for the patient then began to pick off the blanket lining, and was only partially checked in his bad habits when he came to the canvas, for even this he succeeded in tearing up at times. With regard to the words "especially as the room was not artificially warmed," I need only draw the attention of the Commission to the fact that neither at Bayview, nor in any of the Government Asylums, are the single rooms artificially warmed. My reasons for not enlarging upon the fact to Dr. Manning, that Case No. 1 occupied a single room at night are these: The rooms had been in use for similar purposes without comment of any kind, either from the official visitors or the Inspector-General, during all the time of my residence at Bayview. Similar rooms are in general use in all other asylums. Some patients never sleep out of a single room. The only unusual thing about this patient's case was his remarkably destructive, dirty, noisy and excited habits, rendering the usual conditions as to bedding and covering impossible. But the fact of his occupying a single room at night had not struck me as being in anyway remarkable, as it was in accordance with ordinary routine treatment for such cases. Personally, I do not consider the patient could have been placed under conditions more conducive to his recovery had there been any chance of recovery in his case. My reasons for not enlarging upon the fact of his sleeping in a single room to his wife, may be summed up as follows:—Mrs. \* \* \* was very sensitive about her husband's condition, and in my opinion could not have been made to understand the full meaning of his depraved habits, nor the difficulties attached to the treatment of such a case. The distress she already experienced appeared to me very great, in fact her health was visibly affected by it, and I naturally shrank from adding to this distress by enlarging upon the condition of the patient in any way calculated to increase the pain of mind she so acutely evinced. Although I did not make a prominent feature of the fact, I mentioned it incidentally to several medical men, notably to Dr. Scot-Skirving, Dr. Williams, although the latter gentleman did not appear to remember it when giving his evidence, and to Dr. Manning. I also told the patient's son that the father occupied a single room at night, but I can quite understand that this gentleman thought I meant an ordinary bedroom occupied by one person. The matter, however, did not strike me in that light at the time I told him. As regards dressing patients to receive their friends, this is a custom in all well-regulated asylums for very obvious reasons, both as regards inculcating good habits in the patient and on account of the feelings of the friends and relatives who, as a rule, notice immediately such things as dirty nails or untidy collars or cuffs, and occasionally request that special dresses shall be worn by the patients on the occasion of these visits. The death-rate of Cook's River compares favourably with that in other asylums, and I hand in a list showing the average percentage of deaths on average number of resident patients for ten years ending 1893. The average percentage of deaths on average numbers resident in all asylums, exclusive of Cook's River, for the same period is 7.00, or 1.18 greater than at Cook's River. I also hand in a list of names of patients who have died at Bayview during the years 1890 to 1894 inclusive, together with the cause of death and duration of illness. With regard to my interpretation of the word "seclusion" and "restraint," which occur in section 71 of the Lunacy Act, I have adopted the custom prevalent in the Government asylums, and I do not think I could have deviated from that custom without causing great confusion in statistical and other calculations. In the Handbook for Attendants on the Insane, published by the authority of the Medico-Psychological Association in 1893, the following are the definitions of Seclusion and Restraint, page 116:—'By Seclusion' is meant the placing of a patient alone in any locked room or locality during the day-time. By 'Mechanical Restraint' is understood any restriction of the bodily liberty of a patient by some appliance, such as a sheet, rope, straight-jacket, towel, or straps." Amongst the number of medical gentlemen who have from time to time visited Bayview, either in consultation or to see patients on behalf of friends, I may mention Dr. Fortescue, Dr. Sydney Jones, Dr. Mackellar, the Hon. Dr. Creed, Dr. Coutie, Dr. Crago, Dr. Laure, Dr. Sinclair, Dr. Kingsbury, and many others. With regard to the quality and quantity of food supplied to patients and others at Bayview, I know of no one who has complained on this score prior to the three or four nurses who banded themselves together in order to make trouble for the management recently, under the leadership of Margaret Macleod, except Alexander Robinson, and his complaint was only made to me after he had received notice to leave. This was investigated at the time, and found to be a groundless accusation. The physical condition of both patients and nurses at Bayview should, I think, be a sufficient refutation of the charges made by Macleod and party. I have here the diet scale for both Government and private patients. The absence of purpura should also indicate, in a very positive manner, that care had been exercised in selecting suitable food, as well as in supplying an abundance of it. That the food was invariably well and properly cooked there can be no doubt, otherwise it would not have been eaten, as the insane are more difficult to manage, as a rule in this respect, than sane people; and anyone experienced in lunacy will allow that one of the first objects of a superintendent is to get his patients to eat well. With regard to the clothing of Government patients at Cook's River, I believe it has always been abundant. I know it has been destroyed by patients in large quantities, and it was on this account a somewhat lighter dress material was selected than

than is customary in the Government asylums, so that a greater number of new dresses might be provided, the proportion of dirty and destructive patients being very great. I have never heard complaints from patients on the score of clothing, unless it were relative to lighter boots than is generally provided, and for those capable of taking care of them light cloth boots were invariably purchased. As to bed-clothing, I have never heard a complaint from a patient, and I am quite sure complaints would have been made by many patients had there been cause for them. I do not think the Government patients' clothing has been used to any extent for private patients. Why should it? If the friends of private patients supply them with clothes, it would only incur greater expense for me to supplement it with clothing purchased by me. I have no doubt that occasionally I have been put to this extra expense when, rather than allow a patient to go about with worn-out boots, a new pair has been supplied from the store until such times as the friends could supply the want. In the case of a patient, Case No. 65, for whom I receive from the Master in Lunacy something under £50 per annum for both maintenance and clothing, I have no doubt the dress material used by the Government patients has occasionally been used, but I do not think that has been a frequent occurrence—not because the material would not be quite suitable and proper, but because it would tend to confuse what we call Government patients with private ones. Under-garments for such patients as Case No. 65 and Case No. 44 are, of course, made of the same material as is used for Government patients, for the simple reason that more suitable material could not be found. Private patients' clothes have invariably been kept apart and separate from the clothing of the Government patients. In Case No. 28, mentioned by Dr. Manning, I both clothed and maintained her for over six months without any remuneration whatever. The material used for Government patients' clothing would doubtless be used for her. The private patients who have from time to time been treated on the Government side of the house have been such as required seclusion during the day; such as required a single room to sleep in at night; such as requested to be allowed to occupy a single room at night, and for whom a bedstead would be provided, as in Case No. 58 and Case No. 11, or such cases as were too excited for association with quiet patients in either No 1 or No. 2 sitting-rooms, and were, in company with a nurse, allowed the greater freedom of the large Government dining-room. Case No. 14 always remained about that room because she is very old, and had grown so accustomed to her surroundings that her daughters wished to avoid making any change. They provided her with clothing, and when the Government patients, of whom this case was one, were removed in 1886, arrangements were made by the family for the old lady to continue under the same conditions to which she had grown accustomed during the time she was classified as a Government patient. Case No. 13 has frequently spent days together in the Government dining-room, where she has been enabled to work off a large amount of superabundant energy without annoying anyone. This certainly would not have been the case either in No. 1 or No. 2 sitting-rooms. Case No. 13 has invariably occupied a private patient's dormitory at night. With regard to Case No. 6, mentioned in Mackenzie's evidence, there is little to add to what Dr. Manning has stated about him. He was not expected to live many months when he was admitted to Bayview on 20th January, 1887, yet he is alive now and looking well; therefore, need I ask, how can he possibly have been neglected? The special circumstances surrounding this case, in consequence of somewhat complicated legal conditions relative to a will under which he inherited some money, have brought Case No. 6 under the notice of several visitors, notably the Hon. Dr. Creed and Mr. Nugent Robertson, as well as of Dr. Manning, and I do not remember anyone at any time expressing an unfavourable opinion about his treatment. As for preparing the patient to receive visits, I am sure nothing could be done beyond washing his hands, perhaps, and brushing his hair; the difficulty of moving him on account of his paralysis would render it imperative to commence changing his garments immediately there arose cause for it. As to Case No. 23, when she is described by the nurses at Parramatta as being infinitely worse than any other patient ever there, I need say but little. She improved somewhat at Bayview, but never sufficiently to warrant her removal from a single room at night. She was superlatively dirty, but I have never seen the slightest sign of a bruise upon her, nor do I believe she was ever roughly used. Particulars of her case will be found on page 22, v. IV, of the case-book. With regard to Case No. 20, the case as it stands in the case-book I have here in manuscript. I have nothing to add to Dr. Manning's report in the matter of the fracture, except to emphasise the fact that a nurse was on night patrol duty, and visited the room every two hours. With regard to accidents, I here hand to the Commission a list of all accidents involving the slightest cut of the skin, and those of a more serious nature, which have occurred at Bayview during the ten years from 1884 to 1893. Also a list showing percentages of fatal accidents, fractures, and dislocations, compared with total number of patients under care for a similar period, both at Bayview and in the Scotch asylums; the latter report has been extracted from the reports of the Lunacy Commissioners for Scotland. As to notice being given of the arrival of official visitors, I certainly have not received any from them at any time of their intended visits, and as to preparing the patients for them after their arrival at the establishment, it would be quite impossible to do more than collect them together for convenience of inspection, to straighten a shawl or bonnet, or some such simple arrangement. I have never even suggested more than this to nurse or matron, but I certainly have expected this to be done, both on the occasion of official visits and on my own rounds. No message was sent to this effect that I know of, but both matron and senior attendant should be notified of the arrival of official visitors, so that they themselves may be presentable and ready to answer questions if required. Personally, I do not believe that more than this has been done, but I can quite understand that an inexperienced nurse or attendant, especially if they should be of a suspicious temperament, should, on noting these slight preparations, jump to the conclusion that they were done to deceive, whereas the experienced visitor knows quite the contrary, and they should have no difficulty in distinguishing between thorough cleanliness of an institution and a makeshift attempt at it. I may here remark that when one or two nurses, in a small staff, become disaffected and prejudiced against the management by outside influence, it cannot be difficult to understand how injurious their actions may be to the interests of the establishment, nor can it be a matter of surprise that they should themselves do things which would cast obloquy upon the management—such, for instance, as the removal of sheets at night from several beds in a dormitory without any authority, and evidently for the purpose of saying that sufficient clean sheets could not be obtained; in this matter I submit there has been ample evidence to the contrary. So far as my relations with Dr. Manning have gone, they have always been friendly, but never intimate, and I have always interpreted this distinction as a necessary official condition. I am quite sure Dr. Manning's visits

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to the institution have not been intimated to me in any way prior to his arrival or more than three or four occasions during the twelve years I have resided at Bayview, and then it has been necessary to see me relative to matters in connection with the institution. When Dr. Manning has called upon me personally he has not visited the patients. This has occurred several times, notably during my illness at the beginning of last year, and I fully appreciated the kindness which prompted such an action. As to nursing and the nursing staff at Bayview, the custom has been for one or more nurses to be constantly in attendance upon recent cases whatever the rate of payment might be, and as the case improved or became chronic association with other patients, and a gradual diminution of the personal attendance, would supervene; that is to say, as the patient became more accustomed to the surroundings, the conditions of life would become more natural and less inquisitorial. With sick or recent cases a night nurse has always been placed in charge, and also with recent cases requiring a single room at night there has invariably been a night nurse on duty, and this nurse would be off duty during the daytime. On account of the smallness of the number under treatment, and the irregularity of cases of illness or excitement, this system of night nursing has of necessity been irregular and intermittent, and even with a night patrol it would be just the same, because the nurse on regular night duty could not attend to recent sick or excited cases, and an extra night nurse would always be placed on duty for their care. As to the number of nurses employed, there has always been five or six with the fifty Government patients; three or four with what have been termed the No. 2 patients, generally about fifteen in number; and three or four with the No. 1 patients, who, as a rule, have not exceeded eight or nine in number. And there have generally been two or three patients in the house with a nurse specially devoted to them. On the male side the average number of attendants to patients has been one to three or four. Besides these nurses and attendants, the staff has consisted of a coachman, a gardener, a yardman, a painter, a carpenter, an engineer, and frequently a labourer. Two cooks have always been employed and two laundresses. For some years past there has been a matron and a housekeeper, making a total of about eighteen females and eleven males, without counting the servants employed at the new house, and the total number of patients has averaged about ninety. The average proportion of nurses and attendants to patients in Government asylums is, I believe, one in ten. The principal reasons a night patrol was not adopted as a routine have been that such a custom must of necessity disturb a small establishment during the night. The noise of locking and unlocking doors, the flash of a light from a lantern, the creaking of woodwork—all conditions more or less inseparable from such a duty—would, I think, tend to disturb the tranquility of a small establishment. When it is taken into consideration that every room excepting the single rooms have one or more nurses in it as well as the patients, no one surely could doubt as to the advantage of the system when compared with that of a night patrol. It will be observed that I draw a distinction between a night patrol and a night nurse, and for my own part I should infinitely prefer having some one sleeping in my bedroom to having the room invaded at short intervals by someone making the rounds of the place, after the fashion of a night watchman. I know this duty of sleeping with patients is not relished by nurses or attendants at the first, but when they grow accustomed to it the objection seems to wear off, and I have seldom heard complaints about it from experienced people. The numerical strength of the staff has always rendered it an easy matter to place a nurse or an attendant on night duty when required, but several weeks have frequently passed without any such necessity. The general health of the patients has been remarkably good, and when other establishments were full of influenza there was no extra strain upon Bayview. Only a few patients suffered there, and those only to a very slight degree. Both official visitors and the Inspector-General can bear witness on this point. The number of fresh admissions would seldom average more than two per month, and of these less than one-half would require single-room treatment at night, so that the necessity for special night-watching has been comparatively small. Nevertheless, I submit that it has always been efficiently provided whenever required. The fact of there being five or six nurses and a matron within close proximity to the single rooms on the Government side of the house should, I think, be considered a sufficient precaution when the nature of the cases occupying these rooms habitually at night is taken into consideration. The evidence shows they were cases with well-marked and long-established habits, which rendered a single room for a bedroom the most desirable accommodation for them. Their health was always under careful observation, and in the case of illness a special night nurse was always provided. As before observed, some five or six nurses and the matron were within a very short distance at all times during the night. On the male side of the house the custom is for an attendant to remain up all night and visit any patient occupying a single room at intervals of about two hours, more or less frequently, as occasion requires. In the case of healthy patients suffering from excitement, a longer interval is allowed to elapse, but in the case of excited patients in less robust health, they are visited more frequently. I have never had occasion to doubt the conscientious performance of this duty by the attendants working under me. As a rule, I entrust this duty to people whom I have known for some time, or in whom I have confidence. Until recently, I have not deemed it necessary to employ a recording clock, and even now that I possess two of them they are likely to remain unused for months together. In my opinion, in a small establishment, if a man cannot be trusted to do his work without a recording clock, he cannot be of much use with one, and the only service the clock would be appears to me to consist in affording evidence of the presence of an attendant, but it certainly does not record his efficiency as a nurse. When Mr. Gannon gave his evidence I forgot to ask him to explain to the Commission how it came about that I paid Macleod a month's wages through him at the Newtown Police Court. He has, however, given me a letter, explaining the circumstances, and I now hand it in. Referring to Mr. Gearey's statement, that Dr. Tucker was in Sydney shortly before the Commission commenced its sittings, I can only say I was not aware of it, nor do I believe it. I should, I feel sure, have known of it if it had been so, and most certainly I did not, nor have I met anyone who has either seen or heard of Dr. Tucker's being in Sydney recently or at that time. I spoke to Mr. Greville on the subject almost at once after hearing the statement made by Mr. Gearey, and Mr. Greville ridiculed the idea, and at my request wrote a letter to that effect, which I now hand in to the Commission. Much has been made of the supposed warnings given on the arrival of the official visitors, no doubt with the object of making it apparent that it was customary to leave the patients unwatched, and that a general state of disregard for discipline was maintained. I think the explanation given by witness ex-nurse Rachel Kelly (who left the institution of her own free will) will be sufficient for my purpose; for, in answer to a question as to whether, when the official visitors came to the institution, their presence would be notified by me, she replies, "No, Dr. Vause usually came round with them. The matron used generally to say when the visitors

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visitors had come. She would send word so that we could get the patients together, as sometimes they were scattered about." It would clearly take a considerable time if the visitors had to go to each patient who might be about the grounds enjoying peaceful recreation, and no doubt, to obviate this, it is quite possible the matron would send instructions accordingly. This witness speaks most highly of the food, clothing, and general treatment of the Government patients, she having had their charge while employed at the asylum, and states farther that the arrangements of the institution were satisfactory. With regard to the assertion that a wound in a patient's head had been attacked by rats, made by Mackenzie, it appears, when he spoke to chief attendant Doherty at the time, he said he thought the bleeding might have been caused by rats, although this idea was scouted at the time, and the wound after being dressed shortly afterwards disappeared. The incident, however, had apparently not been lost sight of by Mackenzie, and has accordingly been added to his list of charges of neglect. With reference to Case No. 20 and the evidence given by witness Macleod, it is somewhat remarkable that, although when a departmental enquiry was held on the matter, the witness there gave certain evidence, she made no complaints of any kind, although she admits that she had the opportunity of doing so. Clearly at that time then nothing extraordinary had happened. With regard to this witness's statements that there were no observation holes in the single room doors, Rose M'Mahon, an ex-attendant, deposes to the contrary. She further admits having seen me go round at night to see the patients, and in fact, I may say, it has been my practice to do so at all kinds of irregular times so that I might not be anticipated in any way. The Rev. E. D. Madgwick, a constant visitor to the asylum, expresses a most favourable impression as to my management, and states that no complaints were ever made to him by anyone. He says that in his experience as chaplain to Callan Park Asylum, there is no difference in the conduct of Bayview, which he says is more like a home. He adds that he always found everything neat and clean, and has constantly noticed various alterations and improvements. Perhaps the best proof of the happiness of the patients is his testimony that when some of them heard of these charges being made against the institution they expressed great concern and anxiety to be in a position to defend the establishment. The Rev. E. M. O'Callaghan also testifies that he has also found everything satisfactory and well-managed. I would specially direct the attention of the Commission to the evidence of ex-nurse and matron, Bridget Morrissey, who left voluntarily, after an employment of nearly five years. Her evidence is of all the more value, as in reply to a question put to her, she stated that since her retirement she had not seen me till when she actually appeared before the Commission. The witness distinctly denies Macleod's assertion that the sheets were kept on the beds during the day-time for "show," and directly contradicts her allegations of a certain patient being neglected, and allowed to lie about in the rain. From her evidence it will be gathered that plenty of tea, coffee, &c., was available for patients during the night; that some of them preferred sleeping without their clothes; that dresses were so made as to be suitable for the patients in classes (from which arose the idea that the clothes supposed to belong specifically to one patient were placed on another); that I was most particular that the rules and regulations of the institution should be strictly observed; that the single rooms were not used for the sake of economy, but principally for the benefit of wet and dirty patients; that she never knew which way the official visitors would elect to proceed when inspecting; that if the patients complained to Macleod of feeling cold, she did not, as affirmed, report the complaints; that fresh milk was provided every morning and at dinner; and that the asylum was always comfortable and homely, every care being taken with the patients. Finally, the witness gives the result of an interview with her by Gearey, and states that the latter threw out the suggestion that if certain patients named were released as the result of the inquiry she might get an appointment to look after them. Surely this can only show to what lengths those interested had gone in the attempt to induce evidence against the management of the asylum, with, I submit, disastrous results. I might also refer to the evidence of Mary Magney, a housemaid, who left because of a disagreement with me, but who, nevertheless, proves that Case No. 1 was provided with meals from my private table. This witness was also interviewed by Gearey, but apparently unsuccessfully. Mary Doherty, cook, disproves the evidence of insufficient food and bad cooking, and points out the diet scale by which she was guided, and to which she adhered strictly. A quantity of evidence has been taken with reference to two patients about whom Supreme Court proceedings were at one time taken, but as the cases were fully considered by the proper legal tribunals, and as a consequence they are both still under my care, I do not propose to refer to the matter further. Further disproof of Macleod's assertion that the bed-sheets were only left on the bed in the day time for show, and taken off at night, is offered by Eliza Hunter (laundress), who bases her knowledge that such was not the fact by reason of the quantity that was regularly washed by her each week. Nurse McBride gives evidence that sick patients were attended during the night, that there were no complaints of overwork, that the Government patients were well looked after, and that she heard Maggie Macleod express the opinion that the patients were "two well looked after, and had too much their own way"; E. Erickson, a warder at Little Bay Hospital, and formerly employed at Bayview, states that everything was satisfactory while he was there; Johanna Dwyer, an ex-nurse, and formerly for two years at Parkside Lunatic Asylum, also testifies most strongly to the care and attention always paid to all the patients, and particularly as regards food and clothing, and this evidence is given notwithstanding the fact that she was duly visited by Gearey, and had been discharged by me at a moment's notice, in consequence of a quarrel with one of the attendants. The experience of Mr. \* \* \*, who for a time was a patient, may be noted, for he points out that for a time, partly at his own request, he occupied both in summer and winter the very single room in which Case No. 1 was placed, and about which so much discussion has taken place. The fact that he cannot in any way prefer the slightest complaint, either as to the rooms or as to the treatment of the patients, is, I think, most important and significant. With regard to the general evidence of the many medical gentlemen who from time to time have either visited, been connected with, or concerned in the management of Bayview Asylum, I can only say that their unanimity is as gratifying as it is remarkable, and I assume that it would be taking up the time of the Commission unnecessarily were I to specially bring under notice even the main points of the results of their observations and experience, feeling sure that the Commission will have carefully noted them for themselves, and that they would give that credence to their evidences to which their high professional reputation entitles them. To sum up then the exhaustive evidence taken on this inquiry, I would respectfully submit that the charges of neglect and ill-treatment of Case No. 1 have altogether failed, and that the allegations of cruelty and mismanagement generally have been completely disproved for the reasons already set out, and that it is evident that what naturally has resulted in very heavy damage to me, both pecuniarily

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pecuniarily and professionally, has been brought about through a number of idle and maliciously distorted rumours having perhaps a colour of truth in them, and which only too readily and hastily have been seized upon and magnified to suit private purposes or avenge petty and, for the most part, imaginary grievances. Without going into details relative to the payments made by the Government for the female patients maintained at Bayview House, I should like to draw attention to the fact that for the last eight years there have been only fifty at 22s. 6d. per week, and that at Cooma, where the same number was for a time maintained by the Government, the weekly cost amounted to over 25s., counting the interest on money sunk in buildings, at 6s. per bed per week, and value of land, &c.

8930½. Is there anything you wish to add to the statement you have made? Not that I am aware of. I have made it as concise as I can, and have not gone into financial matters.

8931. Will you be prepared to enter more fully into the whole of these matters when under cross-examination—such, for instance, as supplying further facts and other statistics regarding the management of the institution? Yes; certainly.

8932. Have you also provided for the information of the Commission, in addition to this general statement, various books, statutory and others, used at the institution? I have.

8933. It is the opinion of the Commission, under the circumstances, that all the members should have a day or two in order to carefully read over this elaborate statement submitted by yourself, and we propose to adjourn until Friday for that purpose, before asking you any further questions;—does this proposal meet with your views and convenience? Quite so.

8934. Do the books you have temporarily provided for the Commission contain an account of the income and expenditure of the institution? No; they do not.

8935. Have you any objection to provide the books which contain the income and expenditure, particularly the expenditure for the months of June, July, and September, 1894, as compared with the other months of the year, in order that the Commission may see if extra purchases of clothing were made in this particular period? I have no objection at all. I think I can show what is desired from the monthly balance sheets.

8936. *Dr. Manning.*] A fairer comparison would be to show the total expenditure on clothing material in similar months of several years (say) for 1892, 1893, and 1894.

8937. *President.*] Could you provide the Commission with a financial statement showing the amount spent on clothing in the months of June, July, and August, in the years 1892, 1893, and 1894? Yes; I think I could.

8938. *Mr. McGowen.*] The charge made against Dr. Vause by some of the witnesses is that an extra amount of clothing was purchased shortly after the removal of Case No. 1 from Bayview House. The object I have in view in requesting the President to ask these questions is that the point shall be determined. If Dr. Vause purchased extra clothing I presume he can produce the bills and receipts, or let us know actually what money was expended in the months of June, July, and August, in 1894.

8939. *Dr. Manning.*] What would be a fair guide, I submit, would be a statement showing the whole of the expenditure on clothing during these months in the years 1892, 1893, and 1894.

8940. *President.*] The point is this: The evidence on one side shows clearly that there was an extra supply of clothing purchased immediately after the 20th of May last, while the evidence on the other side shows that there was no extraordinary expenditure beyond the small additional outlay which is the custom on account of the change in the season of the year from autumn to winter. We think, therefore, if you will show us the money spent in draperies and other clothing in the corresponding months for three years, we shall be able to make a fair comparison;—do you think, by Friday next, you can supply us with a statement of the expenditure on clothing during the several periods specified? Yes; I do. I will see what I can do, and will do my best.

[The further examination of this witness was adjourned until the following Friday.]

FRIDAY, 25 JANUARY, 1895.

[The Commission met, at 11 a.m., in the Board Room, Chief Secretary's Office.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING, Esq.,  
M.D., INSPECTOR-GENERAL OF THE  
INSANE.

ANDREW GARRAN, Esq., LL.D.  
JAMES SINCLAIR TAYLOR MCGOWEN,  
Esq., M.L.A.

Dr. A. J. Vause sworn and further examined:—

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8941. *President.*] On Wednesday you were requested to provide for the Commission certain information relative to the purchase of goods at particular times—have you prepared a statement? Yes.

8942. We have received from you, and read over carefully, the statement you prepared and handed in as your evidence in connection with the general charges made by witnesses against the management of the institution, and I ask you now if you have anything you particularly wish to add to that general statement? No.

8943. Did you purchase Bayview House from Dr. Tucker? Yes.

8944. Did you understand at the time that Dr. Tucker was the sole owner? Yes.

8945. Have you been the sole owner ever since? Yes; I have.

8946. It has been stated, as you have heard, during the progress of this inquiry, that other gentlemen are interested, directly or indirectly, pecuniarily or otherwise, in the institution;—is that so? Certainly not.

8947. Are the statements made to this effect wholly untrue? Perfectly so.

8948. During your absence from the Colony did you appoint the Hon. Edward Greville, M.L.C., to act as your attorney? I did.

8949. While you were absent, did he have full power to act on your behalf in the management of the institution? Yes.

8950. In any other respect had Mr. Greville any direct interest in the institution? No.

8951. Had he any direct pecuniary interest of any kind? No.

8952.

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8952. Have you expended a considerable amount of money from time to time in erecting various buildings for the accommodation of Government patients? Yes.
8953. I do not see in the statement placed before us that you have mentioned the amount so expended? No; in that statement I have dealt more with the evidence submitted to the Commission.
8954. Can you give us, in summarised form, the amounts you have expended year after year on new buildings, improvements, and repairs? The actual expenditure on new buildings I calculate at £5,000; the amount expended on improvements and repairs goes considerably beyond that.
8955. What would be the total amount you have expended? I have not calculated it.
8956. Can you give us a rough estimate? I should think about £3,000 in repairs and improvements, and £5,000 on new buildings, making a total outlay of about £8,000.
8957. What principally in the way of buildings do these improvements consist of? A new kitchen and laundry; a billiard-room; a verandah and dormitory between the kitchen and laundry, on the second floor, of course including the removal of the old buildings to make room for the new. Then there has been the arrangement and rearrangement of the recreation grounds for the Government patients; the cementing of paths, and the erection of substantial fences. There has also been the erection and improvement of the new house to make it suitable for the admission of private patients; and the expenses incident to the making of new roads in the grounds. I have had a carpenter and painter constantly at work; and I have had two painters and three or four carpenters fully occupied for as long as twelve or eighteen months. I have generally one or two labourers in the grounds besides the ordinary staff of servants.
8958. Have you also incurred some expense in the purchase or erection of a cottage at Narrabeen for the use of convalescent patients? Yes. The expenditure at Narrabeen for the past two years is shown in the books produced. The sum of £365 was the current expenditure for the year 1893.
8959. What does that outlay include? Working expenses, principally. That includes caretaking, patients' maintenance, and carriage to and fro, cartage and interest on the money due to the Government. The land is a good selection, the cost of road-making, and so forth.
8960. Has this cottage been inspected by the official visitors? It has not.
8961. Under what authority are the patients sent to Narrabeen? In accordance with the provisions of the 82nd section of the Lunacy Act.
8962. Has there been any official visitations to Narrabeen? Hitherto there has not been any.
8963. Is the reason why no official visitors have been to this cottage because it is considered that the patients are so much improved that they can leave the institution with safety, and there is but little necessity for these visitations? Yes; there is, too, an arrangement made with a medical man at Manly to attend to all requirements in cases of urgency.
8964. How many patients have you generally at this cottage? Sometimes three, but generally two.
8965. Who is in charge? A married man named George Powell, in whom I have every confidence.
8966. What do you say is the annual expenditure in connection with this convalescent cottage? About £350.
8967. Do you ever send Government patients there? No; I have not done so.
8968. Is it a place you use only for private convalescent cases? Yes.
8969. Do you wish to say anything further in relation to matters of expenditure at Bayview House? No; except that the whole of the income has been taken up by the expenditure.
8970. Do you mean to say that the income and expenditure have been nearly equal? Yes; in consequence of the improvements.
8971. Have you not made any appreciable profit? No; not after paying the working expenses and the interest due on borrowed capital. When I had the Government patients there was sufficient margin for a sinking fund to pay off by instalments the original amount borrowed. I am perfectly sure that since they have been removed the revenue has not even provided the Medical Superintendent's salary, after paying all expenses.
8972. Has not this latter phase prevailed only since the 1st of January this year? Yes.
8973. Up to that time was there a sinking fund margin? Yes.
8974. Was the original purchase-money for Bayview House as arranged between you as purchaser and Dr. Tucker as vendor £14,500? Yes; but that is not all. There has been considerable outlay since.
8975. Since then how much have you spent on the institution? In addition to the amounts spent originally I have spent £500 for furniture; the new house cost £2,500, and £500 of that has been paid off, leaving a balance of £2,000. The £14,000 has been reduced to £3,500, leaving a balance of £10,500 still owing. That, shortly, is the actual financial position of the establishment.
8976. As a matter of fact, have you made large profits out of this institution? I have not.
8977. Did you supply the clothing to the Government patients? Yes.
8978. As you are aware, witnesses at different periods of this inquiry have stated that immediately after Case No. 1 was removed from Bayview House a large expenditure was incurred in the purchase of clothing for the patients;—is that true? I think it is untrue, judging from the entries in the books. I have no personal recollection of such a thing.
8979. Having your books before you, are you able to say what the expenditure on drapery articles has been for the last two years? Certainly.
8980. What was the total expenditure for drapery in the year 1893? It was £329 17s. 2d.
8981. What was the total expenditure for the year 1894? It was £300 12s.
8982. In other words, then, was the expenditure on drapery less in 1894 than it was in 1893, notwithstanding the assertion that an extra amount of clothing was purchased in 1894, shortly after Case No. 1 was removed from Bayview House? Yes; apparently so; the books show that.
8983. What was the expenditure in May, 1894? £49 15s. 2d.
8984. What was it in June, 1894? £19 18s. 3d.
8985. What was it in July, 1894? £12 7s. 6d.
8986. What was it in August, 1894? £21 4s. 3d.
8987. What was the expenditure for drapery in May, 1893? Nothing at all, but there was £50 spent in April of that year.
8988. What was expended in April, 1894? Only £8 15s.
8989. As there was nothing spent in May, 1893—the sum of £50 having been spent in April—what was laid out in June of 1893? £9 9s. 5d.
8990. What in July, 1893? £125 11s. 10d.

- Dr. 8991. What in August, 1893? £5 19s.
- A. J. Vause. 8992. Do these figures show that for the months of April, May, June, July and August, in 1893, the total expenditure on drapery was £191 0s. 3d.? Yes.
- 25 Jan., 1895. 8993. Do the figures also show, as taken from your books, that the expenditure on drapery for the months of April, May, June, July, and August, 1894, reached a total of £112 0s. 2d.? Yes; they do.
8994. Do you state that the accounts for these drapery goods were paid by cheque, always within a month or two from the foregoing dates? Yes, certainly.
8995. Have we taken these figures from your books? Yes.
8996. Do they show unmistakably that the expenditure for draperies in the months named in 1893 was nearly double the expenditure for the similar goods in the corresponding months of 1894? Yes; they do.
8997. Can there be any doubt about this matter? Not the slightest.
8998. *Mr. McGowan.*] Can you tell us where these goods were purchased? Yes.
8999. *President.*] From what firms? From Hordern Brothers principally; also from Riley Brothers, Jones & Co., Mark Foy, Hatte, of Newtown, Reid & Co., Munro & Co., and Anthony Hordern.
9000. When this expenditure was incurred, did you authorise the expenditure, or were you moved to it? The expenditure was incurred after requisitions had been signed by the matron. A list is made out, and I put my name to it as a matter of routine. If I take exception to anything on the list I run my pen through the entry.
9001. Is this done as a matter of routine by the matron in the domestic department of the institution? Certainly, in every case.
9002. *Dr. Garran.*] You heard it stated in evidence that political influence was used to keep the patients at Bayview House longer than they otherwise would have been;—have you stirred yourself in any way to use it? I never have.
9003. Have you approached any Member of Parliament to use his influence with the Government in this direction? No.
9004. So far as you are concerned, have you brought pressure to bear on any Government? No. I have tried to make a favourable impression on Members of Parliament whenever I could, but I never entered into any conversation with them concerning the renewal of my contract.
9005. Have you ever asked anyone to use influence in your behalf? No.
9006. Have you not heard it said in evidence that the removal of Case No. 1 led to a general brushing up of the institution? Yes; I have heard something to that effect.
9007. Amongst other things, the gas has been laid on along the corridor fronting the single rooms on the Government side;—is that the only important alteration that has been made? Yes. I think I was induced to do that more because of the accident than because of the removal of Case No. 1.
9008. Did you hear the evidence of one of the official visitors, when he said he did not altogether regard the laying on of the gas to these single rooms as an improvement? Yes.
9009. Do you think it is an improvement? No; and for my own part I would not have done it. I thought it might be a relief to the minds of some people who do not understand the nature of the treatment of cases of insanity to know that gaslight was available all through the night.
9010. Did you introduce this and other reforms because of the patient's removal? Certainly not.
9011. Have you made any change in the general management in consequence of the patient's removal? No.
9012. Did you look up your wardrobe—make special inquiries about the clothing—in consequence of the removal of that case? Nothing more than usual; it is the ordinary custom to inquire into the state of the wardrobe, so that requisition may be made whenever necessary for additional clothing.
9013. Did you alter the treatment of patients placed in the single room? No.
9014. Did you make any change whatever in your routine? No.
9015. *Dr. Manning.*] Was the gas introduced immediately after Case No. 1 went away? No; it was some months after.
9016. Was that consequent upon the accident to Case No. 20? The gas was laid on in the associated dormitories owing to that. The gas was carried along to the single rooms because it was being laid in the dormitories. The men were working there, and one day the idea struck me that by extending the pipes along the verandah I might illuminate these rooms. I did this without consulting the Inspector-General, as I should have done.
9017. Was the gas laid on in the associated dormitory some months after Case No. 1 left the institution, and in consequence of the accident that happened to Case No. 20? Yes; and if I had not been laying it in the dormitories I should not have carried it on to the single rooms.
9018. *Mr. McGowan.*] Following the questions asked by Dr. Garran, in regard to political influence having been brought to bear in connection with your contract, do you know whether it was exerted? I am not aware it was exerted in the slightest degree. I know that the usual applications for a renewal were made by me, but I have no knowledge of any pressure having been brought to bear by anyone else.
9019. If pressure was brought to bear was it done at your solicitation? Certainly not.
9020. In 1893 or in 1894 were you in any financial straits in regard to the establishment? No.
9021. Not more than usual? No.
9022. Were you compelled by your financial affairs to exercise greater economy? Certainly not.
9023. *Dr. Garran.*] Do I understand from you that during your tenure the indebtedness on the establishment has been reduced? Yes.
9024. And that the whole of the profit you made has been used to reduce the indebtedness? Exactly so.
9025. To what has it been reduced? To £10,500.
9026. From what? From £17,000.
9027. Otherwise have you made anything by it for yourself? No.
9028. *Mr. McGowan.*] Do you have to pay off the mortgage at the rate of £200 per month? I have been diminishing the mortgage on the property, but not to that extent. I have paid it off quarterly; sometimes it has taken place every six months.
9029. *President.*] Over what period is this diminution extended? During the first three or four years I paid off £2,000, having previously paid £3,500. Then matters went on at 5 per cent. interest, which I regarded as equivalent to paying rent, and the surplus went on. I put up the kitchen, laundry, and billiard-room, and went in for improving the property. Then property diminished in value, and the Society from

from which I borrowed the money wanted the indebtedness diminished still more, and I commenced to pay off in small sums. I gave them £500, and another £500.

9030. Is the whole of the profit you have made been used for the reduction of your indebtedness? Yes.

9031. During a period of how many years? Twelve years. And I put in £3,500 as purchase money.

9032. *Mr. McGowan.*] Did you put that in during the year 1836? Yes.

9033. Does not that only make it eight years? Yes; but I was there some years before.

9034. *President.*] Before going into any specific cases I should like to ask you a few questions about the witness Mr. Gearey;—were you acquainted with Gearey prior to this investigation? Certainly not.

9035. Were you aware of his existence? I was not.

9036. Have you any reason to suppose that Gearey was actuated by any other motive than to do the best he could for Case No. 1, and other inmates by the action he has taken in connection with this inquiry? I think so.

9037. On what grounds do you hold that opinion? In his first evidence Gearey stated he was a friend of Case No. 1. On his re-examination he said he knew nothing or very little about the patient. I am, therefore, forced to the conclusion that he had other grounds for his action than his connection with Case No. 1.

9038. Is that your feeling in this matter? Yes.

9039. To what cause can you attribute the action he took? I think he was so mixed up with the nurses and attendants of the place that he took up the cause of dissatisfied and discharged servants.

9040. What interest could he possibly have in doing that? I do not know, beyond that of notoriety.

9041. From one part of Gearey's evidence it would appear that he was in daily communication with some one in the institution; so much so, that he could obtain information of anything and everything that occurred within twenty-four hours of its occurrence;—can you understand upon what ground that statement was made? I heard the evidence, but I cannot understand and do not know the grounds upon which it could be founded, except, perhaps, that a letter from Macleod, written to Gearey, was posted by the witness Kennedy. From hearsay I understand that Macleod was in communication with Geary.

9042. How do you account for the way in which Gearey obtained his information about Bayview House? I think he obtained it through the witness Macleod.

9043. Do you think he also obtained statements from servants who since being discharged have given evidence before this Commission? Yes.

9044. Have you not heard all the discharged nurses tell us that they furnished no information to Gearey while they were in your service? Yes.

9045. Do you think such statements are compatible with the circumstances of the case? I do not think so.

9046. Do you think these witnesses have not told the truth? Quite so.

9047. Am I to understand that some of the statements have been so twisted round as to give a decidedly wrong impression of matters connected with the asylum? Yes.

9048. In other words, are these statements false throughout? Yes.

9049. Do you contradict the statements which more or less appear to be damaging to the institution? Yes?

9050. *Dr. Garran.*] Have you noticed in the course of the inquiry, that the witnesses most hostile to you are discharged servants? Yes.

9051. Do you think you had a good quality of servants at Bayview House? Yes, as far as I could judge without actual experience.

9052. Do you give your nurses and attendants as good wages as is given at the Government asylums? I do not know; I do not know what salaries are paid at the Government institutions.

9053. What wages do you give? As a rule, £3, £3 4s., and £4 per month to nurses, and the matron is paid at a higher rate.

9054. Have these nurses had experience in lunacy work when they come to you? As a rule, I prefer to train my own nurses.

9055. Do you purposely avoid taking trained nurses? Yes; I like to get healthy country girls of good disposition, and with good references of general character. From my experience this is better than taking those who have been at other institutions.

9056. Do you take it upon yourself to get the best you can? Most decidedly.

9057. Where do you get them from? No one place in particular. Sometimes I choose from the applications received, and sometimes Mrs. Gilchrist, the lady superintendent, interviews the applicants and makes the selection. I generally see them myself before they are appointed.

9058. Do you have any trouble in fixing the wages? No.

9059. Is your wage in excess of that which they would receive as housemaids? Yes.

9060. Was Mrs. Morrissey your matron for some considerable time? Yes; I considered her a very good official.

9061. Why did you consider she was a very good official? I was favourably impressed with her as a nurse. I was anxious that the Government patients should have someone living amongst them who would be an authority over the other nurses, and at the same time be one in whom I could thoroughly rely. I considered Morrissey a woman of that character.

9062. Did you impose implicit confidence in her? I did.

9063. Did you believe the evidence she gave before this Commission? Yes; I think it was fairly true. In one part she said she ran short of clothing occasionally; if she did I think it would be owing to her own fault; she had only to make application and she would have obtained what was necessary. She said in her evidence that no requisition was ever refused.

9064. Did you think the evidence of Maggie Macleod's true? It is utterly untrue.

9065. Is the evidence of the witness Verity true? Not all of it.

9066. Was the evidence of witness Marshall true? In certain respects it was untrue.

9067. Was the evidence of Rose McMahon true? So far as she gave evidence similar to that given by Macleod I deny it totally. The first reference I gave to McMahon she returned to me. She then called upon me and asked for a better one, which naturally I refused. I am informed by Mrs. Gilchrist she threatened that she would go to Gearey and make as much trouble for me as she could.

9068. Did she actually say that to you? Yes; she threatened me.

9069. Do you think the evidence of Josephine Mackay is true? Certainly not.

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- Dr. A. J. Vause. 25 Jan., 1895.
9070. At the time one or two of the witnesses were in communication with Gearey, did you know anything of that circumstance? I did not.
9071. Did Gearey ever apply to you direct for information? Certainly not.
9072. What salary did you give Mrs. Morrissey as matron? £1 per week.
9073. Do you know how that compares with the payments made to matrons in the Government asylums? No, I do not. The smallness of the number of patients at Bayview House as compared with the Government asylums would be a reason for a diminution in salary. A matron in charge of 600 or 700 patients would be paid a higher rate than a matron at Bayview House.
9074. On the whole, do you get the best services you can? I get the best ability available at the time I require it.
9075. Regarding the male attendants who looked after Case No. 1, had you any reason to be dissatisfied with Doherty and O'Brien? I had not. I had and have every confidence in them; they are both steady, painstaking men.
9076. How long have they been in your service? One for nearly five years, and the other a couple of years.
9077. Have you any reason to doubt the truthfulness of either? No.
9078. Did you hear M'Kenzie say there was no night attendant on Case No. 1? Yes.
9079. Did Doherty and O'Brien say there was? Yes.
9080. Have you any reason to doubt their truthfulness? I have not.
9081. *Mr. Mc Gowen.*] What purpose has Gearey, even for notoriety, in this matter? I do not know what ulterior motive he may have; that is what puzzles me.
9082. What notoriety can he get in this course of action, and what ulterior object can he have in view? I do not know.
9083. Do you think he has any object in view which is likely to benefit himself? That is best known to himself; I can see no other reason.
9084. You say you are of opinion that Gearey obtained his information from Macleod, and do you disbelieve Macleod and Gearey when they say there was only one visit paid by Macleod to Gearey before you discharged her from your service? I do.
9085. Did you not discharge this woman some time in June after the trouble about Case No. 1? I do not remember the date, but I think it was towards the end of June.
9086. Did not Macleod say she only visited Gearey once, and that was in company with J. Urquhart? Yes.
9087. Did not Mr. Jeanneret move the adjournment of the House on the 23rd of May? Yes, I think so.
9088. In the course of his remarks did he not say that he had information upon this affair a month before he took action in Parliament? Yes.
9089. Then must he not have known these things at the end of April? Yes.
9090. Still, do you believe that Macleod is the informant of Gearey? Yes, in much of the evidence that has been brought before this Commission.
9091. If that is your opinion I think it is an erroneous one. The information submitted to Parliament dealt particularly with Case No. 1;—what did nurse Macleod know about that? Nothing was given in her evidence.
9092. Did the information she gave to Gearey only apply to the female side? I think so.
9093. Is it not reasonable to suppose that Mr. Jeanneret knew nothing of the female side? He never mentioned it.
9094. Therefore had not Gearey had some other reason for proceeding before he came in contact with Macleod at all? I am not excluding any other reason.
9095. But do you not say you believe he got his information from Macleod? Not all of it; he got some of it from that source.
9096. Must he not have had prior information to any that could be given by Macleod? I do not think that Macleod furnished him with all the information.
9097. Do you always employ trained nurses in your institution? Certainly not. I prefer training them myself. I would select the best trained matron I could get, but not so with nurses.
9098. Did you ever have a matron who had been previously trained? Yes.
9099. Had Morrissey received previous training as a matron? No.
9100. Had Jessie Fuller received previous training? Yes, in London.
9101. Had not Dickson previous experience before he came to you as an ordinary attendant? Yes. I would not exclude a person because he had previous experience.
9102. Do you believe in your attendants being strictly sober? Yes, I do.
9103. Have you ever had to discharge any of them for an offence against this rule? I have.
9104. Did you ever discharge the witness Farquharson? Yes.
9105. Is he still in your service? He is, but he was not discharged for insobriety.
9106. Did you know that Doherty when engaged to you had been employed at Gladesville? No.
9107. Do you know he was discharged from Gladesville on the authority or recommendation of the head attendant? I never think of employing any servant discharged from a Government asylum, for this reason: the names of discharged servants are exchanged between the different asylums, and as I believe the medical superintendents of the Government asylums would not employ a discharged servant of mine it would be want of courtesy on my part to engage a servant discharged from a public institution.
9108. Has it not come out that Doherty was discharged from Gladesville? You cannot say he was discharged. It would be hard indeed to say he was.
9109. Did not Doherty say in evidence that he did not leave of his own accord? The explanation he gave is fairly good, and I do not think you should attempt to damn a man's character on that account.
9110. I do not wish to damn any man's character, but was not Doherty there a month on trial, and did he not have to leave? I think he was there.
- Dr. Manning.*] Doherty was at Gladesville only on trial; he was never there permanently; there was nothing against him, but he could not get on with the chief attendant.
- Dr. Vause.*] Doherty is one of the kindest-hearted men I ever came across. It is for me to select the attendants, and I select men whom I think are not of a retaliatory disposition and Doherty is one of these.

9111. *Dr. Manning.*] Do you furnish me with a list of your attendants and nurses, giving their names? I do.
9112. Do you furnish me with a list at the end of each year of the attendants you discharge, with the object of showing what servants have been dispensed with for misconduct, so that they shall not be employed in the Government institutions? Yes.
9113. I notice that the 1894 list of discharged attendants is much larger than usual;—how do you account for that? I think it must have been due to outside influence. I know I had more difficulty with my nurses and attendants last year than I ever had before.
9114. Had you greater difficulty after Case No. 1 was removed? Yes.
9115. *President.*] Can you tell us what was the general character of the witness Mackenzie while he was at your institution? No fault was found with the man to my knowledge. Personally I do not know so much of him, because virtually I was an invalid during the time he was at Bayview House. He left on the 1st March, and in January and February I was indebted to Dr. Sinclair and Dr. Ramsay for acting for me. Dr. Sinclair spoke well of the man, and I know of nothing except the remarkable act of insubordination which led to his dismissal. I could not possibly tolerate a man who would go through a room with his hat on as he did in the presence of a lady, and who, when remonstrated with, said he would not remove his hat except to his superiors.
9116. Was that the only reason you had for discharging him? Yes; and I think it was a sufficiently good reason too.
9117. Do you fancy he has gone out of his way to become one of the prime movers in this matter, owing to his dismissal? I do.
9118. Can you give any other reason for his course of action? No; except what he himself said—"it was the sweetest form of revenge."
9119. Would that be for his dismissal only? Yes, as far as I know.
9120. Do you think his dismissal did him much harm, inasmuch as he is now in the Public Service as a police constable? No.
9121. According to the statement of your views, do you not consider that Mackenzie and Macleod are the arch plotters in the whole of this matter? Precisely.
9122. Can you give any special reason why they have taken this action? Only that they are cousins.
9123. Was Macleod a nurse of exemplary character? She was a doubtful nurse. I was exercised in my mind considerably about her as to what course I should follow.
9124. Was she long in your service? Six months.
9125. Was Josephine Mackay of good character? She was not a satisfactory nurse by any means.
9126. Did she allow a female patient to escape? Yes.
9127. Was she discharged in consequence? Yes.
9128. In your principal statement do you give a copy of a letter written by this witness, the original of which is in the possession of this Commission? Yes.
9129. From that letter am I to apprehend that these discharged servants had some talk as to the arrangement they were going to make in this matter? So I should imagine. I suppose they had met several times.
9130. Is it for this reason that you bring this letter so prominently before the Commission? Yes.
9131. You said you prefer training your nurses yourself:—in following that course is your object to raise them from the lowest to the highest position in order of merit? Yes.
9132. Do you also take this course that they may understand your ways and fall in with your system of management? Yes.
9133. Does it also assist them in apprehending your mode of treatment? Precisely. I consider if I employ trained nurses I should have to begin by getting them to forget a great deal they had learned from somebody else.
9134. Have you not had a good deal of experience in connection with lunatic asylums? I have been associated with asylums during the whole, or nearly the whole, of my professional life.
9135. *Dr. Garvan.*] Did not Mackenzie say something when addressing Mrs. Gilchrist, to the effect that he would not take his hat off only to one superior in authority to himself? Yes; I have considered his conduct in this matter.
9136. Was Mrs. Gilchrist a superior authority to Mackenzie at Bayview House? Yes, certainly.
9137. Had she usually other servants under her direction? Yes.
9138. Was Mackenzie in a corresponding position on the male side of the Institution? No.
9139. Had he anybody under him? I do not think that he had. If he had the person would be but a junior attendant. He would not be a senior attendant.
9140. Then, according to his own professed principles, should not Mackenzie have taken off his hat to Mrs. Gilchrist? Yes. It was because of his rudeness that I discharged him.
9141. Were Verity, Marshall, and Rose McMahon discharged as nurses from your services? Verity was discharged; McMahon was not discharged; Marshall was a housemaid. I never looked upon her as a nurse.
9142. Did Verity refuse to sign any paper when she left? I did not ask her to sign anything. I do not ask discharged servants to sign, for the simple reason that I should not consider their signature of any value.
9143. Was Verity asked to sign a paper? No.
9144. What reason have you for asking any servant when leaving your employ to sign this paper? It was a custom introduced by my predecessor, and regarded by him as a good one. I have always carried it out as a routine. I think if a nurse or attendant has been working with me for any length of time it is as little as he or she can do to sign the foot-note in the obligation rules and regulation book. If they cannot conscientiously sign that foot-note it is an evidence that they have broken their original obligation in not reporting direct to me anything they may have seen wrong or objectionable in the management of the institution or the treatment of the patients.
9145. May not something have taken place which they did not consider it their duty to report to you? That cannot be if they fulfil their original obligation, for it is their first promise in the rules and obligations to report to me direct during the whole period of their engagement. They sign a declaration which says, "I consider myself bound to report to the Medical Superintendent." If they will not sign when

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when they are going away you may expect it is because they say to themselves, "No, I will not; I will if possible make trouble for you."

9146. Were Dickson and Robinson, two attendants, discharged from your service? I do not know about Dickson. I do not think he was a very satisfactory attendant. He was at Bayview but for a very short time. I consider that I was very good to Robinson. He had an affection of the eyes. He left me in the first instance on his own account. He married one of the nurses at the place, and left to enter in business of some kind on his own account. Shortly afterwards he came back to Bayview, soliciting work, as he said he was in distressed circumstances. I had no vacancy at the Cook's River establishment, but I was carrying on work at Narrabeen, and gave him employment there. He was working at Narrabeen for fully eighteen months, and from there he came back to the asylum, and, after being there for some time, I became dissatisfied with him because of his intensely lazy habits. He was a heavy smoker, and I think by this practice he stupified himself to such an extent that he could not do his work properly. I gave him a month's notice, and should have given him a good character, but shortly after I had given him this notice he came with complaints, particularly about the tea, and as that of which he complained was the same I had on my own table, and as was used by every other person in the asylum, not one of whom had complained, I considered Robinson's complaint was groundless.

9147. Did you not hear him say he was employed by you on two occasions? Yes.

9148. When asked why he left on the second occasion, he said, "Because I disagreed with Dr. Vause; a patient complained bitterly of the food he was receiving, and I, as senior attendant, reported it to Dr. Vause, and Dr. Vause informed me that he thought I was running the place on wrong principles, and that I had better leave; I said, 'all right, I will leave,' and I left";—is that true? No.

9149. Further down the same witness said he was asked to sign a document, in which it was stated that every consideration was paid to the care and comfort and recovery of the patients, and that he refused;—is that true? Certainly not.

9150. *President.*] Do you say you have spent the whole of your professional life in lunatic asylum work? Yes; excepting a very short period, when I was in private practice.

9151. What was your particular training in regard to lunacy matters prior to taking charge of Bayview House? I have studied under Sir Crichton Brown, at the West Riding Asylum, in Yorkshire; I was with Dr. Clouston, at Morningside Asylum, at Edinburgh; I was resident official at the University Clinical Wards at Edinburgh, which, as you are aware, is a competitive appointment; I was surgeon in charge of the hospital at Young; and I was also resident at the Sydney Hospital.

9152. For how long? About two years. I was resident medical officer at Bayview House for twelve months before that.

9153. Was that in the year 1878? Yes.

9154. What happened subsequently, in 1882? I took entire charge of Bayview.

9155. Have you had opportunity of examining the treatment of the insane elsewhere since you have been at Bayview House? Yes.

9156. Have you paid visits to Europe for this purpose? Yes.

9157. On what occasions? I have visited the asylums at Paris, Milan, and Great Britain.

9158. Have you had full opportunities of contrasting your treatment with that at the other asylums? Yes.

9159. Have you visited institutions of this character in this Colony and in Victoria? Yes.

9160. Have you made yourself thoroughly familiar with the subject from every possible standpoint? Yes.

9161. *Dr. Garvan.*] While you have been in charge at Bayview have you visited the Government asylums of this Colony for the purpose of acquainting yourself with the practices followed there? I have been in intimate relationship with the Government institutions, and have personally visited them.

9162. How often have you visited them during the past eight years? At least once a year, and sometimes twice.

9163. Do you keep yourself well up in connection with what is done at these asylums? I do.

9164. Do you keep your own reading of the latest literature on the same subject? Yes.

9165. Do you endeavour to keep yourself in all matters relating to the insane and their treatment, well abreast of the times? I do. My instructions—in fact, my standing order—to Mr. Bruck, the medical agent in Sydney, is to send me all new publications as soon as he can get them on matters connected with lunacy.

9166. *Dr. Manning.* When you last went to Europe did I not give you letters of introduction to the medical superintendents of one or two of the leading asylums in England? Yes.

9167. Did you take the opportunity of visiting these institutions? I did.

[The cross-examination of this witness was adjourned till the following Tuesday.]

TUESDAY, 29 JANUARY, 1895.

[The Commission met at 11 a.m. in the Board Room, Chief Secretary's Office.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
Esq., M.D., INSPECTOR-GENERAL OF THE  
INSANE.

ANDREW GARRAN, Esq., LL.D.  
JAMES SINCLAIR TAYLOR MCGOWEN,  
Esq., M.L.A.

Dr. Vause—examination continued:—

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9168. *President.*] Coming to Case No. 1, I observe from the document you have handed in as a summary of your reply to the various charges made against the institution, and against his treatment in particular, that you as a matter of fact, contradict most of the allegations contained in the evidence relating to that case? I do.

9169. For instance, regarding the treatment on the supposed ground of economy, do you endeavour to show there was no economy practised in that case at all? Certainly, there was not.

9170. Not as regards either clothing, food, or the placing of the patient in seclusion? Certainly not.

9171.

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9171. Do you hold that the course of action you took in placing the patient in seclusion was in accordance with the most important medical opinions yet obtained? Yes; I believe so.
9172. When was Case No. 1 first admitted to the institution? On the 22nd November, 1892.
9173. What medical gentleman examined him previously to his being admitted, or, in other words, who signed his certificate for admission? Dr. Williams and Dr. Scot-Skirving.
9174. Can you state, in brief terms, the exact nature of the patient's condition when he was admitted to Bayview House? I regarded his case as one of general paralysis. The attack came on about a week before his admission to Bayview House with considerable excitement and with delusions of exaltation. Previously he had been very much depressed and low-spirited. Next he thought he could make large sums of money by land speculations, also by a patent stoking apparatus, but on attempting to explain himself he became lost in illogical and bombastic assertions. On admission he was very much excited, and inclined to be aggressive. He had exalted ideas in a very marked degree. He was tremulous in speech, and experienced some difficulty in articulation. His gait was, however, free from motor incoordination.
9175. What arrangements were made at this time with his friends in regard to the charges for maintenance, and for the comfort of the patient? I was to be paid five guineas per week. I do not know that there was any special arrangement made in regard to the patient. I understood I was to treat him as I deemed best.
9176. Were full powers given to you relative to his general management and treatment? Yes.
9177. Was there any explanation or specification as to the room he was to occupy? No.
9178. Were any rooms shown to his friends as occupied by him? I showed Dr. Scot-Skirving the different rooms in the house that were occupied by him, but there was no special arrangement made about any one room or rooms.
9179. Did you at any subsequent period explain to his wife or to any friends of his that he occupied such and such rooms? Yes; they saw him in certain rooms.
9180. Did they always express their satisfaction with these rooms? Yes.
9181. Which rooms did he first occupy? The rooms on the ground-floor in the main block; he had one room there for day use, and another as his bedroom.
9182. How long did he occupy these rooms? He occupied a downstairs room during the daytime all the while he was at the institution.
9183. Was his sleeping room afterwards changed to upstairs? Yes; he was in bed for about six months continuously in the upstairs room—in the room just above the other one off the main room.
9184. What attendants had he at this period? He always had one attendant with him in ordinary conditions; he had two when he became excited.
9185. Were any arrangements originally made as to the number of attendants he was to have? No, not at all.
9186. Was there any definite stipulation for him to have a night attendant? No; there was no stipulation about it. His wife asked me if there was always someone with him. I led her to believe that was so. There always was someone, if not actually in the room with him, watching over him.
9187. When the patient was moved from the bedroom downstairs to the room upstairs did you acquaint his friends with the removal? No.
9188. Do you think you were required to do so? No.
9189. Were the official visitors or the Inspector-General of the Insane acquainted of that fact? No; they always saw him in the room he occupied in the daytime.
9190. Did you make any formal intimation to the official visitors of the patient's removal? No, because the reason for not doing so would be something like this: He might be too excited one day to be safe in the upstairs room,—what I mean is, it would be unsafe for him to go up and down the staircase. The next day he might be right again, and able with safety to occupy his room. The change was made according to the varying mental condition of the patient, and I did not consider that it was necessary for me to dilate upon it to the official visitors or the Inspector-General.
9191. Did you not consider the change of sufficient importance to take this course? No; the matter of the change was one of ordinary treatment.
9192. How long did this sleeping upstairs continue? About twelve months.
9193. During that period was the patient ever placed in a single room to sleep? Yes; in the early part of his treatment.
9194. For what period? About two or three weeks; he was placed in a single room on the first day after his arrival at Bayview House; he was placed there for about three weeks. On 23rd November, 1892, he passed a fairly quiet night.
9195. Was that after he was placed in the isolation room? Yes; he was walking about the garden with two attendants during the day, and about 5 p.m. he became very violent, very noisy, and was placed in a single room in consequence.
9196. When that occurred was an entry made of the fact that he was sleeping in seclusion in the medical journal? No.
9197. Although he was put into the room at 5 o'clock at night? No; he was put there because he became so violent.
9198. Why was not an entry made in the journal? Because I regarded it as putting the patient to sleep in a single room.
9199. But did not this happen in the daytime—you say it was 5 o'clock, or shortly after;—do you not call that daytime? I call it evening, after tea.
9200. But can you say that the day closes before 6 o'clock at night? I regarded it as night-time as far as that case was concerned; he was put in the single room and remained there all night, and he remained there every night for some few weeks.
9201. Do you not think that that should have been entered in the medical journal every night? Before there became any necessity to take that course I should have had to have taken him out of the room again. The case was fully entered in the case-book.
9202. But did you enter it in the medical journal? No, not as seclusion.
9203. Did you regard it as simply putting the patient to bed for the night? I did.
9204. And not as putting him in seclusion for a short period? No.

- Dr. A. J. Vause. 9205. Is not this the very complication which is led to for the want of a proper definition of the term "seclusion?" It does not seem so to me; indeed, it is a remarkable thing, to my mind, that anyone should take exception to the meaning of this term.
- 29 Jan., 1895. 9206. Subsequently, did Case No. 1 improve in his general health? Yes.
9207. And go back to the main block to sleep in his ordinary room? Yes.
9208. Until what date? He was fed artificially with stomach tubes, because he would not take food in the ordinary way. On 28th November he refused food entirely, became very excited, was fed artificially with milk, strong beef tea, two eggs, and sugar.
9209. Was it the 28th January following before he began to take food in a natural way? Yes.
9210. From that time did he begin to improve in his general health? Yes.
9211. Is that the history of his case as recorded in your case-book? Yes, precisely. I hand in a copy of my case-book entries as Exhibit Y. [See Appendix.]
9212. Can you tell us exactly on what date? It was in November, 1893.
9213. Was that eleven months after his previous tenancy of the single room? Yes.
9214. During the interval did he improve very much, and were his friends apparently satisfied with the results of your treatment? Yes.
9215. Did they express themselves as being so? They never expressed themselves otherwise.
9216. What happened about November, 1893, in reference to the patient? He became very excited, destructive, and dirty in his habits, so much so that it was deemed advisable to place him in a single room to sleep at night. While an attendant was with him in his bedroom he was constantly ordering him out of the room, and, if not obeyed, became more excited, throwing pillows or anything that came handy at the attendant. He would drag his bedstead from place to place under the idea that he was barricading himself from the attacks of enemies. He would assure the attendant that his forces were coming rapidly towards him, and that he would soon be relieved. At these times he would shout at the top of his voice, issuing orders for the advance of his troops; in fact the noise he succeeded in making, partly by hammering the door, partly by shouting, and partly by rattling his bedstead about, was very considerable. Under these circumstances I had not the slightest doubt in my mind as to the advisability and humanity of placing him in a single room at night, which was the time when he manifested the greatest amount of excitement.
9217. After he had been placed in a single room as you now describe, did you at any subsequent period take him out, and was he supplied with a utensil? I think he had a utensil.
9218. One of the witnesses, named Watt, gave it in his evidence that the patient was put in the single room, tried there for three or four nights, and then taken back to the ordinary dormitories; that the experiment was unsafe;—is that so? That may have been the case. I do not remember it. There were so many changes made with the patient that it is quite possible this was done without me being able to remember it.
9219. When the patient was placed in this single room did you take the necessary precautions in regard to him having proper night attendance? Yes; the usual custom is for an attendant to visit the single room every two hours. In this particular case two men in whom I had and have the utmost confidence, Doherty and O'Brien, took it in turns to watch the patient on alternate nights, with special instructions from me. I told Doherty not to disturb the patient unless he thought it was absolutely necessary to go into the room. He was told to regularly visit the outside of the room, but not to go inside unless there was occasion for so doing.
9220. Was every provision made for the comfort of the patient in the way of bedding? Yes.
9221. Were there also provisions made for supplying the patient with refreshments if he became exhausted during the night? Yes; that is the customary thing; there is always a supply of milk and cocoa, tea, and so forth. Case No. 1 had peptonised cocoa specially made with milk.
9222. Where was it kept? In one of the sitting rooms.
9223. How many hours watching was done by these attendants during the night? They were on duty from 10 p.m. till 6 a.m.
9224. Did they both watch him on the same night? No, they kept the watch on alternate nights.
9225. Did they sit up all night? Yes.
9226. Were they relieved from duty the next day? Yes, more or less.
9227. Did they have plenty of time for rest? Yes.
9228. Do you think that the work was too hard? I never heard any complaint.
9229. Had they any opportunity of sleeping between the visits to the single room? I do not know.
9230. Who watched the watchers? They were under my observation. I think any experienced medical superintendent can generally tell if the work set to be done is performed; he can tell by the appearance of the patient the next morning.
9231. Did you ever visit the Case No. 1 during the night? Oh, yes, many times, but not during my illness. Previous to my illness I have visited him at all times.
9232. Did you understand that the medical gentlemen acting for you during your illness did the same at night? Yes; I understood that they did.
9233. Did you make ample provision that these patrols, or night watchers, should do their duty thoroughly? Certainly.
9234. Where did they rest during the time they were not actually engaged in looking after the patient? In the sitting-room on the ground floor, about fourteen paces from the single rooms.
9235. Had you any tell-tale clock there? At that time I had not.
9236. Do you appreciate or believe in having a tell-tale clock at Bayview House? No; not in such a small place as that, with only one patient in a single room.
9237. Have you had an opportunity of seeing on many occasions the patient out of that room in the morning? Yes.
9238. On these occasions was he ever naked? Yes, frequently. Sometimes he would have a singlet on, sometimes one thing, sometimes another, and sometimes nothing at all.
9239. When placed in that room at night did he always have a sufficient quantity of night clothing? I believe so.
9240. Have you ever seen him placed there? Yes.
9241. Have you paid unexpected visits to that room? Yes.
9242. Are you perfectly satisfied that every care and attention in these respects were paid to the patient? Yes; I believe so. 9243.

9243. Was the bed-clothing adequate, and the personal clothing sufficient? I believe so.
9244. Have you not heard the evidence given by witnesses who visited Bayview House on the morning of the 20th of May? Yes.
9245. Is not the evidence of those witnesses contradictory to yours? Yes.
9246. How do you account for this discrepancy? By the inexperience of these witnesses.
9247. Do you mean inexperience of circumstances attendant upon cases similar to that of Case No. 1? Yes.
9248. Do you think there is any other reason for this discrepancy;—could it be accounted for in any way by it being a rather dark morning? It seemed to me to be a very casual sort of visit. The visitors were not there very long, and the whole affair was both casual and hurried.
9249. How long did they take altogether from the first time you saw Professor Anderson Stuart until they left the premises? About ten minutes.
9250. Not more than ten minutes? I do not think so. I do not think they were two minutes in the single room.
9251. Would it be possible in that short time for the different witnesses to examine into such minutiae as cobwebs on the outside of the shutters, the nature of the bed-clothing, and all the other details that have been handed in to us both in the written reports and the evidence given before this Commission? Not without some considerable practice and experience.
9252. Do you think these visitors were devoid of this experience? Yes.
9253. Yet we have some very definite expressions of opinion on these very matters;—can you explain that? It is a very difficult matter. I cannot explain it.
9254. Does it seem to you to be extraordinary that there should be such a wide divergence of opinion? It is most extraordinary to me.
9255. As you are aware we have had it stated that there was a strong urinous odour in that room, the inference being it was caused through several days' neglect of cleanliness. Do you think this could have been discovered and detected during that brief visit which you say in all did not last more than ten minutes? There might be an offensive smell, but I do not think the distinctions could be discovered.
9256. Do you think it would be possible to distinguish between it and the ordinary urine of a patient in that condition? I do not think it could have been done in that time on that morning.
9257. Professor Anderson Stuart in his statement said that he was shocked at the whole scene that met his view—that case No. 1 was thoroughly neglected in the matter of clothing; that he was in unsuitable circumstances; that there was no provision for his comfort in the room; that the place was badly ventilated; and, with regard to these charges, do you in your statement give quite contradictory evidence? Yes.
9258. Contradictory evidence has also been given in connection with the coldness of that morning and the shivering gait of the patient when he was being taken from the room to his bath;—do you deny the evidence that has been given to this effect? I do.
9259. Was the patient shaking from cold on that morning? No; he was in the ordinary muscular tremor consequent upon his disease.
9260. Do you positively contradict the statement to the effect that the patient was placed in a cold bath? Certainly.
9261. Can you explain why you did not mention the new circumstances in which the patient was placed to sleep during the last six months he was an inmate of your institution to the Inspector-General for the Insane or the official visitors;—did you take this treatment as a mere matter of routine? Yes; I looked upon it as ordinary treatment; I have been in the habit of using these rooms without bringing the fact under the special notice of anyone—either the official visitors or Dr. Manning. I think I have generally told Dr. Manning if there was a patient in the single rooms.
9262. Did you mention the fact of Case No. 1 to Dr. Manning sleeping in that room? No; I did not.
9263. Did you hear the evidence of Dr. Cox? Yes.
9264. Did he not say that he was surprised when he found out that the patient was sleeping in that room? Yes; but I see no reason why, and I have never known any reason why such a circumstance should be reported to anyone. The case is entered in the case-book, and I have never reported the fact of a patient being placed in these rooms for sleeping purposes to the official visitors or anyone else.
9265. Did you not report to the official visitors, to the Inspector-General of the Insane, or to the medical friends of the patient's family, that Case No. 1 was sleeping in that room? I did not do anything more than enter that fact in the case-book. On the 23rd of November, 1893, it was entered fully in the case-book. That entry was read, I am perfectly sure, by the official visitors.
9266. Was it read by them and no comment made? No; there was no comment made. I do not mean to say for one moment that I brought the matter prominently under their observation.
9267. Do you believe that this was the proper treatment and that it was attended by satisfactory results in the case of this patient? Perfectly so.
9268. Are you aware that Dr. Manning, in one of his official statements having reference to the removal of the patient, makes it a matter of complaint that you did not report these circumstances to him? He said it was a departure from usual methods of treatment, but I do not see where the departure comes in when the single rooms were there for that special purpose.
9269. Does it not strike you after all that has transpired in this case that it would have been far better for you to have reported the long-continued residence of Case No. 1 in the single room to either the official visitors or to the Inspector-General of the Insane? If there had been anything beyond the ordinary treatment of a case of this character I should have reported it, but I do not see why I should report unless there was something out of the common in connection with the case.
9270. Have you every confidence in Doherty and O'Brien? Yes; and always have had. I have had patients in a single room longer than Case No. 1 was there when I have not reported on their treatment.
9271. *Dr. Garrahan.*] If you look at the answer to the first question asked in this inquiry, you will see, according to a copy of "Hansard," Mr. Jeanneret made use of these words when speaking in the Legislative Assembly upon the management of Bayview House, "I think it behoves the Government upon the statements I have laid before the House to make full inquiry. The inquiry will prove this, that a gentleman

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- gentleman has been for months past—for the last four months to my knowledge—kept from 5 in the afternoon until 7 in the morning, over twelve hours, in a cold stable, without even a bed to lie upon, without any water, without any attendant, without any food, having upon his body nothing but his night-shirt." Do I understand you to give a flat denial to all these charges? I do.
9272. Do you know of anything that would enable Mr. Jeanneret of his own knowledge to make such charges? I do not.
9273. Was the patient placed in a cold stable? Certainly not.
9274. Was he without a bed to lie upon? Certainly not.
9275. Was he without an attendant? Certainly not.
9276. Was he without food or drink? Certainly not.
9277. Had he on pyjamas or woollen night-clothes? I can understand some slight confusion resulting in this place being called a stable, but there is no justification for that description. The patient was in a single room, he had personal night-clothing, but it is my opinion that a patient in this condition should have nothing more than a night-shirt.
9278. In question 8 you will see a further charge than that contained in "Hansard" is made. It is to the effect that "when friends of the patient went to visit him at the asylum they were shown into an ante-room where they were kept waiting for ten minutes or a quarter of an hour; they were then shown into an elegantly-furnished bedroom in which there were two beds, one for the patient and one for an attendant. They saw the patient in clean and comfortable sheets in a good bed, but will hon. Members believe me when I tell them that on each of these visits the patient was brought out from the stable in the yard, where there was not even a mattress for him to lie upon until one of the attendants in his own time made him one." Do you know of any occasion when Case No. 1 was brought out of a single room and put through these changes before seeing his friends? No.
9279. Is the statement I have quoted correct? Certainly not.
9280. Has Mr. Jeanneret been misled in making that statement? Most undoubtedly he has.
9281. Was the patient ever taken direct from the single room to see his friends? Not that I know of.
9282. Was he always brought out of the single room the first thing in the morning? Yes.
9283. Could this course, as described by Mr. Jeanneret, have been followed? No.
9284. Did the friends of the Case No. 1 always visit him in the day-time? Yes.
9295. Was the patient ever in the single room in the day-time? No; if he had been the fact would have been notified in the medical journal under the heading of seclusion.
9286. In question 29, Professor Anderson Stewart, referring to the room in which the patient had slept, said the wooden floor was at the level of the ground;—is that so? No; there is an air space permitting of ventilation and keeping the woodwork thoroughly sound.
9287. Has the level been altered in any way of late? Outside the level has been raised a little to throw the water off from the building.
9288. Was that yard paved with brick before you were there? Yes.
9289. Did you raise it? Yes.
9290. Is the effect of raising it better ventilation underneath the floor? Yes.
9291. Back and front? Yes; right through.
9292. In question 36, Professor Anderson Stuart says the ventilation of this room was absolutely insufficient, that there was one small window screened by a shutter. When you took charge of the establishment, did you examine the ventilation of this room? Yes.
9293. Did you think it was sufficient? I have increased it lately.
9294. In what way? By putting two air-bricks in the wall, one at each end of the room.
9295. Now that you have done that, do you regard the room as being sufficiently ventilated? I do.
9296. If you were called upon as an inspector of an asylum, would you pass that room as being sufficiently ventilated? Yes.
9297. Does not your judgment differ in this respect from that of Professor Anderson Stuart? Yes.
9298. If you were to let down that window in winter-time, would the temperature of that room be lowered too much? Yes; the room would be too cold in the winter-tims with the shutter left down.
9299. Have you ever entered that room during the night-time after it has been occupied by a patient for some hours? Yes.
9300. Did it strike you on these occasions as being insufficiently ventilated? By no means; no. The room was warm. I have often thought it was almost remarkable in being so warm. I explain that to myself upon this theory, it is a comparatively small place, although it is larger than the usual single rooms in the public institutions. It was, however, evident to me that it was remarkably warm in cold weather.
9301. Do you altogether deny the statement that this room is insufficiently ventilated? Most decidedly.
9302. In question 40, Professor Anderson Stuart states that he did not hear of or see any immediate attendant whose duty it was to look in upon the patient every two hours during the night. He only saw two men bringing the patient through the doorway leading from the lavatory. Were these two men the patient's attendants? Yes.
9303. Were they the very men whom you appointed to that particular duty? Yes.
9304. In question 41, Professor Anderson Stuart was asked if he had any opportunity of seeing the patient in his room before he was removed. He replied that he had not. What I want to know is could he have seen Case No. 1 before he was removed? Certainly he could; the patient was removed at the very moment we arrived upon the scene after Professor Stuart and Mr. Sager had been into the office. The patient was passing in front of the window when we first saw him.
9305. Did you forward any instructions to the attendants to get the patient out of this room before you, Professor Stuart, and Mr. Sager returned to the court-yard? Certainly not; I had not seen the attendants, I could not possibly have seen them, for I returned with Professor Stuart and Mr. Sager from the office-door on the other side of the institution.
9306. In question 45, Professor Anderson Stuart said he thought there might be a considerable abatement of the bad odour in the room; he added that utensils should be provided, but the difficulty was in making patients use them;—do you think you could have made the patient do so if he refused? I do not think so.
- 9307.

9307. Do you think Professor Anderson Stuart could? No; I think it would be a very dangerous experiment to try. I have seen the patient stand in one corner of the room with an earthenware jug in his hand ready to throw at the first person within reach. He would do the same with a utensil.

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9308. Could you neither coax nor force him? No.

9309. In question 49, Professor Anderson Stuart said it would be better to disturb a patient rather than allow him to continue in filthy habits in bed;—do you think so? No; not in acute cases.

9310. Does this treatment depend upon the nature of the case? Certainly. In chronic cases it is the custom to rouse people from their beds for purposes of cleanliness. There is nothing new in that treatment.

9311. As you are aware, Professor Anderson Stuart quoted Mercier in his work published in 1894 on Lunatic Asylums, their organisation and management;—do you think the quotations taken from this authority and used by Professor Anderson Stuart apply to demented patients or imbeciles rather than to acute cases? Certainly; and it is no new theory in its application to dements, or aged, and lazy, and dirty patients.

9312. Do you think you could have trained Case No. 1 into better habits in this respect? As far as possible he was trained in the day-time. He received every necessary attention from the attendant.

9313. Did you give any orders for him to receive similar attentions at night-time? No.

9314. Was your medical judgment against such interference? Yes.

9315. If you had Case No. 1 on your hands again in a similar condition would you follow the same course of treatment and issue similar instructions? I could not alter my treatment as far as that patient's case is concerned.

9316. In question 51, Professor Anderson Stuart says he thinks it would be easy to break into new habits, while in a demented condition, a person passed middle life whose nervous habits have been formed; such, he said, was his opinion, formed on the extracts he had read relating to such patients;—have you also read text-books on this subject? Yes.

9317. Have you had many years of personal and practical experience besides? Yes.

9318. Is your treatment based on your experience and knowledge? Yes.

9319. Do you say that you would not alter your course of treatment now if you had to deal with a similar case? I would not.

9320. In question 54, Professor Anderson Stuart said he did not know whether the attendant he saw was attached to Case No. 1 or to other patients in the establishment;—if he had asked you this question, would you have told him? Yes.

9321. Was it your fault that he did not ask and did not ascertain? No; certainly not.

9322. Does he not state that the building in which the patient spent the night had the appearance of a stable, but that he did not know if it ever had been a stable? Yes.

9323. Did he ask you whether that building had ever been used as a stable? No.

9324. If he had made inquiries would you have told him? Certainly.

9325. If he did not make inquiries was it your fault? Certainly not.

9326. Would you rather have an asphalt than a wooden floor in these single rooms? I would not.

9327. For what reason? I do not think it could be kept cleaner than a wooden floor. I think it would be colder, and much more objectionable to the patients, and there might be less disinclination on the part of the patient to defile it.

9328. In the same answer the Professor says that, with a little trouble, the floor could be kept sweet;—did you avoid any trouble in trying to keep it sweet? Certainly not.

9329. Were your instructions to that effect? Yes; it was the routine, and I have been careful in seeing that it was carried out.

9330. Whose duty was it to clean that floor before the patient was taken from Bayview to Callan Park? I do not know. The single room work is generally given to a junior attendant.

9331. When the man Mackenzie left your employ who became attendant on Case No. 1? I do not know.

9332. Does not Mackenzie say that this room was always well cleaned in his time? Yes.

9333. Have other witnesses said the same? Yes.

9334. I want to know, then, to whom this duty would fall if an attendant waiting upon Case No. 1 left suddenly? I do not know. There would always be an attendant looking after the patient, and I think it would probably be his duty. At all events the floor would not be allowed to get dirty because one attendant whose duty it was to clean it might suddenly leave.

9335. Does Doherty look after these things and see that the duties are properly performed? Yes.

9336. Did you see that room immediately before the patient was removed? Yes; I was in that room the day before it was left.

9337. If there had been any foul smell in that room on the day before the patient was removed would you have noticed it? Certainly, I should.

9338. Did you notice it? I did not. Every single room in the house is visited by me every day, and I should speedily notice any neglect or oversight of this kind.

9339. Do you not know that Professor Anderson Stuart was very strong in his opinion on this matter? I do, and I am perfectly positive there was nothing of the kind there as described by him.

9340. If that room had been properly cleaned out the day before could there have been any stale urinous odour there on the morning of the 20th of May? There could not have been a smell of this kind. It could not have come from under the boards, because if it did it would not be got rid of, and members of the Commission know the room is sweet enough now. I do not consider there is a particle of evidence in favour of the opinion expressed by adverse witnesses on this point. I personally was in that room the day before, and detected nothing of the kind. I was in that room every day.

9341. Are you positive that there was no such smell on the 19th of May? I am certain.

9342. Is it a tight floor? Yes; it is a good, sound, hardwood floor.

9343. In question 65, Professor Stuart says, it was in the hope of seeing the patient in the sleeping-room itself or immediately as he left it that he paid his visit so early in the morning; he did not see the patient until he was entering the lavatory, and that it was not until after a lapse of a considerable time that he saw what he went out to see;—did you place any obstacle in his way? No; as soon as I knew

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the object of his visit I took him at once without a moment's delay to where he could see the patient. We had not very far to go—simply to cross in a straight line through two rooms.

9344. In the same answer the Professor says, "I had almost to force myself in";—did you place any kind of resistance in the way of Professor Anderson Stuart? Certainly not, and the Professor contradicts himself, for he says, a few questions previously, that there was no opposition to his seeing Case No. 1. His very words are, "As soon as Dr. Vause knew what I wanted he allowed me to go into the room."

9345. Do you mean to say that the moment he expressed his wish you did all you could to gratify it? Certainly.

9346. Was there any unnecessary delay on your part in getting up? No; I do not think so. He did not wait long enough even to sit down. He stated what he wanted; I said, "Come on, then." Those were the exact words I used. The only delay in seeing the single room occurred when he himself addressed the patient. He had two or three words with him in the way of a reminder that he had met him previously.

9347. Did the patient recognise Professor Stuart? No, I do not think so.

9348. In question 68, Professor Stuart says there was not enough covering in the room to keep a man warm during the night; that there were three pieces of hard canvas on the floor, but Dr. Manning said it was soft canvas;—what do you say it was? I call it soft canvas. It had been washed frequently.

9349. Were they the ordinary rugs? Yes.

9350. Lined with blanket? As a rule they are, but on that occasion the blanket had been stripped off. There were, however, three rugs.

9351. Was the blanketing stripped from all three? I believe so.

9352. Were they not as warm as they would have been if the blanketing had not been picked off? No but I think the three were more than sufficiently warm for the requirements of the case.

9353. Were they strong enough to prevent the patient tearing them? I think he might have destroyed them if he had tried.

9354. In question 77, Professor Anderson Stuart says his conclusion is that there should be better provision for passing excreta and micturating;—do you agree with him on that point? I am not aware of any better provision.

9355. Is there any better provision for these purposes in the Government asylums? Not that I know of.

9356. Is there any better provision in any other asylum? Not that I am aware of.

9357. In question 82, Professor Anderson Stuart, in answer to Dr. Manning, said, "My impression is that the patient had a cold bath, but for certain I do not know of it";—could not the Professor have ascertained whether it was a cold or a hot bath? Certainly.

9358. Did he pass through the bathroom? Yes.

9359. Could he have remained there and have seen the patient undressed? Certainly.

9360. If he did not know whether the water used was warm or cold, was that any fault of yours? Certainly not.

9361. If the Professor had waited to see the patient undressed for his bath, would he have been able to ascertain what clothes were taken off, and also to see the state of his body? Yes.

9362. Did you see the patient as he was taken out of his sleeping-room? I did; at the same time and under the same conditions as Professor Anderson Stuart and Mr. Sager.

9363. Was he shivering unusually on that occasion? No; he was always shaky.

9364. Was he more shaky than usual on that morning? No; I did not see that he was.

9365. Did he appear to be shivering from cold? He was not shivering from cold; he was shaking from a well-marked muscular tremor—a characteristic of his case.

9366. Did the patient seem to you to show any reluctance when being taken to his bath? No; the bath was only in preparation when we saw him first; it had not come to the bathing part.

9367. Did he say, when crossing the yard, "I am so cold; I do not want a bath"—or words to that effect? No, he did not, or I should have heard it.

9368. When in his room did he show any disposition to resist having a bath? Certainly not.

9369. Was the water on in the bathroom? The patient did not have an ordinary plunge bath, but a sponge bath in his own room.

9370. Was the hot water laid on in the bathroom? I believe the taps were there, but I do not think the hot water was on just at that time, owing to some alterations being made in the water service.

9371. Could the Professor have felt the water in which the patient was bathed? He could have done so, but he did not. As I said, he was not bathed in the ordinary bathroom, but in his own room in the main building.

9372. You must have misunderstood my previous question. I wished to know if the patient was put in the bath, and whether Professor Stuart turned on the taps or felt the water in which the patient was placed;—I ask you now, was the water in the patients bath at the time Professor Stuart passed through the room? I did not say so; I said the bath was in course of preparation.

9373. Regarding this question of odour, could you, entering that single room in the morning after it had been occupied by a patient all night, tell from your experience of smell whether the floor of that room was washed properly on the previous day or not? I think so.

9374. Could you distinguish the difference between a fresh and stale urinous smell in a room like that, and under such conditions? I do not think so.

9375. Could you go into that room and by the sense of smell at once detect whether that room had been properly cleaned out the day before, especially when, as you are aware, the urine of acute maniacs is very pungent in smell? I do not think I could distinguish in that case.

9376. *President.*] The point is this: Can you distinguish the difference between two stale urines? I do not think so.

9377. *Dr. Garran.*] Do you think, by your sense of smell, you could tell one morning whether that room, in the matter of cleanliness, had been neglected the day before? I think I should know whether the room was clean. Medical men are keen scented as a rule. I once knew a professor who could smell a disease while walking down the street.

9378. Would you undertake to define the difference between fresh and stale urine in that room in such circumstances as those of the morning of the 20th of May? I would not.

9379. In answer to question 100, the Professor says there should have been an attendant waiting on the patient, but there was not one there;—how came he to know there was not an attendant there? I do not know.

9380. Did he ask any questions on this subject? I think he did. If you look at my comments on his report you will see I there say that Professor Anderson Stuart asked me a question about the attendants, and I led him to suppose then that the patient had not been seen during the night. But I omitted to explain that, although the room was not entered, an attendant visited the room at least every two hours, and acted as seemed necessary according to the degree of excitement of the patient. He did not go any further into the matter. The whole affair was so hurried that there was no opportunity of explaining details.

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9381. Could you have said anything that led him to believe that there was no attendant on the patient during the night? I do not think so.

9382. Must he, then, have misunderstood you? He must have.

9383. How do you account for him having left the institution under that impression? I do not know, except that I did not explain to him that the single room was under the observation of attendants. The whole visit was so hurried in character that there was no time for explanations of any kind.

9384. Did Professor Anderson Stuart go minutely into details on the occasion of his visit? No; as I have said, the visit was a hurried one. After rapidly going through the place he left, saying to me, "I have seen the patient; I have seen the room he occupied; good morning." That was all.

9385. What room did the attendant watching the patient sit in at night? The one across the courtyard.

9386. Has that room a window through which the courtyard can be seen? No.

9387. Has that room a door opening on the courtyard? No.

9388. Would the attendant be able to hear or see anything going on in the single room from where he sits;—could he hear through the doorway and passage leading from the room? No; I do not think he would hear; but an attendant sleeping in a dormitory ten paces away would certainly hear anything different from an ordinary noise.

9389. But still the attendant sitting up for the purpose of watching the patient was in a room, when not actually performing his duties of visitation, which had neither window nor door overlooking the courtyard which separates the main building from the isolation dormitories? Yes; that is so.

9390. Did not Professor Anderson Stuart say there should be more light and warmth in that room? Yes.

9391. Do you believe these rooms should be artificially warmed? I do not.

9392. If you were constructing a new asylum would you make provision for warming rooms by the aid of artificial means? For single rooms—certainly not.

9393. What have you to say concerning the lighting of these single rooms? I think the lighting should be judiciously managed. I do not think there should be too much light thrown into single rooms.

9394. Do you know if there is sufficient light thrown into single rooms at Bayview? I think there is sufficient for all practical purposes.

9395. In question 102, Professor Stuart says, "Supposing a patient is destructive during the night-time, destroying his bed and night-clothes, light and warmth would be necessary; but in this case the patient was confined in an out-house within four brick walls";—are the walls of this room of brick? Yes; lined with wood part of the way up the wall.

9396. In answer to question 1033, Professor Stuart says the treatment of this patient was certainly unsatisfactory;—in what respects do you think the treatment and management of this patient could have been improved? I do not know how it could have been improved other than having a room adjacent to the single room for the use of an attendant. So far as the rooms themselves go, I do not think they could be much improved.

9397. Is that the one improvement you suggest? Yes.

9398. In answer to question 115, the Professor says that the whole of his report on this subject is merely a relation of facts;—am I to understand that you dispute some of these "facts"? I do.

9399. If you will turn to Gearey's evidence, question 141, you will see the witness says, "When I first arrived at the building I could see that there was only one door, and I never took my eyes off that, for I had made an arrangement with Dr. Stuart not to leave that door until he returned"; if he was in a position near the water-closets in the courtyard, and did not take his eyes off that particular door, could he have seen cobwebs on the shutter of the window in the room occupied by the patient during the night of 10th May? Certainly not.

9400. Would it be impossible for him to see the window? Certainly.

9401. In answer to question 150, Gearey says the patient could have had nothing on his body before the clothes taken into room by the attendant were put on;—how could he know that? I cannot see how he could possibly know that.

9402. After the attendants had opened the door to remove the patient, before he was seen by Professor Stuart and yourself on that morning, if Gearey and O'Brien had taken the opportunity of looking into the room, would they have been interfered with? I do not think so.

9403. Could they have looked into that room at this particular time if they had chosen? I think so.

9404. Gearey, in his evidence, says the canvas sheets in the room on that occasion were about 3 feet square;—is that a fact? Certainly not.

9405. What was the size of these pieces of canvas? About the size of ordinary blankets. They are made that size so that they may be lined with a blanket.

9406. In answer to question 175, this same witness, referring to the stale urinous smell, goes beyond Professor Stuart when he says, "It was stale, and must have been there for some time";—do you entirely rebut that statement? Yes.

9407. Did you visit that room every day, and do you say there was no stale smell? Certainly there was not.

9408. Do you absolutely contradict Gearey in this statement? I do.

9409. In answer to question 186, Gearey says he did not know for certain whether the water used for the patient's bath was warm or cold, but he knew the attendant could not get warm water in the time he was there;—how could he know that? He could not possibly know it. There was always hot water in the kitchen boilers.

9410. Did Gearey make any inquiries into this matter while he was on the spot? No.

9411. Is his statement true that the attendants could not get warm water in the time he was there? It is not.

9412. In question 207, does not Gearey say Professor Stuart said that, if the statements made by Gearey were correct, Case No. 1 could not possibly live more than six months? Yes.

9413. How long ago was that statement made? Over eight months.

9414.

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9414. Do you think the removal of Case No 1 to Callan Park was beneficial or injurious to him? I think, in the excited state in which the patient was at the time, the interference would be prejudicial, temporarily, at any rate. It might have been very much more so.
9415. In your judgment, did the removal do him any good? I do not think so.
9416. The witness O'Brien, who went with Gearcy, said he was positive there was no blanket stitched on the canvas;—could an inspector following the calling of O'Brien have seen blanketing or the remains of blankets if such had been on the canvas? I should think so.
9417. I infer from his answer that he wishes to convey that there never had been any blanket on these pieces of canvas;—could he have seen if there had been? Yes; there would be the cross-marks of the sewing in the canvas.
9418. Would there have been traces of the blanket left even if the blanket itself had been picked off the canvas? Certainly; there would have been traces of it having been there, but I do not think the visitors took the trouble to look for it.
9419. In answer to question 331, this same witness says: "I heard moaning in the other room. I am quite certain I heard a moan, and hearing that, I came to the conclusion that there was somebody in the room adjoining the one from which Case No. 1 was taken";—was there anybody in the other room? No.
9420. Mr. Sager, in his report, and in answer to a question, the same as Professor Anderson Stuart, says he was led to believe, and left Bayview House under the impression, that an attendant did not look in on the patient after 10 o'clock at night;—must he have misunderstood you? Neither Mr. Sager nor Professor Stuart got the right idea about the night-watching. The single room cases are invariably watched at stated intervals the whole night through. Patients in these rooms are visited up to 10 o'clock by the day staff, and they are watched and visited by the night nurse after 10 p.m. always.
9421. Are you quite positive there was a night attendant on duty for this purpose every night? Yes.
9422. Do you pay one for performing this duty? I do; and I believe these night attendants do their duty conscientiously.
9423. Do you ever drop upon these attendants unexpectedly between 10 p.m. and midnight? I have done so; but I did not do it during the earlier months of this year, between January and March, the period of my illness.
9424. Did you do so after the date you mentioned? Yes.
9425. Did you drop upon them after midnight? Yes; I have been called up to see other patients, and then looked round. I have not made it a custom to watch the night attendants in this way. I have generally relied on the appearance of the patient in the morning. That generally is sufficient to tell me whether night duties have been performed by the attendants.
9426. Can you tell, by looking at the patient in the morning, whether or not he has been seen during the night? I can tell whether he is progressing favourably, and if he is, that is evidence that he must have had proper attention.
9427. If a patient is neglected, could you see evidence of the neglect? Yes; certainly.
9428. Mr. Sager says there was no appearance of blanket stitched on those rugs;—have you any canvas rugs without the blanket lining? Occasionally the lining may be picked off.
9429. Would the remains be visible? I cannot speak positively. I know these rugs, as far as my observation goes, are the ordinary canvas blanket-lined rugs, which occasionally may be divested of the blanket, it being picked off.
9430. Do you remember an attendant named William George Dickson? Yes.
9431. In answer to question 416, he says that at your request he laid down a plan of work and classified the work for warders;—did you not employ him to do this? No; with a smaller number of attendants—three or four—we do not do this. It is not an uncommon thing for a new man when he comes to the institution to say, "What have I got to do doctor?" As a rule there is a list of the leading things the attendants have to do, and occasionally when there has been some difficulty with a new man, I have asked him to write down his duties, and I have then explained what he had to do.
9432. In question 478, this witness says he only saw you once inspecting the patients, and then he was cleaning boots. He did not like this particular occupation, as he thought it too menial. He complained to you, and at the same time told you that the warders did as they liked about the place, and then you asked him if he would supervise the work, saying if he would you would be much obliged;—did he ever complain to you in this manner? He may have done so.
9433. Did you tell him to supervise the other warders? No.
9434. Must he, then, have misunderstood you? Oh, yes.
9435. Do you remember that the witness Mackenzie said he always put the patient to bed naked? Yes.
9436. Have you any personal knowledge about that having been the case? No.
9437. Who would have instructed Mackenzie in the matter of putting the patient to bed? Doherty would show him what was to be done, and he would do it after having been shown.
9438. Do you think it possible that Doherty would take away the whole of the patient's clothing? I do not think so; I cannot understand such a statement as that.
- 9438½. Mackenzie says the head attendant told him to take away all the patient's clothes? I do not think it is true.
9439. In question 1016, Mackenzie said there was no attendant told off for night duty;—is that true? It is equally untrue.
9440. Do you aver most positively that this evidence is untrue? Certainly.
9441. Was there any possible gain to you in putting the patient in the single room? No; I do not see where any gain could accrue to me. Single-room treatment is generally looked upon as more expensive.
9442. Were you tempted to follow this course of treatment by any consideration of profit? Certainly not.
9443. Am I to understand that placing the patient in this room was a success as a matter of treatment? Yes.
9444. Did you at all anticipate that you would have to follow this treatment for more than a moderate length of time? When I put him there to sleep, I was hopeful that the period of excitement would speedily pass off. It was reasonable to expect that result in a case of this kind.
9445. Had you any idea, when you first put the patient there to sleep, that you would continue the practice for six months? I did not think it would at all. The idea never occurred to me. I should have kept him there twelve or eighteen months if I had considered it necessary.
- 9446.

9446. What is the longest period you have had any one patient under treatment continuously in these rooms? I have had patients for a considerable number of months sleeping there at night. I do not remember the exact length of time.

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9447. Have you had a patient there longer than the time the room was occupied by Case No. 1? Yes.

9448. Can you give me the name of that or any other patient? He was a general paralytic, but I forget his name for the moment. By nationality he was a Jew.

9449. Did you report these other cases to Dr. Manning? No.

9450. Did you have a patient in that room for a longer period than Case No. 1 was there and not report the fact to the Inspector-General of the Insane? Yes.

9451. Did the patient have a night attendant? Yes; in the same way as Case No. 1.

9452. Sitting in the same room as Doherty and O'Brien did while watching over the patient? Yes.

9453. Regarding the disturbance of patients at night, you have heard the medical evidence;—is it your deliberate opinion in the case of dirty patients, better to leave them in the dirt than to disturb them in their sleep? Yes, decidedly, in all cases of great excitement.

9454. Would you leave your own relatives and friends in that condition? Certainly I would.

9455. Would their health suffer if you disturbed them? Yes.

9456. Do you think the best medical opinion is with you on this point? I think so. I would not have a patient's tranquility disturbed for the purpose of cleaning him. I believe, and act up to my belief, in keeping my patients as clean as possible, but where sleep is of paramount importance, as it was in Case No. 1, I should sacrifice cleanliness. I was strongly impressed with the necessity of sleep in this case. It was a question of life and death. If I could not procure sleep for this patient, I felt certain he would go down towards death. What little hope I had—and I had not much—lay in procuring sleep. My whole attention was concentrated on this one point, so that my instructions were very strong and imperative, that the patient must not be disturbed if asleep or showing signs of sleep.

9457. Would it have done for the attendants to fight with him in the matter of cleanliness? That would have destroyed the object I had in view. It was to obviate resistance that I placed him in the single room.

9458. Do you think your action was wise in following this course? I do. I think it would have been unjustifiable on my part to have taken any other.

9459. Do you think you were right? Yes; even now I do. The only thing I regret is that the single room has not a more presentable appearance.

9460. Are yours as good as the single rooms at Callan Park? I have not seen them.

9461. Are yours as good as those usually used? They are quite as large.

9462. Have you heard the complaints to the effect that the patient was left too long? Yes.

9463. Do you stand by your treatment in respect to this, against all critics? Yes. The patient was under my observation constantly. When coming out and going in I saw his state of health, and I think one can generally judge from close examination of that kind as to how long a patient may be left.

9464. If you had the same case to treat again, would you treat it in the same way? I would.

9465. Has nothing in the course of this Commission of inquiry led you to think you were wrong? Not in the treatment of the patient. I might, perhaps, be inclined to make some additions to the room that has been mentioned.

9466. Would you have any more night interference than you had? No.

9467. *President.*] Before proceeding any further, I should like to ask you whether you remember sending in any comments on the reports made by Professor Stuart and others in connection with Case No. 1? Yes.

9468. Do you desire to include those comments as part of your evidence? I do; and they are as follow:—

#### COMMENTS ON PROFESSOR ANDERSON'S REPORT.

The building occupied by Case No. 1 is described as "having the aspect of having been a stable, with hay-loft, with no windows." This is remarkable, as it was especially constructed for two single rooms by my predecessor, Dr. George Tucker. It is not, and never has been, used as a stable. On the photo-lithographed plan of the institution, herewith annexed, drawn by the Colonial Architect at the request of Dr. Manning in the year 1887, it is shown surrounded by dotted lines in red ink, and the room occupied by Case No. 1 on the occasion in question, is marked by a cross, also in red ink. The dimensions of each room are 12 x 8 x 14. The building itself is constructed of brick, and lined with wood. There is an entrance door to each room capable of being properly secured, and in no way resembling a stable door. There is a glazed window 2 ft. x 18 in. in each room opposite the door, with a sliding wooden shutter. There is a ventilator in the centre of the ceiling of each room, measuring 12 x 14 in., with corresponding louvred ventilators on the ridge of the roof outside, and the window also is made to open and shut. Ample ventilation is also provided for by means of two air-bricks at each end of the room, measuring 9 x 6 in. each. There is also ventilation near the floor for the entrance of fresh air. The flooring is of wood, and has a good air-space below it, which is also ventilated. The sides of the walls are carefully lined with wood to a height of 7 feet from the floor, with a smooth even surface, both for the comfort and the safety of the patient. With door and window closed the room is comfortably warm in winter-time, when occupied by any individual. The rooms have been used both by my predecessor, Dr. George Tucker, and by myself, with uniformly good results. No accident has ever occurred in them, or through their use, nor has any patient so much as caught a cold through occupying them. They are perfectly dry, and in good order and repair. The rooms have been regularly inspected during the whole of my residence at Bayview by the Inspector-General of the Insane, Dr. Manning, and by the official visitors at each of their visits. I have no recollection of any fault having been found with them, and I consider the rooms a most valuable assistance in the treatment of certain cases of insanity, inasmuch as they obviate the use of mechanical or manual restraint—methods of treatment I invariably endeavour to avoid. As to the repulsive odour mentioned by Professor Stuart on page 3 of his report, I venture to say that any bedroom occupied by a wet and dirty patient would be more or less objectionable at the time at which Professor Stuart made his visit. The space between the roof of the building and the ceilings of the rooms, designated in the report as a loft, is only what is necessary in an ordinary gable-roofed building. The cubic space in each room amounts to 1,344 feet. The contents of the room consisted of a mattress carefully filled with clean straw of suitable length and quality. Experience shows that straw is the best filling

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filling for such mattresses, both on account of its warmth and because it is a material which can be changed daily—an essential point with a patient of such dirty habits as the one under consideration. The mattress cover is of strong but soft canvas, actually necessary in the present case, as the patient had destroyed, by tearing, no less than thirty-six ordinary coverings. It was quite clean and dry when placed for use overnight, but was soiled on the morning of the visit in question. There was a pillow both clean and dry, also three sheets, although Mr. Sager only mentioned two, composed of strong but soft canvas. As a rule, one or more of these sheets is lined with blanket, and quilted to obviate tearing, but in this instance, I believe the blanket lining had been picked off by the patient. They were soiled with urine when the visit was made, but were clean from the laundry the night before. In addition to the above, there was an india-rubber utensil in the room. The patient is suffering from delusional mania, with exaltation of ideas. He talks volubly, but very disconnectedly, and cannot concentrate his mind upon anything for more than a moment. He has a staggering and uncertain gait, and always requires assistance when walking unless he can place his hand upon a support, under which circumstances he moves about very well; in fact he is very active with both hands and feet when seated or supported. There is also a certain muscular tremor dependant upon his ailment. His general health has been fairly good for some time past. On the day of his removal from Bayview he was perfectly free from cough or cold of any kind, and he has been able for some time past to walk about the grounds every fine day with the assistance of an attendant. He was on very good terms with his attendants, and his appetite was also fairly good, though appetising food was always specially provided for him. The most difficult thing to obtain for him was sleep, and every imaginable expedient has been adopted to secure this. From my own observations, and that of others, I am convinced he slept better in a single room than elsewhere. He was always more or less excited, but lately he had been more than usually so. He was also very destructive with his clothing, particularly if he thought anybody was watching him. Notwithstanding the painfulness of this part of my report, I consider it my duty to state that the patient is extremely filthy in his habits, never using a utensil, even when handed to him. If not prevented, he would throw it at anybody, or hang it on the door or wall of his room. In using a commode he would attempt to soak in its contents any article of clothing he could lay his hands on. Although there is no paralysis of the sphincter muscles, he frequently defecated in bed, or wherever he might happen to be. Every attempt has been made to avoid this by taking him to the closet three or four times daily, but mostly without avail. The ecchymosis of the eye mentioned in Professor Stuart's report was occasioned while his attendant was endeavouring to prevent him from placing his hand in a closet-pan to pick up feces, and is the only bruise the patient has sustained. It was only by the greatest care he could be prevented from unbuttoning his trousers and divesting himself of that garment, irrespective of his locality or surroundings. He was habitually wet and dirty during the night or early morning. The patient was always provided with a sufficiency of warm clothing, and, in addition to his outer garments, he wore a singlet of some warm woven fabric and a pair of drawers. He always slept in comfortable pyjamas and jacket, unless during periods of excitement, when he would tear them in shreds; and the more he was interfered with the more excited he became. When Professor Stuart saw the patient he was clothed in a dark tweed suit, consisting of trousers, vest, and morning coat, also a soft flannel shirt and singlet. At all times when I have seen him in a single room he has had abundance of clothing; but warm body clothing was more relied upon than sheets or blankets, which he frequently strewed about the floor and micturated on. With regard to the visitation of patients in single rooms, it is my custom to have the rooms visited every two hours, but not entered, unless required for any special purpose, such as the administration of food, the rearrangement of bedding, or soothing excited patients, &c. In this case I was more than usually anxious that he should not be disturbed during the night, because it was at this time I relied principally upon his securing as much sleep as possible; and I had given the attendant instructions to that effect. Hence my remark to Professor A. Stuart, on page 4 of his report, that no attendant would see him between 10 p.m. and 5 a.m. But I omitted to explain that, although the room was not entered, an attendant visited the room at least every two hours, and acted as seemed necessary, according to the degree of excitement of the patient. Ordinary breathing can be easily heard through the observation aperture. The attendant has at all times during the night suitable food at his disposal, e.g., warm milk, to be administered if required. The attendant would also enter to rearrange bedding, &c., and compose the patient to sleep as far as possible. My reasons for adopting the single-room treatment in preference to leaving the patient with a relay of attendants during the night in an ordinary sleeping apartment are:—(1.) The avoidance of manual restraint, which would otherwise have been absolutely necessary during the great excitement to which the patient was frequently subject unless some form of mechanical means were employed, such as the camisole, or leather muffs, forms of restraint particularly repulsive to me, and which have at no time been used in this case. The only other course would have been the additional use of sedatives, and in such quantities as to be detrimental to his health. The patient refused absolutely to take any medicine which he could taste. (2.) He always slept better in a single room than elsewhere, and I have not the slightest hesitation in saying that single-room treatment in his case gave him the very best chance possible of securing those few hours' sleep, which, in my opinion, prevented his relapsing into that extreme state of maniacal exhaustion that nearly ended in death shortly after his admission. He has never suffered physically from sleeping in a single room; he has never caught cold, nor even had an attack of any of the ordinary forms of physical ailment while there. No accident ever happened to him in a single room, nor did he object in any way to sleeping there. Professor Anderson Stuart, on page 4 of his report, writes that Dr. Vause said, "The patient was put in the outhouse when violent and especially ill." The words I used were, "The patient occupied a single room when too excited to be manageable in his ordinary bedroom," and I did not use the term "outhouse" as applied to the room in question, as stated in Professor Anderson Stuart's report.

#### MR. SAGER'S REPORT.

In this report I find the same word "stable" used as in Professor A. Stuart's, as if Mr. Sager had borrowed the expression of the President of the Board of Health, of which Mr. Sager is the Secretary. My remarks upon the single room building, in my reply to Professor A. Stuart's report, apply equally here. Mr. Sager says on page 3 of his report, "He had a black eye, appeared rather feeble and cold, had on a flannel shirt and clothes which did not appear to be clean." The ecchymosed eye has been accounted for

for through his attendant endeavouring to prevent the patient from taking excrement from the closet-pan. I saw the patient at the same time as Mr. Sager, and in my opinion he was looking rather better than usual, and certainly was no colder than any one might be coming into the fresh morning air after being in a warm room. I most emphatically deny that his clothes were not clean. He was clothed in a suit of dark tweed with flannel shirt and singlet, and was preparing for a tepid sponge bath. Mr. Sager says, "The building resembling a stable had no window, no ventilation." This most remarkable misstatement is capable of being refuted by any one visiting the building. Mr. Sager also says, "The sole contents, old straw mattress, two pieces of torn and dirty canvas." I assert that the mattress was not old, that it was constructed in the usual way for wet and dirty patients in fairly good general health, and that it was clean when put into the patient's room overnight. The statement is also at variance with that of Professor Stuart, who states there were three coverings.

Messrs. Gearey's and O'Brien's report are answered in my previous remarks.

#### REMARKS.

Case No. 1 was admitted to Bayview on the 22nd November, 1892, since which time he has been regularly visited by his wife, his son, and frequently by medical gentlemen of his acquaintance. The patient has received on an average three visits weekly, except during conditions of excitement. He has been frequently seen in bed by his friends, both in the room on the ground floor, and in the room upstairs. The visitors have not at any time complained of his appearance, but on the contrary have expressed themselves as being very much pleased with his treatment. The only accidents that have occurred to him during his residence at the asylum have been a slight cut with a knife on the outer side of the left hand, which occurred while removing the knife from his hand, because he was flourishing it about in a dangerous manner, and the black eye caused as before stated, whilst his attendant was endeavouring to prevent his reaching fecal matter from the closet-pan. His condition shortly after admission was one of extreme exhaustion, and without great attention and careful nursing he could not possibly have recovered. During that time he was seen more or less frequently by the Inspector-General, Dr. Manning, Sir Alfred Roberts, Dr. MacLaurin, Dr. Scot-Skirving, Dr. Cox, and Dr. Williams. All these gentlemen have invariably expressed a favourable opinion of his treatment, and I feel sure will concur with me that, if great care had not been bestowed upon him, he could not possibly have recovered from his state of extreme maniacal exhaustion. With regard to cost of maintenance, &c.—Considering the necessity for two special attendants, and frequently three, the charge of £5 5s. a week was low. An ordinary attendant costs between 30s. and £2 per week for maintenance and wages. With regard to the general management of the institution I may be permitted to point out that a private establishment, like Bayview House, must of necessity be dependent upon its reputation for its existence. With this view of the case well before me during the twelve years I have acted as medical superintendent, I submit that I should not be likely to countenance anything that would be detrimental to the establishment. With the same object I have always endeavoured to secure the greatest number of recoveries possible, and I ask to be permitted to quote from the annual reports of the Inspector-General of the Insane as to the percentages of recovery secured during the twelve years from 1882 to 1893. The average for the twelve years being 48·27, including such percentages as 63·15 for 1884, 61·90 for 1885, 68·18 for 1888, and the remarkable percentage of 111·76 for 1890. This last number is explained by the fact that several recoveries were recorded amongst patients who had been on leave of absence for more than twelve months. For 1893 there is the very respectable percentage of 65. The death-rate during this period has been comparatively small. Many discharged patients write to me from time to time in the kindest manner possible, they frequently call to see me, and I am not aware that any one has at any time complained of my treatment.

The following extracts have been made from the Inspector-General's reports upon Bayview:—  
On page 24 in the report for the year 1883 he says:—"At two of my visits I saw the Government patients at dinner, which was good in quality, plentiful in quantity, well cooked, and served with care and cleanliness." On page 21 in the report for the year 1885:—"On every occasion I visited all the day rooms, and saw the greater number, if not all the patients, giving every one an opportunity of speaking to me and making complaints if they so wished. On three occasions I saw the patients at dinner, which was well cooked, plentiful in quantity, and served with all necessary attention to the patient's comfort." "The instances of restraint and seclusion have been few and infrequent, and the patients were as a rule quiet and orderly in demeanour. The wards have been always clean and in good order." On page 23 in the report for the year 1886:—"During the last ten months of the year restraint was not employed in any instance." On page 22 in the report for the year 1887:—"I saw every one of the patients, speaking to all, and giving every one an opportunity of making complaints if they so desired." "Three patients I saw alone at their particular wish. There has been no instance of restraint during the year, and the instances in which seclusion was employed were not frequent." "I have been glad to express in my reports a general satisfaction with the order, cleanliness, and government of the institution." On page 23 in the report for the year 1888:—"Dr. Vause has carried out the various minor alterations and additions with a view of rendering the institution more comfortable for the inmates." "The institution has been efficiently and satisfactorily managed, a sufficient staff of attendants and nurses has been maintained, religious services have been held with sufficient frequency, and Dr. Vause has been careful to attend to the recreation and amusement of the patients. The provisions of the Lunacy Act as to allowing leave of absence to the patients have been taken advantage of to the fullest possible extent, and patients have been also sent for considerable periods for change of air to Manly and other places." On page 21 in the report for the year 1889:—"At my visits I have always seen all patients, except such as were temporarily absent from the institution on visits to Sydney, Manly Beach, and elsewhere, and I have given to all who so wished an opportunity of seeing me alone, and making any representations they might desire. At every visit I have specially inquired into the cases of patients recently admitted, and seen the papers on which they were received. I have made the statutory inquiries as to the classification and dietary, the performance of Divine service, the amusements and means of recreation provided, and the sufficiency of the staff of attendants and nurses, and I have found the general management of the institution efficient and satisfactory. The provisions of the Lunacy Act as to leave of absence have been largely taken advantage of; and at the close of the year thirteen patients were absent from the institution under the conditions prescribed by the statute. Buildings have been kept in satisfactory repairs. The kitchen,

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kitchen, laundry, and offices have been much improved, and are now fitted with every requisite. New summer-houses have been provided; and at the close of the year a new detached building, containing a billiard-room, with lavatories and other conveniences, and with a spacious verandah, was nearly ready for occupation." On page 21, in the report for the year 1892: "The institution has been well conducted, and considerable care taken to meet the special requirements of individual patients. The chaplains have been very regular in attendance; and Dr. Vause appears desirous of affording change of recreation to the patients whenever practicable. With this in view a cottage at Narrabeen has been fitted and worked in connection with the main establishment, and to it patients have been sent for a change, under the provisions of section 82 of the Lunacy Act. This section has also been taken advantage of to give leave of absence on trial under the charge of friends, and in seventeen cases patients have been absent from the institution for considerable periods, and five of these were discharged, recovered whilst on leave. Fifty of the patients are maintained at the Government expense, owing to the want of room in Government establishments." On page 18, in the report for the year 1893: "At my visits I made the inquiries prescribed by statute, and was careful to see all the patients, especially those recently admitted, and to make inquiries as to their fitness for care and treatment in an institution for the insane. I have investigated all complaints made to me which were not obviously due to delusions, and have, when necessary, seen the patients alone. I have on all occasions found the rooms everywhere clean and orderly, and consider the general management of the institution satisfactory." "Very considerable addition has been made to the institution by the purchase of an adjoining property, the house on which has been repaired and greatly altered, and rooms set apart for nine patients and the necessary attendants. These rooms have been very nicely furnished, and give excellent accommodation for private cases. The alterations were approved by the Chief Secretary, under the provisions of section 27 of the Lunacy Act, on October 13th, and the building now forms part of the licensed house." "The number of Government patients has been kept at fifty during the year, vacancies by death being filled by transfer of others from the hospitals. The quarters of these patients have been rendered more comfortable by the addition of a large covered and enclosed verandah, which serves as an additional day-room."

"Bayview" Licensed House for the Insane,

A. J. VAUSE,

Cook's River, May 27th, 1894.

Medical Superintendent.

9469. *Dr. Manning.*] Do you not say that patients kept in the single rooms in the male division always have night attendance? There may be one or two exceptions—such as in Case No. 66 for instance—where a patient used the room at his own request.

9470. With the exception of occasions when patients occupy these rooms on their own wish do you always have night attendants? Yes.

9471. Are the cases in these rooms different in character to the cases occupied in the single rooms of the female division? Yes.

9472. Are the rooms on the male side kept for acute cases in the acute stages of the disease? Yes.

9473. Are the single rooms in the female division used mainly by chronic cases? Yes.

9474. Do you remember my visit to Bayview House a day or two after Case No. 1 was removed? I do.

9475. Do you remember some rugs being shown to me? Yes.

9476. Are you aware of your own knowledge that these were the same rugs as were used by Case No. 1 the night before he was removed to Callan Park? I believe they were.

9477. We have been told in evidence that on the morning of the 20th of May patients were seen walking across the courtyard;—what patients were these? I think there may have been some half-dozen crossing from the dormitory on the other side of the court-yard.

9478. Would these patients have to cross the yard from that dormitory to get to the dining and sitting rooms? Yes.

9479. For the most part, are the patients who occupy the dormitory quiet in disposition, not needing immediate supervision? Yes.

9480. Will you tell us what is the custom in regard to issuing comforts at night? These stores are issued in the forenoon; as a rule, after breakfast.

9481. They are supposed to last till when? The same time next day.

9482. Do they include provisions—tea and things of that kind—for breakfast the next morning? Yes.

9483. Are they kept where the attendants have access to them during the night? Certainly.

9484. Having had some experience of attendants, are you aware that it is the custom of attendants on night duty to cook for themselves? Yes.

9485. Do you think it would be possible to get attendants to perform night-duty unless they were supplied with plenty of food at night? I do not think so. They will be supplied with food and plenty of it. Indeed, an extra egg is the classical diet of night nurses.

9486. Is it the universal practice for attendants on night-duty to prepare and cook for themselves? Yes.

9487. Would it be impossible to get night attendants unless they were well provided with food? Yes.

9488. Is it the custom for nurses and attendants on night duty to have two or three meals a night? Yes.

9489. Will you explain to us more fully than you yet have explained the hot water supply to the bath-room? The hot water supply to the bath-room has been there for some years, but as I made alterations to the kitchen and laundry, varying the positions of the water-heaters, a little delay occurred sometimes in the hot water supply to the bath. When changing the pipes from one source to another the bath has been without the direct service of hot water, but the abundant supply of hot water always available in the kitchen has always obviated any difficulty.

9490. Had there been a direct supply of hot water immediately preceding the removal of Case No. 1? Yes.

9491. The morning he was removed was this direct supply temporarily suspended owing to the source being altered from one heater to another? Yes; I remember noticing it because the taps were rather tarnished. Case No. 1 had a separate bath in his own room. He was bathed in a movable bath—a bath specially supplied so that it would be removed from room to room upstairs or downstairs. It was what military men call a "tub."

9492. *Dr. Garran.*] That is where you misunderstood my question. I was under the impression the patient had an ordinary bath, and that Professor Stuart and the other visitors did not ascertain if the water was warm or cold.

[The further examination of this witness was adjourned until the following Tuesday.]

WEDNESDAY,

WEDNESDAY, 30 JANUARY, 1895.

[The Commission met at 11 a.m. in the Board Room, Chief Secretary's Office.]

Present:—

THE HON. SIR ARTHUR RENWICK, KT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
Esq., M.D., INSPECTOR-GENERAL OF THE  
INSANE.ANDREW GARRAN, Esq., LL.D.  
JAMES SINCLAIR TAYLOR MCGOWEN,  
Esq., M.L.A.

A. J. Vause, Esq., M.B. et C.M. : Examination continued:—

9493. *President.*] Have you made some provision for coping with fire, supposing there were an outbreak at Bayview House? Yes.

9494. Will you describe what provision you have made? I have 3-inch mains laid to the kitchen and laundry block, also to the buildings formerly used by the Government patients. I have also three hydrants of full size.

9495. Have you had these pipes connected with the Sydney water supply mains? Yes.

9496. At whose suggestions were these provisions made? Primarily Dr. Manning. The suggestion was made before the water was laid on, but as soon as the water was laid on the connections were made.

9497. Did Mr. Bear, the Superintendent of the Metropolitan Fire Brigades, inspect these? He did.

9498. Were the connections made under his supervision and suggestions? Everything was fitted according to his recommendation and approval.

9499. Can you give the Commission an idea of the cost incurred in making these provisions against fire? Not definitely at the present time. The money was expended some years ago.

9500. Do you think the cost was £100? It was about £150.

9501. Have you ever required to bring these appliances into actual use owing to an outbreak of fire? No; they have not been used except for testing purposes.

9502. Do your attendants and nurses understand how to utilise these provisions should occasion arise? Yes; I have taken the precaution to show them how to use the appliances.

9503. Have your nurses and attendants periodical training in the use of the fire preventives? No; Mr. Superintendent Bear promised to send a member of the brigade to put the Bayview House nurses and attendants through their drill, but he has not done so yet.

9504. Did Mr. Bear certify that your appliances were to his entire satisfaction? Yes.

9505. And that they were sufficient for all practical purposes? Yes.

9506. *Mr. McGowen.*] Did you not say, in answer to the President yesterday, that Case No. 1 was put into seclusion about four or five or six weeks after he was admitted to Bayview House? No; I said he was placed in the single room the day after he came.

9507. Did you make an entry of the fact in your journal or case-book? Yes.

9508. Did you make an entry on the 4th of November, 1893, in the case-book, six months before the patient was removed? I do not know that there is an entry for November in the case-book.

9509. I think I saw one, and called special attention to it, when I was at Bayview House the other day? The entries in the case-book are not always made on the date of the occurrence to which they refer. Sometimes I do not make up the case-book oftener than once a month, unless there is something of an urgent character, and then I enter it at once. At other times I may write up the case-book once a week.

9510. If an entry was made in the case-book six months before the patient was removed to the effect that he was placed in a solitary room to sleep, would the official visitors have an opportunity of seeing the book? Certainly.

9511. Did you see the Commissioners' note and entry to that effect when they were at Bayview House? [*Case-book produced and examined on page 78.*] There is an entry dated November 20th, saying the patient is apparently much better. Another, dated November 24th, says he was very excited, destructive, and dirty in his habits. I do not think there is any entry about the commencement of single-room treatment. There was an entry there dated six months before the patient was removed. I remember remarking the fact when we were examining the books. [*The entries were examined by Dr. Manning, Dr. Garran, and Mr. McGowen.*]*Dr. Manning:* It must have been a mistake. We must have looked at the wrong November.9512. *Mr. McGowen.*] Did you make that entry on the 23rd of April, nearly a month before the patient was removed? Yes.

9513. Did the official visitors see that entry of the 23rd of April? I do not know; they had every opportunity of seeing it.

9514. Therefore did the official visitors have an opportunity a month before the patient was removed from your institution, of seeing that the patient was going through single-room treatment? Yes.

9515. Although, as you say, you did not write up the case-book oftener than every week? Yes.

9516. Why did you not make an entry of the time you first put the patient in the single room, the same as you did on the 23rd of April, a month before he was removed? I do not enter such treatment in any way as a rule; I look upon sleeping in a single room as usual treatment, and I mentioned the fact on April 23rd incidentally.

9517. For five months previous to that date had not the patient been going through single-room treatment? I do not call it single-room treatment; it is sleeping in a single room.

9518. If you make an entry in November, 1892, and another in 1894, why did you not make others notifying the remainder of the time the patient was occupying the single room;—why did you mention it on some occasions and not on others while the patient was still going through the same course of treatment? Because the first was the initial entry, which would show the kind of treatment that might be expected through the case.

9519. If that is your explanation, why was the entry made on the 23rd of April; that could not be an initial statement, could it? No; it could not.

9520. Then, again, there is an entry on April 30th;—were these entries made before Case No. 1 was removed? Yes; they were made within a day or two after the dates to which they refer.

9521. Is it not a fact that the patient was sleeping in that room for six months prior to his removal to Callan Park? Yes.

9522.

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9522. How is it the fact is not entered in the case-book? Because I have not been in the habit of making such minute entries after the initial treatment has been established.
9523. Will you swear that the patient was in that room six months prior to being removed from your establishment? I think so.
9524. Will you swear he was in that room during the previous November? I will not; but I think he was.
9525. Why did you not make an entry of the fact at that time? I do not know.
9526. Can you not account for that omission? No; except that I did not think it of sufficient importance at the time.
9527. Why did you make the second entry? Because the treatment was continued.
9528. Because the treatment had been continuous the four or five months previous to April? Yes.
9529. Would not as good reasons exist for making an entry in November, January, February, or March, as there did in April? Perhaps so; I am sorry it was not entered at once. There was no particular reason why the entries should not have been made.
9530. Have you sworn that you always had night attendants during the six months the patient slept in the room? Yes.
9531. Are you positive of that? Yes.
9532. How was it you told Professor Stuart and Mr. Sager on the morning of the 20th of May, or led them to believe, that no attendant saw the patient after 10 o'clock the previous night? Yes; I remember that point, and, as I said yesterday, I must have been misunderstood. The visit was a hurried one, and I think I told the visitors you name my instructions to the attendants were that the patient was not to be disturbed during the night, but that he was to be visited at intervals.
9533. Did you tell Professor Anderson Stuart that no attendant visited the patient after 10 o'clock at night until he was removed the following morning? I think so.
9534. Is it a fact that the female patients in the single rooms were not seen after that hour at night? Not unless they required to be seen.
9535. Do you say that on the night of the 19th of May there was a night attendant looking after the patient? Yes.
9536. Where was he on the morning of the 20th, when Professor Stuart, Mr. Sager, Gearey, and O'Brien arrived at the court-yard? I do not know; I was not there.
9537. If that attendant was placed in charge of the patient, was it his duty to go to the room door every two hours? Yes.
9538. Do you know that Professor Anderson Stuart and the other visitors said they only saw an employé wheeling a barrow, who directed them to the head attendant;—one half of the visitors went to the office and the other two to the court-yard, and did not Gearey and O'Brien say they saw several patients, but no attendant? I say there must have been an attendant there.
9539. Do you not think if an attendant was in the building where he usually sat he would have come forward when the visitors were waiting in the court-yard? If he happened to be inside the house at the time he would not see them.
9540. Have you any means of ascertaining whether these night attendants attended properly to their duties by seeing the patient every two hours? Only by my observation of the patient's condition. I have, moreover, confidence in these attendants. I had no recording clock.
9541. If the weather happened to be inclement during the night, do you think the attendant would stop in the main building by the fire instead of crossing the yard to see the patient? I do not think he would to any extent.
9542. Have you not said, in answer to a previous question, that it was not the duty of the attendant to open the door of the room during the night? I would rather say it was my wish that he should not disturb the patient.
9543. Would not the patient hammer at the door? Yes.
9544. In that case would the attendant open the door? Not always.
9545. What would he do? Wait for some other development. It was a customary thing for this patient to make a hammering noise in his bedroom. He did it when in the house. He, however, became more vociferous when outside. He would shout more; and that was a clear indication that he was not in much physical pain.
9546. If the patient hammered at the door, would the attendant sitting up in the main building answer by going to the room? No; as I said before, he would wait for further developments. Hammering at the door would be a result of excitement. An attendant going to the patient would only make him worse. Hammering at the door, or a patient promenading round his room, are practices in which these cases indulge in for hours together.
9547. Did Doherty and O'Brien have to do any other night-work besides watch over the patient? No.
9548. Did you make the arrangements for them? I think they made their own arrangements. I do not interfere with special arrangements they make between themselves so long as they suit themselves and properly perform their duties.
9549. Did you know what that night-watching was? Yes.
9550. I would like to invite your attention to questions 3260 to 3264;—here O'Brien says he was on night-duty every second night for six or seven months, that he generally went to sleep the next day about 1 o'clock, slept through the day till 10 o'clock at night, then got up and went to bed again the same night? Yes; I saw his answers to these questions.
9551. Now turn to Doherty's evidence, question 3080;—here Doherty says that it was his custom to get up at half-past 5 in the morning and work till 10 o'clock at night; that after he had been on night-duty he need not go on duty the next day, but would be about the place if wanted, and that after having been up on night-duty for every second night it was not his custom to have a sleep next day? Yes; I see those questions and answers.
9552. Would this system result in Doherty, perhaps, being on duty for thirty-one hours? Perhaps so.
9553. Did you know that this arrangement for night-duty was in operation? Yes.
9554. Do you think it was a complete arrangement? I think it was better for me to allow these attendants to work the night-watching in their own way. It was an exceptional case, which caused a good deal of trouble at times, and not so much at others. If these two attendants liked to work it in this way

to suit themselves it was not for me to interfere. They seemed to work satisfactorily. If there had been a greater number of patients under observation such a system would not have answered. There was only one patient, however, and so long as the arrangement suited them, and I was satisfied that the work was properly done, it was not for me to interfere.

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9555. Was this system carried on for six or seven months? Yes; they managed the whole matter between themselves.

9556. Did you, yesterday, in answer to Dr. Garran, say it was more expensive to keep the patient in a single room than to follow the ordinary course of treatment? Yes.

9557. In what way? Because we had to keep a day-room for him as well. This room could not be used for any other purpose; and the single-room treatment requires extra attendants.

9558. Did you have to pay anything more for these extra attendants? No, not in actual payment to them; but I could have worked with fewer attendants as a whole if they had not been on night-duty. I could have done with one less outside and one less attendant inside the house.

9559. Am I to understand that while Doherty and O'Brien were on night-duty for those six months that you had to employ two extra men? I had extra men outside ready to come in all that time. I had no accommodation for more than five in the house. I should have had to have them at any moment they were required.

9560. On the morning of Professor Stuart's visit did you order the removal of Case No. 1 from that room? No.

9561. Did the head attendant move the patient on his own authority? I suppose he did it in the ordinary course of duty.

9562. What was the usual time for taking the patient out of his room? Between 7 and 8 o'clock.

9563. Not between 8 and 9 o'clock? I do not think so; it might have been occasionally as late as that.

9564. Was he taken out at the usual time on the morning of the 20th of May? I think it was a little before the usual time on that morning.

9565. Do you know why the head attendant took him out? I did not ask.

9566. If you turn to Professor Stuart's report you will see he says, on page 2, "Having gone as directed, we found ourselves in a sort of courtyard, where, after a time, we found an attendant, who went to rouse the head attendant. After considerable delay the latter came, and to him I stated my office, authority, and business; but he said he could not let me see a patient without Dr. Vause's direction";—would not the Professor stating his "office, authority, and business," be sufficient to tell the head attendant the nature of the Professor's mission, and did not he and O'Brien proceed to remove Case No. 1 out of the room after he had been told the object of the visit? Yes.

9567. Did Doherty do so on his own authority? Yes.

9568. Can you give any reason why Doherty took this action? No; except that he knew that Case No. 1 was wanted, and he got him ready to come out. He would not have allowed anyone to see him without my permission.

9569. Did not the President ask you the basis and authority for Professor Anderson Stuart's visit, and do you not say it is contained in these words, used by Mr. Jeanneret when moving the adjournment of the House: "I think it behoves the Government upon the statement I have laid before the House to make full inquiry. The inquiry will prove this. That a gentleman has been for months past—for the last four months to my knowledge—kept from 5 in the afternoon till 7 in the morning, over twelve hours, in a cold stable without even a bed to lie upon, without any water, without any attendant, without any food, having upon his body nothing but his nightshirt";—was this the authority for Professor Stuart's investigation? This statement was made subsequently to Professor Stuart's visit to Bayview.

9570. Did he ostensibly go to Bayview House to see if these assertions were true? How could he?

9571. Did he tell his authority, business, and office to the head attendant, who, being aware that Case No. 1 should be seen in that room, removed him out? He was removed so that he might be seen.

9572. Do you say the patient was not removed with your sanction or request? I do.

9573. Dr. Garran asked you yesterday whether the visitors did not meet with a certain amount of opposition? I am quite sure there was no opposition by anybody.

9574. Was it not possible for the attendants to offer opposition to thwart, if possible, the object of the visit? All the time I was present I am sure there was no opposition.

9575. Could there have been opposition to Gearey and O'Brien previous to your arrival on the scene—I mean while they were waiting nearly an hour? Let us look at the evidence and see what was said.

9576. The question is, was it possible for the attendants to offer opposition before your appearance? Opposition to what, and in what shape?

9577. It has been stated by Gearey and O'Brien that they were ordered off the premises;—is that so? Certainly, and quite right too.

9578. Do you think Professor Stuart refers to that? Yes; I say it was quite right that the attendants should order them off the premises.

9579. Did you see the single room on the morning of the 20th May, with Professor Stuart and the other visitors? Yes.

9580. Did you see Professor Stuart pick up what he calls three pieces of canvas? Yes.

9581. Did he pick them up in his hand? He moved them very gingerly.

9582. Did he raise them completely off the ground? I do not think so; he raised them sufficiently to count them.

9583. Were these three pieces of covering shown to Dr. Manning as the covering which was used in that room by the patient on that particular occasion? I believe so. I believe they were the same after they had been through the laundry. I told the attendant to prepare the same three pieces of covering by having them washed and dried, and placed in the room for inspection if needed. As far as I know they were the same three pieces of canvas.

9584. If you turn to question 3003, you will see that Doherty, in answer to Dr. Manning, said some of these rugs were the same as those used by the patient, then he adds that there were three rugs, and two out of the three seen by Dr. Manning a day or two later were used by the patient the night before he was removed? Yes; that is what he says.

9585. Now was it possible for the rugs shown to Dr. Manning to be picked up one by one by one hand, and for whoever picked them up to put them on one side counting "one," "two," "three,"—what I want to

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to know is, is it possible for one man with one hand to pick up these pieces of canvas, and change them from one place to another in counting them? I think so.

9586. What was the size of each piece? About the size of an ordinary single blanket. There are two or three ways of gesticulating. Picking up pins and lifting up something very heavy from the floor are two very different matters.

9587. The very reason I am asking you this question is, because of the fact of Professor Stuart saying he went in this room, picked up three pieces of canvas in an off-hand manner, leading the Commission to believe that they could not have been adequate for a man's covering? Quite so. The description is of as much value as calling the single rooms an out-house. It is a wrong idea.

9588. Did you see Professor Stuart move these rugs? Yes.

9589. Do you believe they were a complete and sufficient covering for a man in his bed? I should have preferred better covering for that patient, but I think the covering was sufficient for the requirements of Case No. 1 at that particular time. I should have preferred more elaborate covering, but the difficulties of the case were so great that the patient destroyed ordinary blankets, and sheets were altogether out of the question. I am quite sure the size of these rugs was right, and I am equally sure the patient was warm.

9590. Did you not lead Professor Stuart to believe that morning that the patient was only occasionally put in that room? Not intentionally.

9591. If you turn back to Professor Stuart's report you will see he says, "Dr. Vause said the patient was put in the out-house when violent and especially ill?" I take exception to that assertion in my comments on this report. There I say, "The words I used were 'The patient occupied a single room when too excited to be manageable in his ordinary bedroom,'" and I did not use the term out-house as applied to the room in question, as stated in Professor Anderson Stuart's report.

9592. Taking your own words "too excited to be manageable in his ordinary bedroom";—was the patient excited every night for the whole six months? I believe so.

9593. Would not the use of the words "violent and especially ill" lead Professor Stuart to believe that the patient was only occasionally isolated? I do not know. We had but very little conversation on the subject. The whole visit was very hurried. The Professor seemed to get all the information he required when he saw the bedroom.

9594. Did the official visitors have any idea that it was only occasional treatment for the patient to be put in the single room at night? I do not know.

9595. Did Dr. Manning, as Inspector-General of the Insane, have any idea that this patient was only occasionally in the single room? The question did not arise between Dr. Manning and myself until later on in the treatment, and I did not know what he understood exactly. I was under the impression I told Dr. Manning that the patient occupied a single room at night, but how frequently I do not remember having said.

9596. Were the friends of the patient always under the impression that he slept in a room in the main building? I do not know. I told his son that he occupied a single room, and I again reminded him of the fact on the 20th of May. Then he said, in reply, "He did not know what was meant by a single room; he thought it was a bedroom occupied by the patient alone."

9597. Did you tell anyone else the patient was in a single room at night? Yes; I told Dr. Scot-Skirving and Dr. Williams.

9598. Did you tell the official visitors or Dr. Manning? I did not tell the official visitors.

9599. Did you inform the official visitors or Dr. Manning of the patient's dirty habits? It is entered in the case-book.

9600. Do you know whether the patient complained at any time of having been cold at night? Certainly not.

9601. If such a complaint had been made to the head attendant should he have reported that fact to you? Undoubtedly.

9602. Turn to question 2965. Here Doherty distinctly says the patient complained to him of being cold at night; that being so, was it not Doherty's duty to report to you? Yes; but the question is did the patient so complain.

9603. Doherty says he did? I think that answer "Yes" of Doherty's was really meant to be "No." I believe, in answering the question "Did the patient ever complain to you of being cold at night," in a lapsus he said "Yes." I think if you asked this witness the same question again, he would say "No."

9604. He was asked in question 2948 if the patient was once or twice extremely violent, and his answer was "not much";—what does that mean? It is an indefinite answer. "Extremely violent" would more befit a powerful man. The patient was not a powerful man, neither was he extremely violent; therefore I think the answer "not much" would be a fair interpretation of the question.

9605. Would that definition justify you in putting the patient in a single room? There might be great excitement without violence. He might be extremely excited, and yet not muscularly violent.

9606. Supposing Doherty had heard the patient complain of having been put in a stable to sleep, should he have brought that complaint to you? I think I have heard him say that much myself; so it would not have made much difference if he had reported it to me or not. I have heard him say, "I sleep in a stable," but I do not attach much importance to that.

9607. Were you ever aware that the night-clothes were taken away from the patient at night-time? No, not his night-clothes, but only his ordinary day-clothes. It is customary to undress single-room patients in the single rooms—to remove the outer garments and replace them with a night costume of some kind. After that the day-clothing is removed.

9608. Did you see the patient have his bath on the morning of the 20th of May? No; but I have frequently seen him have his bath.

9609. What time after Professor Anderson Stuart had left did he have his bath? I do not know; but in all probability in less than half an hour.

9610. At 7 o'clock in the morning would there be hot water in the kitchen? Yes; the attendants get up at 5 o'clock in the morning, and, as a matter of fact, there is hot water all night in the kitchen. There is a large range there which cost me over £100, and that keeps the water warm the whole of the night.

9611. If you will turn to question 800, you will see that Mr. Little, the chief attendant at Callan Park, on 7th November, when asked if the patient used the utensil now, he said, "He does now, but he would

would not at first";—then, if you turn to question 1298, you will see that Mr. Kernaghan, a warder at Callan Park, corroborates Mr. Little's statement;—how do you account for this evidence being in direct opposition to that of your own attendants upon this point? Simply from the varying changes of the case. He has used utensils frequently; then would come a change in his condition, and he would refuse.

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9612. Does not Professor Anderson Stuart say he ought to be taught to do it? So he was taught in teachable periods; but it would be useless to attempt to teach him or anybody else while in a state of maniacal excitement.

9613. *President.*] Do you account for the varying stages of the disease as the reason for these altered conditions the patient went through? Undoubtedly.

9614. We will now proceed to the consideration of Case No. 34;—do you produce the history of this case, taken from your case-book? Yes. [*Document handed in, and marked Exhibit Z.—See Appendix.*]

9615. Can you tell us briefly the particulars of the case and the circumstances under which she was admitted to Bayview House? She was admitted on the 16th of May, 1892.

9616. By whom were her certificates signed? By Dr. Beeston, of Newcastle, and Dr. Alcorn, of Maitland.

9617. Do you produce the certificates? They have been already produced. [*Exhibit C.—See Appendix.*]

9618. On what grounds was this patient admitted to your institution? Her mental disorder was melancholia, caused by mental worry. She died on the 28th of May, 1892, from melancholic exhaustion, as far as I can make out. Personally I did not see the case.

9619. Do you personally know much about the case? No; I was in England at the time, and Dr. Hetherington had charge during my absence. From the certificates, I see that she was in a state of melancholic exhaustion when she was admitted.

9620. How long was she in your institution? Twelve days, as she died on the 28th of the same month on which she was admitted.

9621. Do you remember her cousin coming to see you in connection with this case? Yes.

9622. Did she make any complaint to you? Yes; she complained to me about Dr. Hetherington.

9623. Did she complain that Dr. Hetherington had not informed her that the patient, her cousin, was in a dying condition? I do not think she told me that. Her principal complaint, as far as I recollect, was that Dr. Hetherington had not treated her with sufficient consideration.

9624. Did she say anything to you about the position of the mortuary, or about the condition of the mortuary? I do not remember her saying anything about that.

9625. According to the evidence embodied in question 3763, the cousin said she saw the body of the patient laid out in what she called a stable, there was fodder under her feet, and a couple of bags of fodder in the place; there was no window even, but only an aperture containing iron bars; she called it disgraceful; he spoke to Dr. Vause about it later on; she asked him to sue us for the money, and they would expose it, but Dr. Vause said he would not sue her;—is that statement true? Certainly not.

9626. Was the mortuary the same then as it is now? Yes; it was specially constructed for the purpose; there are no iron bars at all about it, and I have never known it used for any other purpose than that of a mortuary.

9627. Did Mrs. \* \* \* threaten to expose you in connection with these circumstances? No.

9628. Did she ask you to sue her for the money in connection with the matter? I have no recollection of anything of the kind. All I remember is that she appeared to be hurt, owing, as she said, to Dr. Hetherington not having treated her with sufficient consideration. I expressed my regret, and assured her that I did not think Dr. Hetherington would intentionally hurt anyone's feelings, especially in such painful circumstances.

9629. Was there any question of suing raised on her part? Certainly not.

9630. In her evidence, in question 3788, she said, "I asked Dr. Vause to sue me for the money owing." Do you remember this circumstance at all? No.

9631. Is the substance of your recollection in connection with this matter to the effect that Mrs. \* \* \* merely made a complaint to you about what she considered to be Dr. Hetherington's neglect? No, not neglect, but want of consideration for her.

9632. You mean on the occasion of her visit to her cousin? Yes.

9633. *Mr. McGowan.*] The only thing about this matter that I can see is Mrs. \* \* \* complained in the first instance that she was not allowed to see her cousin in the night-time, that Dr. Hetherington told her the cousin was in no danger, and that this cousin actually died the following morning. In question 3765 she says Dr. Vause seemed to infer that Dr. Hetherington had not done his duty, and that he had had the mortuary cleaned up. Did you lead that woman to believe Dr. Hetherington had not done his duty? Certainly not.

9634. Do you know whether there is any truth in the statement when this lady said Dr. Hetherington told her that her cousin had been in the habit of taking a great deal too much stimulant, and that he would make this fact public? I do not know anything about that, but I think it is very improbable that Dr. Hetherington would say anything of the kind.

9635. Mrs. \* \* \* in her evidence said that arrangements were made for her cousin to have a private room;—is that so? There is no mention about that. The arrangement was that the patient should pay £3 3s. per week. She stated in her evidence that £4 4s. per week was the amount paid. The books show that the actual amount paid for the maintenance of the patient was £5 8s., and that there was no extra charge made for the additional trouble owing to the death of the patient.

9636. Do they owe you anything yet? No.

9637. Is the same witness also wrong when she says that a private room was paid for, but was not used? There is no record of anything of the kind.

9638. Is she also wrong when she says that there was a plentiful supply of clothing taken to the institution? I do not know anything about that.

9639. In question 3790 the witness said that the matron informed her that notwithstanding there had been several boxes of linen sent to the institution all her cousin's clothes were gone. Do you know whether any complaint was made by the matron concerning this supposed insufficiency of clothing? I do not know.

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9640. When clothes are sent to the institution can they be used by the patient if wanted? I presume so. I know the matron at that time was a reliable woman in connection with clothing. She was most careful in this matter, because frequently we have had questions raised about the clothing. Friends who bring clothing for patients expect it to last very much longer than it does. I therefore gave instructions to the matron to always take down a list of everything that was brought in the way of clothing by the friends.

9641. Was the body of that patient laid out in the proper way in the dead-house? Yes; I do not see where else it could be put.

9642. *President.*] Have you the papers in connection with Case No. 30? Yes.

9643. Do you produce them for the use of the Commission? I do. [*Document handed in, and marked Exhibit A1—see Appendix.*]

9644. When was this patient admitted to Bayview House? On the 29th of December, 1884.

9645. Under what circumstances was she admitted? She was transferred from Mr. Harcourt's asylum in Melbourne.

9646. Who signed her certificates of admission? Dr. Marano and Dr. Roth.

9647. Do you produce them for the use of the Commission? I do. [*Document handed in, and marked Exhibit A2—see Appendix.*]

9648. What is the substance of the grounds on which the medical gentlemen you have named recommended that this patient should have further treatment in a licensed house for the insane? Dr. Marano says she was under delusions of persecutions, particularly by the Ritualists, whom she blamed for all her troubles, which statement is without foundation. She makes rambling statements, is emotional, and very nervous. Her sons state that she takes likes and dislikes, and is apt to destroy or make away with her apparel, and abuses her attendants if annoyed.

9649. What does the other medical gentleman say? Dr. Roth says she has delusions of religious persecution, and also imagines that one of the patients at Cremorne Asylum went there specially to protect her from persecution. She also had persecutions of this nature while she was in Scotland. I believe she thinks now that I am the one following her about to protect her from the persecutions of various people. She believes that he, whoever he may be, has come to Bayview House on the same errand. She has an idea now that I follow her as someone else did in Scotland. Although she is so rambling she is anxious to impress one with the truth of her statements. If she takes a dislike to any article of wearing apparel she destroys it. She set fire to her room once.

9650. At the time of her admission were these peculiarities still in existence? Yes.

9651. What was the previous history of this patient? She had resided many years ago at the Creighton Asylum in Scotland. About eight years after that she was removed to Mr. Harcourt's asylum, Cremorne, in Victoria. During the time that she was at Cremorne her sons had taken her out on leave of absence, but they were obliged to return her to safe custody, because of the impossibility of keeping her in their own houses.

9652. Is her present condition very much the same? It is very much the same. She is in capital physical health, but mentally she requires treatment.

9653. Do you know her sister, Miss \* \* \*? Yes.

9654. Have you had a number of conversations with her relative to the detention of Case No. 30? Yes.

9655. In fact have you had altercations with her which eventually led to legal proceedings? Yes; but only once.

9656. Do you think that Miss \* \* \*, from what you have seen of her, is a suitable person to take charge of her sister, Case No. 30? I do not.

9657. On what grounds do you form this opinion? I do not think Miss \* \* \* mental condition is sufficiently good in the first place. The patient's sons are quite prepared to take charge of their mother whenever she becomes well enough for them to do so. They are decidedly opposed to their aunt having charge of their mother. These sons are in good social positions, while, on the other hand, Miss \* \* \* has no suitable abode, no fixed residence, and very small means. If anybody should have charge of the patient it should be her sons and not her sister.

9658. As a matter of fact, was an application made to the Supreme Court for powers to transfer the custody of the patient to the sister? Yes.

9659. Did the Court decline to comply with that request? Yes.

9660. Do you know personally the sons of this patient to whom you have referred? Yes; I know two of them.

9661. From conversations you have had, and from what you know of them, do you think there is any truth in the statement made by Miss \* \* \* when she says these sons dislike and refuse to meet their mother? Certainly not; both of them, as far as I have seen, are exceptionally affectionate sons.

9662. Do they seem to be anxious for their mother's recovery, and that she should be put under their care? Undoubtedly. I do not think either would keep his mother at Bayview House a moment longer than is absolutely necessary. If they thought they could manage her at all they would take her either to one house or the other immediately. I am perfectly satisfied on that point.

9663. Do you think it is undesirable to place Case No. 30 under the control of her sister, Miss \* \* \*, in view of all the circumstances you mention? I do, most decidedly.

9664. *Mr. McGowan.*] How often do these sons call to see their mother? At varying times. The one residing in ——— comes to Sydney once or twice a year.

9665. Do all the sons live out of this Colony? Yes; I think so. One lives in Victoria, one lives in ———, and the other is travelling. The latter occasionally passes through Sydney, and then, I believe, always comes to Bayview House to see his mother. The one in ——— I am constantly communicating with by letter, and whenever he comes to Sydney he sees his mother.

9666. *President.*] Do you remember Case No. 29? Yes.

9667. Do you produce the papers in this case? I do. [*Documents handed in, and marked Exhibit B1—see Appendix.*]

9668. When was this patient first admitted to Bayview House Asylum? On the 31st of May, 1881.

9669. Under what circumstances? She was admitted upon the medical certificates of Dr. Fortescue and Dr. Hodgson in the first instance. She had been previously in Gladesville. Dr. Fortescue, in his certificate, said the facts indicating insanity observed by himself were "incoherence and rambling in conversation,

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conversation, restless and excitable in manner, being suspicious of her nearest friends, charges them with bad intentions towards her, complains that she is misunderstood, and that everyone is against her."

9670. What did Dr. Hodgson say in his certificate? He said, "excessive haughtiness, violent attacks upon domestics, excessive suspicion of her family's conduct, occasionally supreme contempt for any or all of her friends, and undue inattention to her personal attire." That seems to cover her case.

9671. What is the subsequent history as regards the retention of this patient? She had leave of absence on the 12th of December, 1882. After residing with her friends for a time she returned to Bayview Asylum on the 7th of August, 1884.

9672. Do you produce the papers in connection with that leave of absence? Yes. [*Document produced, and marked Exhibit B 2—see Appendix.*]

9673. I ask you this question because her brother made some statement concerning this leave of absence; therefore, do you produce the papers of that leave of absence? Yes.

9674. Will you now please go on with the history of the case? Yes. She was discharged on the 20th of August, 1891, and readmitted on the same day on the request of Mr. \* \* \*

9675. Is there not something peculiar in the fact of a patient becoming discharged and readmitted on the same day? Yes; that is explained by the following letter from Mr. \* \* \*, who made the application. This letter says, "The father of Case No. 29, who signed the request on which she was received into the Licensed House for the Insane at Cook's River, being dead, I, the undersigned, being the person who made the last payment on behalf of the said \* \* \*, now direct, under the provisions of sections 84 and 85 of the Lunacy Act, that she may be discharged with a view of fresh proceedings being taken for her readmission under new request and certificate in accordance with section 8 of the Lunacy Act \* \* \*, 13th of August, 1891."

9676. What was the subsequent history of the case? Since readmission she has been much the same as before. She complains of insults being heaped upon her, but fails to specify any particular insult. She says she has been reduced to the state of a menial, although she has no menial duties to perform. She complains that her clothes are insufficient, which is not the case.

9677. Is the patient visited by her elder brother from time to time? She visits her brother from time to time, and goes out driving and walking, occasionally attends the theatres, concerts, and public gardens, accompanied by a nurse.

9678. Is the patient still under treatment? She is still under treatment, and there is very little change in her condition mentally.

9679. Are you aware that her younger brother was desirous of taking charge of his sister, supposing she is discharged from your institution? Yes.

9680. Do you know both her brothers? Yes.

9681. From what you have seen of interviews that have taken place at the institution between the younger brother and his sister, do you believe he is a proper person to have the custody of his sister? Certainly not.

9682. On what grounds do you make that assertion? Principally from his conversation with myself. I have not had many conversations with him, but from my observations of the man, I have come to the conclusion that he is not a suitable person to have charge of his sister.

9683. Were you in Sydney at the time he made an application to the Supreme Court for the custody of his sister? No.

9684. Are you fully aware of the desire of the elder brother that she should remain in your institution, and that he is satisfied with your treatment of the case? Yes; and I may add that if anyone could look after the patient outside of an institution of this kind her elder brother would be able to do so. I am quite sure that in his own mind he knows he could not keep her in his own house with any degree of comfort either to herself or to the members of his family.

9685. *Mr. McGowan.*] When you received this fresh application from Mr. \* \* \* would it be necessary for you to get fresh medical certificates? Yes.

9686. What are the names of the doctors who signed those certificates on the latter occasion? Dr. Ashwell and Dr. Mark Henry Long.

9687. *President.*] Do you produce the particulars of Case No. 6 in your institution? Yes; they are in the case-book produced.

9688. What are the particulars with regard to that case? He was admitted to Bayview House on the 20th of January, 1887, he was transferred from Callan Park, to which institution he was admitted on the 3rd of December, 1886. Before his admission he was rambling and incoherent in speech, without cause. He tried to destroy himself by jumping out of a window; was subsequently found rambling along a railway line. He had exalted ideas of wealth on admission, and afterwards he was at times very excited, always boasting and very talkative. He had peculiar ideas of exaltation. There was some impediment of speech.

9689. Was he paralysed? Yes; there was marked tremor of the upper lip and tongue. These were the conditions of his case while in Callan Park. After arrival at Bayview House he was very weak, dull, and heavy for a time. He has been a wet and dirty patient during the whole of his residence at Bayview.

9690. In the evidence given by the witness Mackenzie it is stated that this patient was not kept clean, and that he did receive proper attention;—do you remember the man as a patient? I do distinctly.

9691. Can a charge such as that made by Mackenzie be true? It cannot be true. The patient was in such a weak state of health that I believe the slightest negligence of him would have resulted in death.

9692. Do you endorse the statements made by the witness Watt and by Dr. Creed, to the effect that if this patient had not received exceptionally good treatment most serious consequences, if not death, would have ensued? Yes.

9693. *Mr. McGowan.*] In question 2845 does not the witness Doherty say the patient is there now? Yes.

9694. In question 2847 he is asked if he is dirty in his habits, and he says not so very dirty;—does not Doherty mean that he is a very wet and dirty patient? I think he would have answered the question properly by saying he has been a very wet and dirty patient, but he is much better now.

[The further examination of this witness was adjourned until the following Friday.]

FRIDAY, 1 FEBRUARY, 1895.

[The Commission met at 11 a.m. at the Board Room, Chief Secretary's Office.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
ESQ., M.D., INSPECTOR-GENERAL OF THE  
INSANE.ANDREW GARRAN, Esq., LL.D.  
JAMES SINCLAIR TAYLOR MCGOWEN,  
Esq., M.L.A.

A. J. Vause, Esq., M.B. of C.M., examination continued:—

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9695. *President.*] I asked you to obtain for the information of the Commission such particulars as you could possibly get from Mr. Reuss, who formerly, I understood, was architect for Bayview Asylum during Dr. Tucker's time, with reference to the building of your isolation rooms on the male side of the institution. Have you obtained any information on this particular point? Yes, I have. In accordance with the wish expressed by you, sir, as President, I wrote to Mr. F. H. Reuss as follows:—

Dear Sir,

Bayview House, Cook's River, 30 January, 1895.

I believe you acted as architect for Dr. Tucker in the various additions and improvements he made to the Bayview House property. Will you be kind enough to tell me whether the single rooms on the male side of the house were built under your instructions and with the knowledge of the purpose to which they were to be applied?

I remain, &amp;c.,

A. J. VAUSE.

F. H. Reuss, Esq., Architect.

9696. Is the building you refer to here the one that has generally been referred to as an outhouse, a stable, and so on? Yes. In reply to that letter I received the following communication:—

Dear Sir,

Hermitage, 72, Pyrmont Bridge Road, Glebe Point, 31 January, 1895.

In reply to your inquiry relative to a seclusion room at Bayview, I beg to state that about the year 1868 to 1869 I acted as architect to Dr. Tucker in the erection of a dormitory, and at the same time I erected a building for a seclusion room, all under the doctor's directions. The builders were Messrs. Smith and Bennett, of Woolloomooloo. The walls were padded about half-way, and the ventilation was a very great point with Dr. Tucker, and received special attention.

Yours truly,

E. H. REUSS,

Architect.

The position of the building is marked "A" on the plan signed by me.

I hand in these letters and plan for the perusal and use of the Commission. [*Documents handed in and marked Exhibit C 2—see Appendix.*]

9697. Whether this building was approved of in Dr. Tucker's time or not, has it since been examined and approved by the Government authorities? Yes.

9698. Has it been seen by the official visitors, by the Inspector-General of the Insane, and numerous medical gentlemen from time to time? Yes.

9699. Have all approved of it for the purposes for which it was erected? Yes; as far as I know.

9700. Passing away from this subject, do you remember Case No. 23? Yes.

9701. Have you the particulars of her case? Yes; they are in the case-book produced. From entries there I see she was transferred from Parramatta to Bayview on the 30th of May, 1884, her history being that she was very mischievous, difficult to manage, and needing a single room at night. She required to be fed by the use of a stomach pump, and was dirty in her habits, and persisted constantly to denude and expose herself. On admission to Bayview she was in that state, and although she improved somewhat her dirty habits continued the whole time she was there.

9702. We have it in evidence that she was rather harshly treated—or, in other words, that a nurse scrubbed her down with a broom for the purpose of cleaning her body;—did you ever receive a complaint to that effect? Not the slightest. She was under my observation daily, and never presented the appearance of having been harshly used in any way.

9703. Did you ever hear any complaint either from nurses or the matron in respect to this patient? Not a word from anyone.

9704. Could this scrubbing down have occurred without you having some report upon it? No; not to any extent. It would be impossible for such a practice to be followed and me not to know of it. I can understand a nurse, for the purpose of making mischief, doing something of that kind, but such a practice could not be followed in any ordinary way.

9705. If a nurse scrubbed a patient down with a broom would marks of such treatment be left upon the body? Certainly.

9706. Would it not be possible that you would have no opportunity of examining the body of that patient? I feel sure that such an offence as this would have been reported to me had it occurred to any great extent.

9707. Did the matron supervise the bathing generally? Yes, always.

9708. Would she report a matter of that kind to you immediately? Yes, undoubtedly.

9709. Would she see this patient subsequently, even if she did not happen to be present at the exact moment such a thing might have been done? Certainly.

9710. Was anything of the kind ever reported to you? Certainly not. As a matter of fact, this particular patient was improving in health, and if she had been subjected to such treatment most likely the opposite would have been the result.

9711. *Mr. McGowen.*] Do you state that the matron supervises the bathing of all patients? Yes.

9712. Are all the patients bathed at the same time? The Government patients are bathed a few together at a time.

9713. Was it ever the practice at the institution for one patient to help to bathe another? No.

9714. The only evidence we have on this point is from the witness Annie Marshall, who was asked if she knew of a nurse having been cruel to a patient. In reply, she said she could not say that much. She never saw a nurse strike a patient. There was one patient named (Case No. 23) whom another patient struck with a scrubbing brush while in her bath. The evidence seems to be very conflicting. It is said in another place that Nurse McBride was cruel to a patient. What have you to say about this? I am perfectly sure such a thing as one patient scrubbing another would not have been done except as an accident. If it had been done I should have heard of it.

9715.

9715. *Dr. Garran.*] Supposing one or two or a few patients were together in a bathroom, might not one take up a brush and apply it to another one? One patient might just touch another with a brush, but that would not be what it is evident this witness wished to convey.

9716. Still might such a thing have happened? Certainly, it might have happened; but still two patients are never allowed in a bathroom at one time alone.

9717. In any case, do you think such a thing could have been done wilfully and continually by either a patient or nurse without the fact having been brought under your notice? Most undoubtedly it could not have occurred.

9718. Particularly if carried on to any extent? Certainly; that is just what I mean. Such a thing might have occurred momentarily as an accident, and have been magnified into a practice by a hostile witness; but in the general bathing the matron was always present.

9719. Was she present on the occasions of a special bath? Yes.

9720. *President.*] We will now take Case No. 12;—can you furnish the Commission with the particulars of this case? Yes; the patient was admitted on the 8th of March, 1894.

9721. What is the diagnosis of that case? It was a case of acute melancholia of recent origin. She was in excellent health until three weeks before admission. Her lover had left \* \* \* for Sydney, and the patient said he had a down on her because he pulled his hat over his eyes when saying good-bye. She fretted and could not sleep at night. She would sit up talking all night, but would work hard during the day. She got low-spirited and lost her appetite, and became thin. She would sit watching the road as if expecting her lover, though she knew he had gone to Sydney. She was aware that she was making herself ill by fretting, and tried to overcome it by hard work, but was unable to do so. During the last week prior to admission she ceased to work, and with great difficulty was induced to take small quantities of nourishment. She was in great dread of being removed from home, saying she would be burnt if she was. She had had hallucinations of seeing blue lights, but was free from suicidal or homicidal tendencies.

9722. Do you hand in papers connected with her case? Yes. [*Document handed in, and marked Exhibit D1—see Appendix.*]

9723. What was her condition on admission? On the 8th of March she tried to injure herself by knocking her head on the floor and bedstead. With difficulty she was got to take a little nourishment.

9724. Was that on the day she was admitted? Yes.

9725. What happened after her admission? She received treatment.

9726. What treatment? Chloral hydrate, 20 grains; bromide of potassium, 15 grains; bromide of ammonia, 5 grains. Her food was bread, milk, eggs, soup, and puddings, together with fluid nourishment. She slept well, ceased moaning, took a fair amount of liquid, but had to be fed with a spoon. Her pulse was still weak, and she was constantly trying to undo her dress. She would neither dress nor bath herself.

9727. Did she require treatment in a single room soon after admission? I believe so; within a short time after her admission she was treated in a single room.

9728. Do you remember her being placed there? Yes.

9729. How soon after admission did that occur? I cannot say exactly, but it was a short period after her arrival. It has been explained to me that she was first placed in the hospital-room, and that this room was shown to her father as the one occupied by his daughter. I believe she did actually occupy it for a time, but when she was removed to the single room I do not remember. I know she was an excited patient at night; she was very noisy, dirty in her habits, and occupied a single room.

9730. Was she quiet during the day-time? No; she was very restless.

9731. Did she require to be placed under restraint during the day? No; I do not think so.

9732. On whose orders was she placed in the isolated room during the night? On my orders; and she was supplied with the ordinary bed-clothing.

9733. Had she a bedstead in this room? No.

9734. Was it necessary to place her bed on the floor? Yes; there were three or four beds on the floor.

9735. Of what, medically, did her subsequent treatment consist? She had a tonic medicine in the day-time and sleeping draught at night.

9736. Was this treatment conducive to her recovery? Yes; she became more tranquil, so much so, that when her father saw her, although it had been his intention to remove her from the establishment in consequence of the reports that had been made public in connection with Case No. 1, he expressed himself almost in these words, "I do not care, doctor, what they say; I will not remove my daughter from your care." He led me to suppose he and the members of his family had been much distressed on reading the reports in the newspapers about Case No. 1. He brought a letter to me from Dr. Manning, asking me to arrange for the transfer of the patient according to his wish, but when he saw the patient he said he would not remove her on any account.

9737. Was he perfectly satisfied with your treatment of his daughter? Yes.

9738. How soon after that was she discharged? About a month or six weeks; when she was well enough to go home.

9739. Did you send a prescription to the girl's father subsequently? I gave him two prescriptions at the time—one for a tonic and the other for a sedative. Subsequently he wrote to me, saying his daughter was still restless, and asking if I would send a fresh prescription. I then sent him another prescription, advising the administration of a small quantity of opium.

9740. Was that prescription for a very small quantity? It was very much smaller than is ordinarily required. It was specially written, so that if by accident the entire quantity of opium prescribed had been taken at one dose it would not have hurt the patient.

9741. If it was so small in quantity, was it intended to give, and would it have given, relief? Certainly; because the patient had gone beyond the acute stage in her ailment.

9742. Do you remember the evidence of Maggie Macleod, when, in question 1700, she said patients complained of feeling ill after having taken sleeping draughts? Yes.

9743. In the next question she was asked who did so complain, and her reply was that Case No. 12 used to be terribly bad the next morning after taking these draughts;—did you ever hear anything of the kind in connection with this patient? No.

9744. Is chloral hydrate generally prescribed in cases of this kind? Yes; it is prescribed for the purposes you refer to.

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- Dr. 9745. Is it prescribed only for lunatics? No; I think it is used for cases of excitement in ordinary practice.
- A. J. Vause. 9746. Did the girl's father on that occasion express himself as being perfectly satisfied with your treatment? Yes.
- 1 Feb., 1895. 9747. Did he make any special complaint at any time in connection with the case? I understood him to be enthusiastic about the treatment; in fact he was more than satisfied with the results.
9748. *Dr. Manning.*] Did the patient have a night nurse every night she was in the single room? Yes, as far as I know.
9749. Would the nurses have any means of giving medicines other than those specially prescribed for a patient? Certainly not.
9750. Must the night sleeping draught given to the patient have been the draught that appears in the prescription-book, the details of which entry you have given to us? Yes.
9751. *Dr. Garra.*] In question 1749 the witness Maggie Macleod says that when this patient refused to take the draught she would force it down her throat;—do you think it was necessary to use force? I think it is probable that there may have been some objection on the part of the patient to taking this draught, but Macleod could not have forced it down her throat. I know no way of forcing a draught down an unwilling patient's throat except with the aid of appliances, special appliances, which were not available for any nurse.
9752. If this nurse had used force would the fact have been reported to the matron, and would the matron have reported to you? Yes.
9753. Was any such case reported to you? No.
9754. When you found it necessary to put this patient in a single room for treatment had you any other place than one of the rooms in the row along the verandah? No.
9755. Were you obliged to use one of these rooms? Yes; and I could not have used a more suitable room for the purpose.
9756. Do you say that, although these rooms are on the Government side of the institution? Quite so.
9757. Does your establishment contain single rooms for private patients on the female side? No; not specially set apart for private patients. I have no other single rooms in the female division except those in the row formerly used by Government patients.
9758. *President.*] Were these single rooms on the female side used indiscriminately for private and Government patients? Yes.
9759. On some occasions did private patients express a distinct wish to sleep in these single rooms? Yes; they would be glad to do so for months together. I have had two of these rooms occupied in this manner for a long time, the patients having the ordinary bedstead and bedding, &c.
9760. *Mr. McGowen.*] Did Mr. \* \* \* know his daughter was sleeping in a single room? I do not think so; that is not a matter I should think of reporting to the friends of any patient, not at once at all events.
9761. Was he given to understand that his daughter was sleeping in a different room altogether? Not that I am aware of.
9762. Have you said that it was customary that when Case No. 12 was put into a single room at night for a nurse to be on night duty, to attend to her requirements? Yes.
9763. Are you positive on that point? Yes.
9764. How often was this patient put into a single room to sleep? I cannot say.
9765. Should the fact not have been reported to you? It was by my orders that she was put in the room, and I had her placed there as part of the ordinary treatment of her case.
9766. Was she an excitable patient? Very excitable.
9767. I see by the evidence on page 47, question 740, that witness Macleod says Case No. 12 was not an excitable patient, but that she was always crying and moaning and groaning about her home, and that she was not violent in any way. With regard to the question on page 60, number 2314, Josephine Mackay says Mr. \* \* \* was not shown the cell in which his daughter slept, but that he was shown a different bed-room altogether by Mrs. Gilchrist, who, on that occasion, asked Mackay which was the best bed-room, and she told the lady superintendent the one near the door;—can you explain this in any way? He would be asking which was her bed-room in the first instance, and no doubt would have been shown this room. I do not think he ever saw a bed-room afterwards. He was never shown a bed-room when she was under treatment in the single room.
9768. Do you consider that she was a fit subject for single-room treatment? Yes, decidedly.
9769. Unless you had a sick case in a single room was there a night nurse on duty? No; if there happened to be a sick case in one of the single rooms a nurse would be on duty every night to look after the requirements of that sick patient. There was not a night nurse for the chronic cases.
9770. Did you ever consider this patient to be a sick patient when you put her in the room? Yes; she was in a condition that required watching.
9771. Is there any truth in the statement that nurses had to resort to subterfuge to get a patient to take a drug? Not that I know of.
9772. Was subterfuge resorted to by any of your nurses? I do not know what you mean.
9773. Were the drugs put in their food or drink? Oh, yes, certainly.
9774. *Dr. Manning.*] Do you say that this patient was suffering from acute melancholia? Yes.
9775. Is that a condition of lunacy which is usually accompanied by great excitement? Yes.
9776. Although there may be excitement, does it follow that there should be great violence? No.
9777. Would a case of this kind require, while in the acute stage, the attention of a night nurse? Yes.
9778. For that reason did you employ one to look after the patient, Case No. 12? Yes.
9779. Is Mrs. Gilchrist, your lady superintendent, well acquainted with all parts of the establishment? I think so.
9780. That being so, do you think it probable she would, on the occasion of the visit of a patient's father, ask any nurse to show her the best bed-room? No, I do not think it is probable.
9781. *Mr. McGowen.*] How often did Case No. 12 sleep in a single room? I do not know how long she occupied the room, but I should think for about a fortnight or three weeks.
9782. Did you not say, in answer to a question the other day relative to an entry in the case-book regarding Case No. 1, that it was customary at times to make an entry in the case-book of the initial treatment of patients in a single room? Yes.

9783. Did you not say that on the initiation of that kind of treatment you made this entry in your case-book? You misunderstood me; I did not say initiation; I said the initial treatment of the case was entered. That stamps the treatment of the case. For the first week or so a daily record is entered in the case-book according to the case-book orders. In Case No. 1 I made a daily entry for a week or ten days, showing the characteristics noted in connection with the case.

9784. Shortly after Case No. 12 came to the place was she not put into a single cell? Yes.

9785. Was that the initial treatment for her disease? It was near the initial treatment in her case.

9786. That being so, did you enter in your case-book, like you did in case No. 1? No; I do not think I did. Perhaps it would have been better if I had. At this time my attention had not been directed to entering single-room treatment in the case-book like it has been during the sittings of this Commission.

9787. But had you not entered up Case No. 1 previous to the admission of Case No. 12 to your asylum? Perhaps so; but I must also tell you that I did not write up the last case at all. I believe it was written up by Dr. Ramsay. [*Case-book produced and examined by witness.*] Yes, the entry is in Dr. Ramsay's writing.

9788. Is there any entry in that book relating to the single-cell treatment of Case No. 12? I do not see any; there is no entry.

9789. Do you explain this omission by the fact that you did not make up the case-book? I did not write up the case, and if I had written it up I do not know that I should have made any special point about it, because I regard single-room treatment as ordinary treatment. Perhaps by a Commission like this much more importance is attached to it, but I regard it as only a means of ensuring benefit for the patient.

9790. Since the removal of Case No. 12 has her father expressed himself as satisfied with your mode of treatment? Certainly, personally and by letter.

9791. Have you seen him subsequent to the letter referred to having been written? Only in this room. I have not seen him since he gave evidence before this Commission.

9792. *President.*] Have you any particulars of Case No. 2? Yes.

9793. Will you kindly state the previous history of this case, the date on which the patient was admitted to Bayview House, and any other facts you desire to mention? Yes.

9794. As you are aware, Dr. Manning has already given some particulars of this case, but will you state his history from data you have in your own case-book? Yes. This patient was admitted on the 20th of December, 1882, suffering from subacute mania. I hand in papers relative to his condition and treatment. [*Documents handed in, and marked Exhibit E 1—see Appendix.*] The certificates of admission were signed by Drs. Eagan and Brady. These state at times the patient was violent, very excited, and irritable, and threatened to make away with himself; got into a fit of temper if at all contradicted, and attacked the warders in charge. The attack came on about fourteen days before he was admitted, while returning thanks at a dinner given by his supporters, after having been defeated for the Patrick Plains electorate. He was taken to the reception house, and while there effected an escape by a window 10½ inches by 9½ inches, distance 24 feet from the ground. He was recaptured and brought to Bayview House. He slept in a single room the first night, and was visited specially every hour until 1 a.m., and seen every two hours afterwards. He was given a sedative draught. On the 23rd of December, three days after admission, he tore up a sheet during the night, and with it constructed a rope with which to escape. He was very excited. On December the 24th he concealed a knife, and became very troublesome when questioned about it. One of his characteristics was exalted ideas of his own powers. On the 11th of the following January he effected an escape from No. 2 dormitory before 5:30 in the morning. On January the 12th he was discharged by the authority of his wife, under the 84th section of the Lunacy Act. He was admitted to the Hospital for the Insane at Gladesville on the 22nd of the same month. He was readmitted to Bayview House on the 14th of May, 1883; was very talkative, and continually boasting of his escapes from this and other institutions. He said then there was not a place in the Colony that could hold him if he did not choose to stay. He was more or less excited during his stay at Bayview House. On the 6th of June he was interviewed by Dr. Harper-Crew, and detailed the whole of his experience since his electioneering troubles, particularly mentioning his nude condition in Sussex-street, when he wished his wife's sister to come into the room to him, distinctly stating that the females of his family were in the habit of seeing him go about the house in a nude state. He failed to see anything indicating insanity in all this. On September the 6th, 1883, he was discharged from Bayview House, under the 84th section of the Lunacy Act.

9795. Did you hear the evidence of William George Dickson in connection with this particular case? Yes.

9796. Do you consider Dickson to be competent to express an opinion regarding the character of this case? I do not.

9797. Had this witness any other experience of this patient except having remained a few weeks in attendance on him? Not at Bayview House. I believe he had had previous experience elsewhere in lunacy work as an attendant, but he had no opportunity of knowing anything of the history of this case. Case No. 2 was a remarkably plausible individual. Without any knowledge of his actions I can easily understand anyone being carried away by his conversation.

9798. In question 421 this witness says he always found the patient to be quiet in demeanour, and that there was no necessity to treat him as a refractory patient; he was however placed in a dark cell every night in the week,—what have you to say to that statement? He was not treated as a refractory patient. He had ordinary bedding and bed-clothing in the single room. When he escaped he did not escape from a single room. He was removed from the single room at his own request within a short time after his admission. He escaped from an ordinary dormitory while at Bayview.

9799. From the history of this case given by Dr. Manning, as well as from your own observations, did you consider it absolutely necessary to adopt the measures you did in his treatment? Yes.

9800. In order to protect him from himself as well as for the safety of others? Yes.

9801. Passing on, I may state that this witness, in question 445, referring to Case No. 3, says "he was strapped in a chair with a strap round his waist, and muffs on his hands fastened to the straps; the sight was a shock to him, for he heard on making inquiries that he had been sitting in that position from between 8 and 9 in the morning. He said, 'That man wants a bath at once,' and without consulting anybody he gave him a bath, although he had not been twenty minutes in the asylum; he consulted no one, and no one consulted him, and when he talked to the attendant about the case before he took the action

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action he did, the attendant said it would be simply loss of time to bath a man like Case No. 3";—that is his evidence, and are such statements correct? First I will hand in my case-book notes on this patient. [Document handed in, and marked Exhibit F1—see Appendix.] The particulars as stated by Dickson are not altogether correct. The patient was badly paralysed and very weak. Occasionally he required to be supported in a chair by some means, otherwise he would have had to remain in bed. I think he was better sitting up than in bed, and whatever means were used to keep him from falling out of his chair were used with my consent.

9802. Do you not observe that the witness says about not being twenty minutes in the asylum before he gave the patient a bath, he doing so without consulting anybody, and without anybody consulting him? Yes; I see the evidence on this point. Case No. 3 was a wet and dirty patient; he frequently defecated in his chair. If an attendant saw that this had happened it would be his immediate duty to clean the patient. If he saw the patient in a dirty condition as he says he did, and did not at once clean him, he would have been guilty of neglect of duty.

9803. As a matter of routine was it the duty of this attendant to perform such services with this patient under the circumstances? Yes.

9104. Is it correct that the patient improved considerably in health and condition while this attendant was there? I do not think so. He temporarily improved for a time, then gradually sank and died from paralytic exhaustion.

9805. Do you deny that there was any neglect in this case? I do.

9806. *Mr McGowan.*] In question 2,312, the witness, Josephine Mackay, in answering a question, said the father of Case No. 12 came to see her. In further questions the same witness said he was not shown the single room in which his daughter slept. He was shown a different bedroom altogether by Mrs. Gilchrist, who, on that occasion, asked her which was the best bedroom, the answer being, "the one near the door." The father's evidence is to the effect that two or three days after his daughter was admitted to the asylum he asked to see her sleeping apartment, and Mrs. Gilchrist took him round and showed him a room she slept in. He was next asked if his daughter had told him anything which led him to believe the room he was shown was not the one she used, and she told him she never slept in the room shown to him by Mrs. Gilchrist;—can you give any explanation regarding these answers? Yes. If you go a little further on in the father's evidence you will see that he says, in answer to a question as to whether he was satisfied with the treatment his daughter received at Bayview House, that it would be very hard for him to come to any other conclusion because his daughter might be wrong in her statements to him. He added that when she was at Bayview House she was not capable of looking after herself, and he knew that now she was as well as ever she was. Irrespective of her father's evidence, I am quite sure the daughter occupied a hospital room, and that he did not know whether what his daughter told him was a true relation of facts or not.

9807. Do you know anything about Mrs. Gilchrist having shown a bedroom to the father of Case No. 12? She told me she showed him the room his daughter occupied when she was first admitted to the institution. On this occasion she showed him the hospital room, which is just like a single room, with the exception that it contains a wash-hand-stand and other necessaries. Otherwise, I think this room is rather smaller than the single rooms.

9808. Is it a fact, as Dickson says, that when he volunteered to walk Case No. 3 about he was allowed to do so? I see no objection that I can take to that statement except this—the idea of walking that patient about did not originate with that particular attendant. It was his duty to walk the patient about as other attendants did, but to arrogate to himself the credit of doing so I certainly think amounts to throwing a false light on the case.

9809. In Question No. 445, the same witness states that this patient was strapped in a chair with a strap round his waist and muffs on his hands fastened to the straps;—is that true? I have no doubt the patient had some protection from falling out of the chair; beyond that I cannot go. His treatment is entered in the case-book, and I daresay he wore muffs once or twice on account of his destructive habits. He was a paralytic patient, and would have fallen off the chair if he had not been supported in it.

9810. The same witness says that on making inquiries he ascertained that the patient had been sitting in that position from between 8 and 9 o'clock in the morning;—is there any truth in that? The patient might have sat there for an hour or two at a time; he was obliged to be kept in this chair or in bed, for he could not move about. He was in a special chair, made with long arms, specially for his use. I could not get a cane chair to suit the case, and it was one with a canvas back. He could lie full length in it, and it was designed in view of the fact that when lunatic patients of this class once got back in a chair of this kind it is difficult for them to tumble out, especially with a sheet or strap under his arms.

9811. In question 446, the witness states that when he first saw this patient his legs were cramped, his clothes were saturated with urine, and when he tried to walk after being unstrapped, he could not do so without help as his legs were so cramped; and further, that the witness was not there a month before the patient could walk across the lawn by the aid of him holding him by the sleeve;—is that true? That is a grossly exaggerated statement. The patient was under my daily observation; I took particular care of him because his sister was so anxious about him, and visited him at very frequent intervals. The man was always under my care, and I certainly never saw anything of the kind.

9812. Do you think that an attendant, newly arrived like Dickson, could alter the treatment of this patient without consulting anyone? I do not think so; I do not think the treatment was altered. I daresay he was requested by the senior attendant to do certain things. Bathing the patient when in a dirty condition would be his particular duty.

9813. Does he not say that when he spoke to the attendant about bathing this patient the attendant replied, "It would be simply loss of time to bath a man like Case No. 3"? I look upon that as an untrue statement. I do not believe it.

9814. Is it a fact that there was a considerable improvement in the patient's health shortly after he arrived at the institution? I do not know whether the improvement was noticeable at this particular time. I know he did improve temporarily, but gradually his disease took the ordinary course. He had to remain in bed; bed sores followed, and eventually he died from paralytic exhaustion. He was in bed for weeks, and everything passed from him as he lay. Cases of this kind are particularly difficult, because of paralysis of the sphincter muscles, the patient losing all control over himself in this direction.

9815. *President.*] Have you the particulars of the case of Case No. 4? Yes; they are in the case-book.

9816.

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9816. What are the particulars of his case? He was 87 years of age, suffering from senile dementia, and was admitted on the 7th of November, 1893.
9817. Were his symptoms the usual symptoms of senile dementia? Yes.
9818. Did you hear the evidence given by the witness Mackenzie relative to this case? Yes.
9819. If you will turn to questions beginning at No. 927 you will find certain evidence that requires explanation. This witness states that case No. 4 received an injury to his head through falling out of bed and hitting his head against the wall. After this injury occurred this witness says—and he was particularly warned to bear in mind that he was on his oath—that the wound was attacked by rats;—have you any specific recollection about that particular matter? Yes; I saw the case and dressed the wound.
9820. I will refer you to Question 935, which is as follows: "Now I want you to be careful and remember you are on your oath. It has been given in evidence here that the patient was attacked by rats;—is that a fact? Yes, it is." "Within your personal knowledge? Yes." "Did you see it? Yes, I did." "Did you complain to Dr. Vause about this occurrence? No, I did not, but I complained to the head attendant";—have you any personal knowledge of these circumstances? No; I simply heard that someone had said the wound looked as though it had been attacked by rats? I laughed at the idea, for the wound was small, having a granulated surface.
9821. Is that matter entered in your case-book? Yes.
9822. What entry have you about this wound? As a matter of fact it was an accident, and as such is entered in the medical journal. The entry is to the effect that on the 2nd of February Case No. 4 fell and sustained a slight scalp wound.
9823. Have you any reference in your case-book regarding the treatment of this wound? There is an entry to the effect that on the 2nd February, 1894, this patient sustained a small abrasion on the scalp by falling from the side of his bed. It was dressed with carbolic dressing, and rapidly healed. Some delay occurred owing to the patient removing the dressing and rubbing the affected part. This is the substance of the entry in the case-book. I distinctly remember the case because of the difficulty experienced in retaining the dressing on the wound.
9824. When was that entry made in the case-book;—was it subsequent to or before the discharge of the patient? I cannot say. It was made shortly after the accident happened, but I am not certain about the exact time the case was written up.
9825. Do you think it was likely that the entry was made after the patient was discharged? Perhaps so.
9826. Can you tell us whether the wound was well when the patient left the institution? I am not quite sure. I think it was nearly well.
9827. After having heard the evidence given by the witness Mackenzie, and from the entries in your case-book and journal, are you prepared to say that this wound was merely a trivial injury to the patient's head? So far as I saw, it was.
9828. Do you see what the witness Mackenzie says in answer to question 940—when he asserts that "immediately after the accident he could not imagine what was the matter with the patient, who used to jump up and sing out, 'Oh, oh, my head' about every five minutes; in the morning he found that his pillow was covered with blood; he looked at his head, saw a large wound, but could not see what had done it; the next night he started singing out again, witness got up, obtained a light, and saw a rat jump out from the back of the patient's head, which was bleeding then. The next morning he told the head attendant of the occurrence, and he told him to close all the doors the next night. Witness replied that there were some holes in the room through which the rat could come; he closed the doors as instructed, but next night the rats came again. There was a big bandage on the patient's head, but the rats gnawed this open and got at the wound again, after which the wound was increased in size to about 4 or 5 inches in circumference";—is not this a very different description from the one in your books, and from the evidence you give? It is very different from my own observation.
9829. Is it a correct description? Certainly not.
9830. Did you dress this wound personally? I did.
9831. Do you know exactly what would have been the nature of the wound if it had been gnawed by a rat? Yes.
9832. Do you think it would have been gnawed down to the skull? Yes, most likely.
9833. Would it have healed for a considerable time? Certainly not.
9834. Was it an incised or contused wound? Actually it was an abrasion, and then it granulated.
9835. Did it pass from the skin to the bone? I do not think so.
9836. If it had been a wound 4 or 5 inches in circumference, would it have meant necrosis of the bone? Yes.
9837. Is the description given by Mackenzie untrue? On the face of it, it must be untrue.
9838. From your own observation, do you contradict entirely his statement? I do, emphatically.
9839. Did it ever reach the size he describes? I do not think it was ever more than a quarter of an inch, perhaps three-eighths of an inch, in diameter.
9840. Did it merely affect the the epidermis? Yes; just the outer skin.
9841. When was this patient discharged from Bayview House? On the 11th of February.
9842. After his discharge from the institution did you hear anything further about this matter? Yes; about the patient. I received a letter from his family expressing satisfaction with my treatment of the patient.
9843. Was anything said about the injury to his head? Nothing at all.
9844. If the wound had been the size described by Mackenzie, could it possibly have healed in the time between the patient leaving the asylum and the date on which you received the letter? Certainly not.
9845. If the patient had gone to his home with a wound of that kind in his head, would he have required both surgical and medical treatment? Yes; most decidedly.
9846. As far as you believe and know, is Mackenzie's statement incorrect? Speaking generally, his whole evidence is highly exaggerated, and with regard to the rats it is absolutely untrue.
9847. Do you believe a rat ever touched that wound? I do not.
9848. Do you remember any other circumstances connected with the institution wherein rats have been injurious to patients? I never heard anything of the kind.

Dr. 9849. What is the letter you refer to as having been received from the patient's family? It is as  
A. J. Vause. follows:—

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Dear Doctor,

26 February, 1894.

I enclose cheque in payment of account. I quite overlooked it in our anxiety, although, as you will see, I had the account in my pocket until it is worn out. I suppose you will have seen ere this that my father has passed away to his rest, very peacefully indeed. Permit me to tender to you, and those concerned in your institution who attended to him, our most grateful thanks for the kind care and attention shown to him. We will ever remember the time when he was placed under your care as one during which he received the most tender and careful consideration.

Believe me, &c.,

\*\*\*\*\*

Dr. Vause, Bayview House.

9850. *Mr. McGowen.*] Had this wound healed when the patient left Bayview House? I do not think it was quite healed.

9851. Do you think there were any signs of it left? There would be a small scar, scab, or something of that kind I should say.

9852. *President.*] Do you remember Case No. 17? Yes.

9853. Do you produce the papers in this case? Yes. [*Documents handed in and marked Exhibit G 1—see Appendix.*]

9854. What were the leading features in the case? She was suffering from acute mania, and was admitted for treatment on the 10th of November, 1893. The attack of mental disorder was of recent origin. She had been refusing food to a certain extent. She suffered from delusions of various kinds. She thought she could destroy the world by making certain passes with her hands. She had been very noisy, aggressive, and destructive. Her excitement continued during her residence at Bayview House. Dr. Tarrant was called in to see her, and expressed the opinion that he did not think the patient could live more than a few days. She was then refusing food, and died on the 12th of December from maniacal exhaustion.

9855. Do you remember the evidence of the witness Maggie Macleod in connection with the case? Yes.

9856. Did not this witness say in answer to questions 1635 to 1639 that Case No. 17 was a private patient, she was a very excitable woman, and that she was placed in a single room for medical treatment? Yes.

9857. Does not the same witness say that when this patient was placed in the single room her clothes were taken away, and she was left there naked? Yes.

9858. Is that a true statement? I do not think so. Personally, I did not see her put in the single room. Possibly the answer to this question referred to the patient's ordinary wearing apparel. That is always taken away from patients placed in single rooms. The custom is for the patients to stand in the middle of the room when the day-clothes are removed from the body and till she is perfectly free from everything with which she might injure herself. It is the duty of the nurse to see that this is done. The night-clothes are then put on the patient.

9859. In answer to questions 1658 to 1660, this witness states that "she never saw any covering for the convenience of this patient; she only saw bags in which straw was put; she never saw any canvas coverings, but coarse tickings; that Case No. 1 was the first to have canvas; that Case No. 17 objected to go into the single room;"—are these statements true? I do not think so.

9860. Is it true that this patient was left without clothing from the time she was put in the cell at night until 7 o'clock in the morning? I do not think so. Neither do I see why any exception should be made in Case No. 17 when other patients received the same kind of treatment when necessary.

9861. In question 1682 this witness, Macleod, states that Case No. 17 was bruised and injured;—is there any truth in this statement? She had bruises about her hips and the lower part of her body when she was admitted to the asylum. She sustained these in consequence of great violence while in the railway carriage on her journey from the country to Sydney immediately prior to her admission to Bayview House.

9862. Are these bruises referred to by the witnesses? Yes.

9863. How long was the patient under your charge? About a month.

9864. Could these bruises have disappeared within a month? I do not think so; they were rather severe bruises.

9865. Is that how you account for these bruises being on her body at the time of her death? Yes; I remember noticing them at the time of her death.

9866. Must they not have been very large ecchymoses to have enabled you to do that? Yes.

9867. Did the peculiarity of her ailment prevent these bruises from disappearing, or did she lie too long in one position? No; she was of very restless habits.

9868. Being restless would she be likely to still further bruise her injured parts through her restlessness? No; the bruises were mostly on the front part of the hips.

9869. Do you account for the presence of these marks by injuries received while travelling in a railway carriage? Yes. I saw this patient in her own house at ——. I went there specially to see her, and at that time the question in my mind was whether I would allow her to be brought down to Bayview. It was when I saw the patient at ——, a very doubtful case, and if I had not known the family for years I certainly should not have admitted it to the asylum. The members of the family were in great distress, and I told them if they thought they could bring their mother to Bayview House I would do the best I could for her. For a time I thought she was improving, but she subsequently became worse, and died from maniacal exhaustion. Her relatives told me they had great difficulty in bringing her to Sydney in the train. It is a long journey from —— to Sydney; and the bruises were considerable and well marked when she arrived.

9870. *Dr. Garran.*] Was she destructive with her clothing? No.

9871. If she was not, what inducement was there to take her night-clothing away? I do not think it was taken away; in fact I am sure it was not.

9872. If she was not a destructive patient, and if the nurse left her in a room in a nude state, would she be acting contrary to instructions? Yes; there was no reason for her to have the patient naked.

9873. Was there a special night-nurse with this patient? Yes.

9874. All the time she was there? Yes.

9875. *Mr. McGowen.*] One complaint in connection with this case is, according to the evidence, that when the clergyman arrived to administer the last rites of the church the patient was dead;—is that the truth?

No;

No; I do not think it is, I think she was very nearly dead. That, however, was a matter for the clergyman to decide. The patient was Roman Catholic, and at the last she was surrounded by Roman Catholics. The Matron was a Catholic, and the nurses were Catholics. They all knew the rules of the institution, and they sent for the priest when the patient was nearing death. The priest had seen this patient previously, and only came on that occasion to administer the last rites of the Catholic Church. If he thought the patient was still alive, I suppose he considered himself justified in administering the rites.

9876. Did not the matron, Bridget Morrissey, say she thought she heard the patient breathe: did not Father O'Callaghan say he thought he heard her breathe, and yet Mackay and Macleod say she was dead? Yes; that is the evidence. As I said before, she was a Catholic, and a priest of that church came to administer the last rites, and he should know, especially as he had seen the patient previously.

9877. Was this patient very much injured in coming from \* \* \* to the institution? Yes. She was a patient in whom I took particular interest. I had known her and her family for a number of years, and for many reasons I took a great amount of interest in her case.

9878. *President.*] Were you specially summoned to \* \* \* to see this case? Yes. \* \* \*

9879. As a result of your recommendation, after careful consideration, was she brought from \* \* \* to Sydney? Yes; but it was a doubtful point at the time whether she should come or not. I was in very great doubt, and if I had not known the family I would not have had the case in Bayview House. She seemed at the time to be dying. Her case was a very severe one.

9880. Have you the particulars of Case No. 20? Yes. I hand in the extracts from the case-book. [*Document handed in, and marked Exhibit H 1—see Appendix.*]

9881. Will you kindly state what the main particulars are in reference to this patient? She was transferred from Gladesville Hospital for the Insane to Bayview House on the 7th of July, 1894, suffering from delusional mania. The history of the case from Gladesville shows that she had epileptiform seizures at intervals, and that at times she was noisy and violent. She became gradually more demented, and also very deaf. As a rule, she was quite clean, and in the habit of sleeping in an associated dormitory, but at times she had to be placed in a single room. After admission she was fairly quiet and tranquil. She was very deaf, and spoke but little. On or about 16th August she became noisy and excited, and at 10 o'clock the same night she was removed from the dormitory to a single room, with the consent of the matron. On the morning of the 17th she was found to have sustained a fracture of the forearm.

9882. In connection with the fracture of the forearm was an official inquiry held? Yes.

9883. By whom. By Dr. Manning, Dr. Huxtable, and Mr. Nugent Robertson.

9884. Is it usual for the official visitors to hold inquiries of this kind into accidents that occur at Bayview House? I believe it was done on this occasion at my special request.

9885. Is there any provision in the Lunacy Act for holding inquiries in cases of this kind occurring in your institution and the public asylums? I do not know of any special provisions. There may be provisions, but I am not aware of them.

9886. What was the course followed in this instance, which led to the inquiry held by the official visitors? I first wrote to Dr. Manning stating the nature of the case.

9887. Was that following the usual course of reporting to the Inspector-General that an accident had occurred? Yes.

9888. What happened then? Dr. Manning wrote and told me he would call at Bayview House, and take the evidence of witnesses relative to the occurrence.

9889. Did the official visitors then come to your asylum and investigate the matter? Yes.

9890. Was there any result to that inquiry? I think a report was sent to the Colonial Secretary stating that the accident was due in all probability to the patient having a fit while in a single room and injuring her arm in that way. It was an unfortunate occurrence that there should have been a bedstead in the room, but there was one there. The recommendation of the official visitors was that gas-lights should be introduced into the associated dormitories.

9891. Did the official visitors know at that time that there was no regular night patrol? At that particular time there was a regular night patrol. Nurse Brennan has given evidence that she was on night-duty and passed by this single room every two hours.

9892. Was there evidence that pointed directly to the cause of this fracture? The cause of this fracture was an epileptic seizure, in which the patient fell across the bedstead. She was in one of the two rooms set apart for the use of two private patients. These rooms were not occupied at that particular time, and I presume the nurses thought they would make Case No. 20 more comfortable by putting her in a room containing a bedstead. I believe it was done with the best of intentions. Both nurses state that the patient had no injury to her arm when she was taken across to the single room, and a nurse visited her every two hours during the night. Once or twice the nurse spoke to the patient through the observation hole when the patient was standing close to the door. At a later period the nurse entered the room and saw the patient in bed, but saw no sign of injury at that time. When she was taken out of the room half an hour later there was a blood-stain on her night-dress, which the single-room nurses attributed to other causes. When the nurse was dressing the patient and examined her more closely, she found that her arm was fractured.

9893. *Dr. Garran.*] Are you pretty clear in your own mind that the accident happened after the last time she was visited by the night-nurse, and before she taken up by the day-nurse? I am; there was a compound fracture of the arm, and I paid particular attention to it: it cost me a great amount of anxiety, because an injury of this kind might have involved amputation of the limb. The wound was a very small one and quite fresh, the blood was quite fresh. There was not the slightest coagulation, which proved that the wound must have been of recent origin.

9894. When you set the fracture did the patient seem to understand anything about the accident? No; she only expressed an opinion that something was the matter with her arm.

9895. Did she appear to suffer great pain? No; nothing whatever during the whole time of her illness; the temperature never rose, and the putting up of the fracture had a remarkably successful result.

9896. If she had called out at the time she fell would the nurses have heard her? I think so; for not only was the night-nurse passing the room frequently, but other nurses were in close proximity.

9897. When the night-nurse on duty was not actually making her round, where would she be? She would be on the ladies' side, and probably in No. 1 dining-room.

9898. Would she sit there meanwhile after paying her visits? Yes.

9899. Would she be able to hear the noise of a scream or a call while there? No. 9900.

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- Dr. A. J. Vause. 1. Feb., 1895. 9900. *Mr. McGowen.*] Was this patient sleeping in the dormitory until 10 o'clock that night before she was taken to the single room? No; she was not sleeping. She was in a state of considerable excitement.
9901. Was she in the dormitory before 10 o'clock? Yes; wandering about the room and interfering with other patients. She would not stay in bed.
9902. What time, as a rule, do patients go to bed in this dormitory? The older and weaker patients generally go to bed directly after tea, between 5 and 6 o'clock. The others sit up later, according as they wish, to 7 or 8 o'clock; and some of the lady patients up to as late as half-past 9 o'clock.
9903. *President.*] Was this patient put to bed immediately after tea that night? She was taken to the dormitory, but she would not remain in bed.
9904. *Mr. McGowen.*] That is the question;—was she put to bed previously to being put into the single room? Yes; she was put to bed, but she would not remain there.
9905. Did she get up and disturb other patients before she was put in the single room? Yes; the witness, Ada Simpson, is pretty strong on that point, she having said in evidence that she remained with this patient and endeavoured to persuade her to keep in bed.
9906. The official visitors who brought in their report said this was not a fit subject for single-room treatment, did they not? I beg your pardon.
9907. Do you think a patient subject to fits should be placed in a single room? I should not object to it, but certainly there should not be a bedstead in the room. You must remember that this patient had not had a fit while she was at Bayview House. She was subject to epileptiform seizures while at Gladesville, but she had had no fit at Bayview House. The matron at that time did not know that she was an epileptic.
9908. Did not the report of this Committee of inquiry agree with the treatment, provided there was no bedstead in the room? I think so.
9909. Do you think a person subject to fits is quite safe while under single-room treatment? I should not object to single-room treatment of an epileptic during periods of excitement.
9910. Did not the Committee come to the conclusion that this patient fell out of bed and broke her arm? Yes; I think so.
9911. Was she in bed when the nurse arrived to take her out of the single room? I think the nurse's evidence deals with that. Personally, I cannot answer the question.
9912. Did it not come out in evidence that the patient did not sleep in the bed at all;—if so, how could she fall out and break her arm? She was in bed, for the night nurse swears that she saw her in bed, covered up with clothes, half an hour before she was removed. Nurse M'Bride had charge of the single rooms at that time, but what she saw I do not remember.
9913. *Dr. Manning.*] Do you always report serious accidents to me? Yes.
9914. Are inquiries always made into these matters by the official visitors? Yes.
9915. Occasionally are special visits made to the institution for the purpose of making these inquiries? Yes.
9916. *Mr. McGowen.*] In the event of a death occurring in the institution, would the certificate of the Medical Superintendent be sufficient authority for burial? Yes.
9917. Is there any inquiry held by the official visitors in the case of death? No.
9918. Does the Medical Superintendent report the fact of the death to the official visitors and the Inspector-General of the Insane? Yes; there are two reports in connection with all deaths—one to the Colonial Secretary, through the Inspector-General of the Insane, and the other to the Master in Lunacy. These two official reports are required by the Lunacy Act. The cause of death, the duration of illness, and other particulars must be stated.
9919. In connection with the death of Case No. 17, did your certificate bury the body? Yes.
9920. Did you report the fact to the Inspector-General? Yes, certainly.
9921. *Dr. Manning.*] In all cases of death occurring at Bayview House, can the official visitors on their next visit see the death recorded in the discharge register? Yes.
9922. Also the age, cause of death, and all other circumstances connected with the case in the discharge list? Yes.
9923. Do the official visitors have every opportunity of inspecting the case-book, and of making further inquiries if necessary? Yes.
9924. In certain cases have the official visitors made further inquiries? Yes.
9925. *President.*] Do you say that the official visitors have made further inquiries? Yes; the official visitors have given me a great deal of trouble by the criticising inquiries they make.
- [The further examination of this witness was adjourned until the following Tuesday.]

TUESDAY, 5 FEBRUARY, 1895.

[The Commission met at 11 a.m. in the Board Room, Chief Secretary's Office.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
ESQ., M.D., INSPECTOR-GENERAL OF THE  
INSANE.

ANDREW GARRAN, Esq., LL.D.  
JAMES SINCLAIR TAYLOR MCGOWEN,  
Esq., M.L.A.

Dr. Vause—examination continued:—

- Dr. A. J. Vause. 5 Feb., 1895. 9926. *President.*] Can you afford us any particulars about Case No. 11? Yes; from my case-book. She was admitted on the 16th of November, 1889, suffering from delusional mania.
9927. Is she still under treatment? Yes.
9928. The accusations in regard to this case arise from the evidence of the witness Macleod, who, in question 1561, says that on one occasion when the patient's daughter visited her a silk dress was put on her body over her dirty clothes;—is there any truth in that statement? The only truth in it is that the silk dress is worn by this patient when anyone comes to see her. That is nothing unusual, for most patients have clothing—I may say special clothing, to wear when they are seen by their friends. If the silk dress was put on over the dirty clothes the nurse had no authority to do it. 9929.

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9929. Another charge made by the same witness is that this patient was very much neglected, that her body was covered with vermin, and that she was left to roll about as she liked in her own dirt;—is there any truth in that statement? These statements are utterly untrue.

9930. Was she a clean patient? Yes, fairly clean; she was subject to periods of great excitement, and then became abusive, somewhat aggressive, and difficult to manage.

9931. Did you ever notice that she was somewhat particular in regard to her dress? Yes, she was; and she is what I should term a tidy and clean patient.

9932. Would not charges of this nature, then, relative to this particular patient strike you as extraordinary? Yes, quite so.

9933. Of course, we all know that in institutions of this character patients are apt to become verminous; that being so, is it one of the things to which you pay special attention? Yes; and I am sure that if a patient becomes verminous the matter would be reported to me at once.

9934. Would your own observation lead you to discover the fact? Certainly; even if it were not reported.

9935. Then there is the other charge to the effect that this patient was often and often exposed to the rain, allowed to lie in the yard and sometimes in the verandah in all kinds of weather, and was left to roll about as she liked in her own dirt;—what have you to say to these assertions? They are utterly untrue. This patient has been under my own observation during the whole of her residence at Bayview. I have never seen anything of the kind, neither do I believe that anything of the kind has happened. She is a most particular woman, and if such a thing had happened she would be the first to complain to me about it.

9936. Is she sufficiently intelligent to understand and make a complaint? Yes; she is a well educated woman, and it is only at times that she gets excited and irresponsible.

9937. What, then, have you to say concerning the evidence of M'Leod as it applies to this patient? It is utterly false.

9938. *Mr. M'Gowan.*] What is delusional mania; I regard Case No. 1 as suffering from acute mania;—did he have delusional mania at times? Yes; a patient may have acute mania without delusions, and delusions without acute mania. In case No. 1 there were both acute mania and delusions. He had periods of acute mania, a maniacal condition. At other times he was quiet, and then you might term his a condition one of delusional mania.

9939. *President.*] Do you remember case No. 13? Yes.

9940. Have you the history of that case? Yes; I can take it from the case-book. She was admitted to Bayview House on the 25th September, 1889, suffering from melancholia with delusions.

9941. Was there anything particular in her case which you desire to bring specifically before the Commission? I think I have said something about this patient in my principal statement to the Commission. The delusions were very well marked in her case; she did not talk about them so much in the early stages of her disease as she did subsequently. Every year seems to bring these delusions more prominently forward, until now she can hardly speak without manifesting very, very many. At times she becomes very excited and aggressive, and on occasions of this kind I think it better to place her in the large dining-room, where she may walk about and exhaust her excitement. I do not think I have had to do more than that in her treatment; I do not think she has been placed in a single room; she may have been on rare occasions, but removal to the large dining-room has been sufficient to overcome the difficulty for the most part.

9942. Was the reason why you removed her—a removal which has been made a matter of complaint by this witness—her excited condition, and because by removing her to the large dining-room she would obtain greater advantages in the way of cure? Most undoubtedly.

9943. And, at the same time, relieve the quieter patients on the private side of her presence? Yes, certainly; if she had not been placed in the large dining-room it would have been necessary to lock her up in a single room; to avoid placing her in a single room I put her in the large dining-room on the Government side. She never objected to this treatment, but rather seemed to prefer the change.

9944. Was she only placed in this large room as a matter of treatment? Quite so.

9945. Did she have her meals, and at ordinary times remain on the private side? Yes. I am now using the Government dining-room, or, more properly speaking, the dining-room formerly used by the Government patients, for the private patients. That has been done since the Government patients were removed.

9946. We now come to the question of food. As you are aware, some witnesses have complained that the food supplied at Bayview House is insufficient in quantity, badly cooked, and badly served, on many occasions;—have you any reply to make to these various charges? No; except that I deny them all.

9947. In addition to what you have said in your general statement to the Commission, do you wish to furnish further details? Yes; I am here to answer any questions, as far as I am able, which the Commissioners may put to me on this or any other subject.

9948. It has been charged against you that on many occasions special arrangements were made in regard to the food, and that better meals were prepared when the official visitors were expected at the asylum;—is that true? Certainly not. It would be impossible to do so, for I never knew, and no one else at the institution ever knew, when the official visitors were coming.

9949. Are your contracts so made that a difficulty would arise in regard to quantity and quality of the food if you made special preparations on certain occasions? Yes.

9950. *Dr. Garran.*] Do you inspect the food personally every day before it is cooked? Yes; both before and afterwards.

9951. The gentleman who buys your meat said in his evidence that his instructions from you are to buy meat of the first quality;—is that so? Undoubtedly; I have always looked upon proceeding in this direction as the most economical thing to do. In dealing with the insane, as far as my experience goes, I have found that there is always a large amount of waste in regard to food. It is almost heartbreaking to see the amount of food wasted, and I am quite sure that if the food was not of the best quality, and if it is not cooked in the best manner possible, there would be more waste than there is.

9952. Has this gentleman always bought meat to your satisfaction? Yes, always.

9953. Would it pay you to stint the patients in the matter of food? Certainly not.

9954. If you did would the patients immediately fall off in condition? Certainly; it has always been a matter of considerable anxiety to me to get the patients to eat as much food as I can.

9955. Do you grumble when they have good appetites? Certainly not.

9956.

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9956. From whom do you obtain your groceries? For a long time I dealt mainly with Peate and Harcourt, subsequently I went to different grocers in town, and now I am dealing principally with Green Brothers, of Newtown.

9957. Do they give satisfaction? Yes.

9958. Have there been any complaints made by witnesses about the quality of the tea supplied at your establishment? Yes; I heard them. I have always used the same tea myself; the same tea is always given to visitors, and I have never had two classes of tea at the institution.

9959. Are you a fair judge of tea yourself? Yes; pretty fair.

9960. Where do you get your milk? From my own cows; I have always kept five or six cows.

9961. Do you buy any milk from outside sources? No.

9962. Do you get fresh milk every day? Yes.

9963. In a document left by the witness Gearey at the Board of Health Office, it is stated "even the milk they used to get in the tea was sour; in fact, rotten some mornings";—is that true? That must be untrue, because we have fresh milk twice a day, and there is no reason whatever why we should not have fresh milk daily. The cows are there and they are milked twice a day. I do not mean to say that milk has never gone sour, but if it has I do not think it has ever been used. To prevent it going sour I have spent considerable sums of money in the erection of cool chambers.

9964. Could the milk have been sour without being rotten? Yes.

9965. Do you not say that this statement says that the milk was rotten very often? If the milk were bad I am quite sure it would not be used.

9966. It is also stated in this same paper that the meat was rotten very often;—is there any truth in that? I have frequently had a large quantity of meat go bad in the course of twenty-four hours, consequent on thundery weather; this was never used but always buried.

9967. Was the cook always told never to use meat of this kind? Yes; always.

9968. Did you ever hear of any bad meat having been used up? Certainly not; I have heard of corn beef being slightly tainted, and then there was sufficient of other meat to use instead.

9969. Did Case No. 8 ever grumble about the food? I have never heard him express the slightest disapprobation concerning the food.

9970. In this paper that was left by Gearey at the Health Office, although it is not signed, it is stated that Case No. 8 always grumbled about the food, and so would any man at the food that they used to get there;—is there any truth in that? I never heard of any complaint, and no complaint has been reported to me. In fact it has been just the reverse. Sometimes I have been told that the beef was hard, and I have done everything I could to obviate that difficulty. To do so I have had it kept longer in the ice chambers, but, as you are aware, it is a very difficult thing sometimes to get freshly-killed meat into anything like condition. I think I have hit upon a plan now that will answer successfully.

9971. In this same paper it is stated, in regard to Case No. 1, "that the room in which the patient was contained a piece of canvas sewed together and stuffed with straw, also three pieces of canvas. Four months the patient was placed in this room without any bedding at all; some canvas rugs were thrown to him, and this was the sole contents of the room. A humane attendant sewed up this piece of canvas and stuffed it with straw. This treatment has been going on since last December until our visit on May 20th, 1894";—what have you to say in reply to this statement? Up to that time I believe the patient was using the ordinary mattress and the ordinary coverings. He was tearing them so frequently that some one, I do not remember who, suggested the use of stronger material. The straw mattresses we use are made, I believe, by a sailor who lives in the village. It is very seldom we have had such a destructive patient as Case No. 1. I believe it was the witness Mackenzie who said, instead of using the ordinary mattresses made by the sailor, he would volunteer to make an extra strong covering, and he was allowed to do so. This was looked upon as part of his duty. He need not have made the covering unless he liked. If a stronger covering had become necessary, and if he had not made it, somebody else would.

9972. Was this bed an improvement on the one used by the patient formerly? I do not think it was an improvement, but it was less liable to be destroyed.

9973. Did it last in use for a considerable time? Yes.

9974. Was it more durable than the one previously used by the patient? Yes.

9975. Was it as pleasant to lie upon? I do not think it was quite as soft as the other. It is astonishing how soft canvas is with straw. There is a springiness about it that you could hardly expect to find.

9976. Gearey says in this same paper that Case No. 1 was the quietest of patients, so much so that any attendant could sleep in the same room without any fear of violence;—is that true? Certainly not. I do not think anyone could sleep in the room. The idea that anyone could is a wrong one.

9977. Would the difficulty of sleeping arise from the patient? If there was anything in the room that he could use as a weapon he would use it. I never looked upon him as a particularly violent patient. He was not physically strong enough to be what is ordinarily termed violent.

9978. Was there a predisposition on his part to use weapons? No; but he would use them if he saw them and could get at them.

9979. Was the sight of an implement too much temptation for him? He would use any thing he could as a weapon, and herein he was dangerous.

9980. Did seeing the weapon suggest the idea of using it? Yes.

9981. In consequence did you have to denude the room of everything? Yes.

9982. It is stated in this paper that the patient's family paid you six guineas per week for his maintenance;—is that true? No; the rate was five guineas per week.

9983. It is added in this paper: "The agreement being that the patient was supplied with an attendant day and night, for which purpose the patient's room is supplied with a bed for himself and an attendant, which as a matter of fact he never occupied after 5 p.m." I want to ask you if you, after having removed the patient to the single room, ever showed his friends the rooms he previously occupied as the room he was then occupying? Not that I am aware of; I do not think I showed the friends any rooms after the time he was placed in the single room to sleep.

9984. Are you quite sure you never misled them on this point? Yes; the patient occupied a day room.

9985. Was that the room in which the attendant stayed at night? Yes; very often the patient would lie down there in a semi-nude condition in the day time, but the fact of him occupying it in the day-time did not mean that he slept in it at night.

9986. Did you show that room to his friends as the room he was sleeping in at night when he was sleeping in the single room? No.

9987. Are you quite clear upon that point? Yes, and I distinctly deny the accusation.

9988. Speaking of the room in which the patient was, in another document headed "Information for H. Gearcy," it is stated, presumably by Mackenzie, that he could prove the patient to have been kept in the single room for the last twelve months;—is that true? No.

9989. Could he prove this? No, I am quite sure he could not.

9990. Can you prove the contrary? Yes.

9991. Speaking of your report where you state that an attendant visited the patient's room every two hours, he says, "That is false, as I never heard or know of it being done;"—do you know anything about that? It may have been so, but even if it were it seems to me very remarkable that he should not know of it.

9992. Do you mean, seeing that Mackenzie was a day attendant on Case No. 1 for two months, it is wonderful how he should not have obtained the information? It is very remarkable indeed.

9993. He says he often assisted in putting the patient to bed;—is that so? Yes.

9994. Was he one of three men who waited upon the patient? Yes.

9995. And did you leave the arrangement of the night duty to the head attendant? Yes. He arranged the night duty; Mackenzie was engaged on day duty outside. The arrangement is for me to select the men I think best for night duty, if they do not grumble at undertaking the work; I should not force a man to take night duty unless he chose.

9996. Did you ever suggest that Mackenzie should be put on night duty? No, I could not do so on the grounds of his inexperience; he was not with me long enough to trust him to night work.

9997. Were Doherty and O'Brien experienced in night duty? Yes; Doherty had been with me some time.

9998. Speaking of the utensils, he said the patient never had one;—is that true? Certainly not.

9999. It is said that the utensil was taken out of the room;—are you aware of that fact? I was not aware that it was ever taken out. It might have been; an attendant might have taken it in and out every time he entered the room.

10000. Do you leave these details to the attendants? Yes. I should not interfere in a matter of that kind.

10001. He goes on to say, "There were weeks that the patient never dirtied his room, and Dr. Vause never offered to put him anywhere else";—was it ever reported to you that he was behaving better in this respect? Yes; I receive reports.

10002. Were there weeks together in which the room was not soiled? I do not think so. It was not on account of his dirtiness that the patient was put in this room, although he was a dirty patient. The principal reason why he was placed in a single room was on account of his excitement. If he had been a perfectly clean patient he would have been put there just the same.

10003. Was he put there on account of his noise? No, but it was on account of his continual restlessness and excitement. He was in a condition of excitement always? He could not keep his hands still, and always fiddling with his buttons. He was in a state of extreme nervous excitement.

10004. Do you think a patient in this stage of excitement can be left too much alone? I think seclusion is the best treatment in these circumstances, especially at night-time. In the day-time I recommended plenty of exercise. I ordered that Case No. 1 should be taken about the grounds all day long with an attendant. I used to make him walk about the grounds so as to make him tired.

10005. Was he always irritable at night? Yes.

10006. Was this irritableness specially marked in his case? Yes.

10007. The same paper states: "The patient had been violent to my knowledge on very rare occasions, but even then only for an hour or two at a time";—is that so? That is not so very far wrong, but I should not say very rare occasions. He has indicated tendencies to dangerous violence frequently.

10008. Do you call Case No. 1 a violent case or a restless case? He was exceedingly restless, and it was because of his restlessness he was placed in the single room. I do not say he was a very dangerous patient, but still a man with the small amount of strength Case No. 1 had could become a source of danger to himself and others.

10009. *Mr. McGowen.*] Did you see an anonymous letter that was sent to Members of Parliament? Yes, I believe so.

10010. Can you identify this as a copy of that document [*Document produced and examined by the witness, and marked Exhibit H1—see Appendix*]? Yes, I think that is a copy of the anonymous letter.

10011. *President.*] Is it much the same as the anonymous letter signed "Aristides," and circulated amongst Members of the Legislative Assembly? Yes.

10012. *Mr. McGowen.*] Have you read this document? Yes.

10013. Is there any truth in the first clause of it, which says, "Owing to influential friends, \* \* \* has been removed from this hell upon earth"? I do not think so.

10014. The next clause says, "Fifty Government patients are half starved and nearly naked, being only clothed properly when it is known that the Government Inspector, Dr. Manning, is coming";—is there any truth in that? Certainly not.

10015. It is also said "Men and women are placed in solitary confinement without light, bedding, or clothing";—is there any truth in that? Certainly not.

10016. Then it says, "Paralysed patients are eaten alive by rats": is there any truth in that? There is no truth in it. I do not know whether to make any exception in regard to light. The single-room patients are not without light, and not without clothes.

10017. Is it not a fact that patients are placed in isolation without light? I admit there is not a light in the room, but Bayview is no exception to other institutions in this respect. Now I have lights that can be thrown into these rooms at night-time. As to the statement concerning patients being eaten by rats, it is utterly false.

10018. The next clause in the lettersays, "Women batter their heads and die in the dark cells";—is that true? It is utterly false.

10019. The next clause states, "Women are dragged by the hair of their heads and placed in dark solitary confinement";—is that true? Regarding the dragging by the hair of the head, I say it is utterly false.

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- Dr. A. J. Vause.  
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- false. Placing them in a dark single room is in accordance with the ordinary treatment in certain cases.
10020. The next clause states, "That women die without any inquiry being made, and men likewise;"—what is your answer to these statements? That in the case of death the usual certificate is furnished.
10021. By the Medical Superintendent? Yes. The Inspector-General is notified, the Master in Lunacy is notified, and for the most part patients who die have been seen both by the Inspector-General of the Insane and the official visitors, as well as by friends and relatives and clergymen visiting the place. I think therefore that there is rather more publicity in connection with death at an institution like Bayview House than there would be in a private house.
10022. Regarding this statement, that patients die without inquiry being made, I do not exactly understand your interpretation. In the case of death, is there an inquiry held by any person outside the institution? Not that I am aware of.
10023. The next clause in the anonymous letter is, "A hell upon earth is the only name for this institution, which is presided over by Dr. A. J. Vause: a drunken Dr. Vause";—do you deny these allegations? Certainly I do.
10024. The next clause is, "Why did Dibbs suppress the papers and the honest report of Dr. Anderson Stuart?"—do you know anything of that? I do not.
10025. Then it says, "Because Copeland, his mate, was a shareholder in this impious concern"—do you deny that assertion? Yes, I deny that statement.
10026. The next clause asks, "Why is Alfred Bennett, of the *Evening News*, silent? Because he is well tipped";—is there any truth in that? I am perfectly sure Alfred Bennett has not been tipped by me.
10027. The next clause says, "The other dailies have been squared by Edward Greville, another shareholder";—what do you say to that? I deny it.
10028. Another clause says, "Members, do not let this evil spot remain in your midst, Greville, Copeland, Vause. . . . Gannon & Co. must not be allowed to ill-treat with impunity the poor and insane, from whom they are netting £6,000 per year";—what do you say to that? Take Mr. Gannon's own evidence, where he has denied that he has the slightest interest in Bayview. I deny it too.
10029. The next clause is, "Yet the Government (meaning the last Dibbs Government) also wish to hush up the matter, so that Greville, Copeland, & Co. can still go in for their daily spoil of flesh and blood. . . . Members, how long is this to be carried on? Will no one take the matter up and demand a searching inquiry?" What have you to say to that? The clauses speak for themselves.
10030. *President.*] Do you deny the whole of the statements contained in that document? Yes; with the exception of darkness in the single rooms.
10031. *Dr. Manning.*] When the Inspector-General of the Insane visits your institution, does he always see the causes of death recorded in the discharged register? Yes.
10032. Does he always make inquiries regarding the cause of death and the circumstances attending it? Yes, invariably.
10033. Has he had opportunities of repeatedly seeing the case beforehand? Yes; and not only that, but I have very often reported the patient's condition.
10034. Concerning the food, have you a dietary scale hanging in the kitchen? Yes.
10035. Has there always been an unstinted supply of meat and bread? Yes; I produce my dietary scales for private and Government patients. [*Documents handed in, marked Exhibit I 1 and I 2—see Appendix.*]
10036. Did you find the dietary scale in use when you took charge of the institution? Yes.
10037. Have you improved considerably on that? I think so.
10038. In what direction have your improvements been made? Particularly in the provision of butter for breakfast and tea; in hot dishes for breakfast and tea; and also in the introduction of jam for the Government patients for breakfast and tea.
10039. Do you adhere strictly to that dietary scale you have handed in? Yes.
10040. Do you vary it by supplying fish sometimes? Yes; I do not think fish is mentioned on the list.
10041. Were these alterations the result of experience? Yes.
10042. *President.*] Regarding the food supply at night, have not witnesses stated that there was a difficulty in obtaining a supply of medical comforts and provisions at night. For instance, did not the witness Mackay in her evidence say there was no provision for getting food at all; that the kitchen was locked; did not the witness Macleod say she could not get food at night; did not McMahon say that the kitchen was locked up, and the only way she could get a sufficient supply of provisions at night was by getting the key from the cook; and then unlocking the kitchen;—does not Morrissey say she could not get these things, and what do you say in reply to these statements? I can only deny them.
10043. Will you state exactly where the provisions are kept at night, what is the quantity of the supplies on hand, and how the nurses can get them? There are stores apart from special provisions made for sick patients, which, I maintain, are always available, and, apart from what the nurses must have had for themselves, there is an abundance of tea, sugar, and milk during the night, inasmuch as the stores are taken from the principal store-room after breakfast every morning in sufficient quantity to last until the next morning at the same hour.
10044. *Dr. Garran.*] Would there be sufficient stores allowed to meet the requirements of the night? I think so; I think there would be sufficient for any emergency. When one is dealing with only 130 patients it is impossible to say how many will require nourishment during the night. Perhaps there is not one a month. Where the occurrences are regular special provision is made every day for night supplies.
10045. *President.*] Do you, of your personal observation, know that there was an adequate supply kept? I think there were more stores than were necessary, so much so that it was by no means a common occurrence to find nurses taking tea and bread and butter two and three times during the day, outside their ordinary meal-times. At 10 o'clock in the forenoon they would invariably have tea and bread and butter, and 4 o'clock in the afternoon they would do the same.
10046. In other words, was there always a sufficient supply of stores during the night? Yes.
10047. Were the supplies locked up so that the nurses could not get them? No; all the nurses could not get at these stores, but if anything in the way of nourishment was required it could be obtained in the night-time. Stores would not be left at the mercy of the nurses indiscriminately so that she or they could make a cup of tea for themselves whenever they liked. There were three separate departments for stores.

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- stores. There were separate stores for No. 1 ladies; separate stores for No. 2 ladies; and stores on the Government side.
10048. Speaking of the Government side particularly, would the nurses on that side know exactly where the stores were kept? She ought to know; it was her duty to get them from the matron.
10049. Would she have a key whereby she could obtain stores in the night-time? The matron would give the stores to her.
10050. Would stores be left out for the use of the nurse attending on a sick patient? Yes.
10051. Would they be under lock and key? No.
10052. Supposing supplies were required on an emergency during the night, would the nurse have them at hand? She would not have the stores herself, but she could get them without any difficulty. She would have to wake somebody and get them.
10053. In a case of emergency would someone have to be roused before stores could be obtained? Yes.
10054. Could not the nurse go into the matron's room and help herself? I do not think so; she should rouse the matron.
10055. Are these things left in charge of the matron? Certainly.
10056. *Mr. McGowan.*] If you turn to question 3461, you will see that the witness Morrissey, who was your matron for twelve months, says distinctly that she could not get a warm drink during the night without waking somebody else; and then in the next question she added that, supposing anything went wrong with patients at night and a warm drink was required, she could not get it without waking another official; and that (in question 3463) she had not the same means of access to the kitchen and the place where the stores were kept as the attendant on the male side had, as there was a cross-lock on the door on the female side; she could, however, go round to the kitchen and get hot water if she wanted to;—what have you to say to that? I think the witness contradicts herself. She said she could go round to the kitchen if she wanted to and get hot water, and then she says, almost in the same breath, that she could not obtain a warm drink without waking another official.
10057. Do you ever use condensed milk at the institution? Yes, occasionally.
10058. Would it be possible for that milk to go bad? I have never known it to go bad.
10059. Have you ever had any complaints to that effect? No; I have generally used the best brands I could get—generally the "Dairymaid" brand.
10060. Did you put O'Brien on night duty immediately after he joined the institution? No; he went on night duty some time after he joined the institution.
10061. How long was O'Brien with you before Case No. 1 was put in the seclusion cell? I cannot say; but it was some time; I do not remember the dates.
10062. Had he been with you eight months then? He joined the institution six months before Case No. 1 was a patient, and Case No. 1 was there twelve months before he was constantly sleeping in the single room.
10063. Did the other attendants, Mick and Pat, ever perform night duty? I do not think so; they were only with me about three months. O'Brien had been with me much longer than that, and he is one of the most intelligent men I ever had. The attendants, Mick and Pat, were not discharged, and I was annoyed at their leaving as they did.
10064. Did they leave after the publicity given to Case No. 1? Yes; some time afterwards.
10065. Did you discharge Copley? No; Copley left of his own accord.
10066. Did he leave shortly after the incident alluded to? Yes.
10067. Did he do night duty? He worked in the house at night.
10068. Did either of these three attendants assign any reason why they left you? No.
10069. Did they get reference from you? Yes.
10070. *President.*] Now, regarding the clothing;—have you not noticed in the course of this inquiry that there has been a great discrepancy in the evidence relative to the clothing, and while some say there was an ample supply, others say it was scanty; for example, Mackay says the clothing was scanty, specially in the winter time, and poor in quality, also that the stockings were ragged; Macleod said the dresses were insufficient and unsuitable; other witnesses, including Rose MacMahon, said there were not sufficient stockings, dresses, and chemises; Verity said there was an insufficiency of bed-clothing;—have you any personal knowledge on these points? I can only say I do not think there is any foundation for the statements.
10071. As far as you are aware, has there always been a sufficient quantity of clothing? Yes.
10072. I wish you to remember that I am now referring to the Government patients;—had they always a sufficient supply of clothes? I think if there was any temporary shortness in the supply the private patients would be the first to feel it. I have had to supplement their supply myself when they have run short.
10073. Do you ever use Government clothes for private patients? I have used the same dress material for private patients as I used for Government patients.
10074. Do you mean that you have done so when the friends of patients have not supplied a sufficient quantity? Yes. I do not think I could use anything better than the material I provide for the Government patients.
10075. One statement made is to the effect that the clothing was taken off private patients and put on Government patients;—is that a fact? Certainly not, unless a change has been made with some bit of finery to which a patient has taken a fancy.
10076. Do you remember the statement made by Bridget Morrissey about the clothing of Case No. 28? Yes; she was at first a private patient, and ultimately a Government patient.
10077. *Dr. Garran.*] Although you call it Government clothing, are these clothes your private property? Yes; I had to provide the patients with clothes.
10078. Were you at any time using Government property to clothe private patients? No; it was not Government property.
10079. Did any of the patients ever complain at not having what they considered to be proper? They sometimes asked for clothing of a little different kind to that worn by other patients. Some patients rather objected to wear the same kind of clothes as other patients.
10080. Do you mean that they regarded their dress as too much like a uniform? Yes; some requested to be allowed to make their own dresses.

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10081. Did you humour them in these matters? Yes.
10082. Even if they were Government patients? Yes.
10083. Did you give them the material to make up? Yes.
10084. And did you allow them to make it up? Yes. The same objection was sometimes raised in regard to boots. Patients would ask for boots of a lighter quality, and that request was always acceded to.
10085. It has been stated by some witnesses that many patients had a fancy to take their boots off;—is that so? Yes.
10086. If they did, would that soon wear out their stockings? Yes.
10087. Did they ever go about with half stockings on? No; I do not think so. No patient was allowed to go about in that manner, but, at the same time, it was a difficult matter to keep the shoes and stockings on some patients. To obviate that difficulty special fastenings were sometimes used on the boots. It is remarkable how little it takes to irritate some patients. I am now speaking from my own observation. Lunacy takes so many varied forms that the treatment of individual patients requires continual study.
10088. If a boot irritated a patient would you let him run about in his bare feet? I do not think a patient would take much harm if he did, but I have always tried to avoid it. I remember seeing a man at Barnwood who would not wear any under-garments at all.
10089. Do you think a patient who became irritated by wearing boots would suffer if he was allowed to go about barefooted in the summer time? Not on a dry wooden floor.
10090. Do you allow patients to do this if you can help it? No.
10091. Are the complaints true when a witness says there was not sufficient underclothing and shirts for female patients; that the stock would not permit of one under-shirt replacing another if a change was necessary? Certainly not.
10092. As far as you know, was there always underclothing to put on patients if that being worn became dirty, or was destroyed? Yes; it is very easy to see if a patient is properly dressed with underclothing, especially if they stand against the light of a window.
10093. Could a practical eye tell in a moment if these patients wore underclothing under their dresses? Certainly.
10094. Would you, as Medical Superintendent, immediately notice if a patient was left without underclothes? Yes.
10095. Have you ever given instructions that the women were to be stinted in clothing? No; I have given instructions to just the contrary—to have requisition lists made out as early as possible. I may say that the method of obtaining clothing is a very simple one. All the matron has to do is to write in a book provided for the purpose a list of the articles required. That is brought under my observation, and the articles are obtained as soon as possible.
10096. *Mr. McGowen.*] Have you ever kept the matron waiting a fortnight for any special article required and asked for? I would not say such a delay has not happened, but it would be a very rare occurrence.
10097. *Morrissey* says, in answer to question 3518, that sometimes she has had to wait for a fortnight—“as a rule not long, but sometimes for a fortnight”? Yes; she says, “as a rule not long.”
10098. Does she acknowledge to having run short of underclothing? If she did I do not think it was of frequent occurrence. Moreover, it would be her own fault if she did not report to me that she was running short. I am not aware that she did run short. It is the first intimation I have had that she ran short.
10099. She says the chemises and underclothing ran short;—what have you to say to that? I say she never told me of it.
10100. Do you say you would obtain what was required as early as possible? Yes. For the most part articles were kept in the store. If there was not a supply in store, whatever was required would be obtained as soon as possible. Such things as skirt linings, calico, dress linings might run short, and the matron would, perhaps, have to wait a few days for a supply; but, as a rule, the materials were purchased by the piece, and two or three pieces at a time.
10101. Did you buy the material and was it made up at Bayview? Yes.
10102. *President.*] When these patients were visited by their friends or when the official visitors came to the institution, it is stated that frequent changes were made in the attire of the patients;—are you aware that such was done? Yes.
10103. I do not mean trivial alterations, such as the arrangement of a dress, the putting on of a collar, or the brushing of the hair, but were the dresses of the patients changed? I do not think anything could be attempted to mislead the official visitors or the friends of the patients, but that patients are made presentable when receiving visits from their friends is certainly the case. That any changing of the clothes takes place to deceive or mislead the visitors I deny altogether.
10104. Is there sufficient time for such a purpose? No; and I am quite sure there is nothing more done for them than there is for me when I make my usual routine rounds.
10105. *Mr. McGowen.*] Do you know if any special clothes are made for the purpose of slipping over dirty patients when the official visitors arrive? Certainly not.
10106. Do you know if there are any clothes of a particular size made for this use? Certainly not.
10107. If you turn to questions 3,555 and 3,358 you will see that *Morrissey* says, “supposing friends of a patient came on a visit we would always change them and put them in clean clothes”; also, “that we had a large number of dresses made in a general way, and use them for these purposes when necessary”; further, that “we are not particular about the fit so long as the patient is clean and presentable”;—do you know of these things? I certainly know the dresses are made in quantities and kept in stock, and that they are made in different sizes. As I understand the evidence, this witness does not say anything more. I do not understand that these dresses are made to put over dirty ones. I understand this witness to mean that the dresses are made in three or four sizes, as is the custom in all institutions of this kind. A certain batch of patients measure pretty nearly about the same, and you will find the dresses are made in three or four sizes to meet these requirements. It would be impossible to make dresses to fit every patient as dresses generally fit other persons; for with the insane frequently a dress does not last a day.
10108. Am I to understand that these dresses were made for the special purposes of suiting patients of different sizes? Yes.
10109. Would it not be for the purpose of slipping over the other dresses when the official visitors came? Certainly not. These dresses are for ordinary use, and not for slipping on anything. I am quite sure,  
too,

too, that Morrissey did not mean anything of the kind. If you think she did, I shall request that she be brought back here and re-examined on the point.

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10110. Am I to gather that these dresses fit people of different sizes? These dresses are made in batches to suit different classes of patients for ordinary wear.

10111. *Dr. Manning.*] Had almost all the Government patients a better dress in stock than the one ordinarily worn? Nearly all of them had.

10112. Was the better dress worn when the friends came to visit patients? Yes; a number of them had a special dress for this purpose. The dress worn on these occasions depended on the condition of the one on the patient. If the one in wear was recently new and clean and whole, no change would be made.

10113. *President.*] When paying a visit to the institution we were pleased with the cleanliness of the dormitories and sheets, but we have been told in evidence that the sheets are not always used by the patients, that they and the bed covers are removed, the witness, Macleod, having said that only two patients in her dormitory slept in sheets while she was there, and that the sheets were taken off the bed, folded up, and put away at night; bits of blanket or anything they could get was all they had to cover themselves;—are such statements true? I do not think so. Whatever was done in this direction was done by that nurse herself. Such a thing as removing the sheets never occurred to my knowledge, neither before nor since. If she removed the sheets she did so on her own responsibility, without any authority from me or the matron. I believe there were one or two unusually dirty patients in her dormitory. The worst patients occupied it, and in these cases some special arrangement may have been made, but I feel perfectly confident that even those dirty patients always had sufficient night-clothing. There was one patient in the dormitory who told me she objected to sleep in sheets. She always took the sheets off the bed herself, and slept in the blankets. This was Case No. 16.

10114. Is the evidence of Macleod on this subject untrue? It is utterly false and misleading.

10115. If anything like she described actually occurred was it only in consequence of her neglect of duty? Yes.

10116. For the dirty patients sleeping in this dormitory were special arrangements made? Yes; they were always made as comfortable as they could be in the circumstances, and if they became too bad for the dormitory they were put in a single room.

10117. Had you an ample supply of chamber utensils all through the institution? Yes.

10118. Had you a guttapercha utensil for each of the single rooms? There was one available for each room, but I do not know if there was one put in each room. I do not think it would be safe to put one in the room with some patients. I use utensils made of different materials at different times. I have used paper ones and indiarubber ones. The indiarubber ones are the best, but they are the most expensive.

10119. In the isolation rooms on the male side is there only one? There is only one indiarubber utensil there now, and has been for some time, because two are not required.

10120. Are the patients generally placed in the room adjoining one occupied by Case No. 1 quieter in disposition and accommodated with a commode? Yes; but an indiarubber utensil would be supplied if it was required.

10121. Have you an ample supply of these? Yes; but one was not required in the second isolation room on the male side.

10122. *Dr. Garran.*] Supposing a patient were to make a bad use of a utensil, would that be sufficient justification not to leave it in the room? Not unless the practice became habitual.

10123. Did you ever know of a patient hammering the head of an attendant with a utensil? I never heard of such a thing. I avoid using breakable utensils. A porcelain utensil in a single room would be dangerous.

10124. If the utensil provided for the convenience of the patient was removed, should the fact have been reported to you? Yes.

10125. Do you think it was removed from the room? I do not think there was any object in removing it.

10126. During the time the patient was in the room, was he in the majority of instances disposed to use the utensil? I do not think he was. As far as I know he was disinclined to use the utensil.

10127. *Mr. McGowan.*] How many utensils are there on the female side? I do not know exactly; I forget. I generally keep an extra supply in the store. The number varies at different times—sometimes there are more than at others. These utensils are easily broken and torn, and I know I have to replace them from time to time.

10128. The witness Morrissey says there were four or five in the female seclusion room when she was asked if there was one for each room, and further that the patients did not get them if they did not ask for them;—how do you explain that statement? I look upon it as the answer of a witness who did not understand the question clearly.

10129. Do you think you had enough to supply one to each room? Yes.

10130. *President.*] Referring to the single rooms on the Government side we have had a number of extraordinary statements in evidence, and I should like to obtain some definite information. First, what is the nature of the bedding in the single rooms? For destructive patients there is a canvas tick filled with straw, canvas rugs, canvas pillow, and an indiarubber utensil.

10131. Are there any other patients than destructive ones who use these rooms? Yes.

10132. What other patients? Patients who request to sleep there of their own accord; some do that, and they are patients more or less excited and not destructive. The bedding for the destructive patients is the mattress filled with straw, and rugs—two or more—for covering. The other patients are provided with ordinary bedding, ordinary blankets, sheets, etc. At the commencement they have the ordinary bedding, and in one or two instances where the rooms have been occupied for a considerable period the patients have slept on ordinary iron bedsteads.

10132½. In certain evidence, particularly that of Macleod, has it not been stated that some patients have no bedding at all—nothing but straw? Loose straw is used only by one patient, Case No. 15, who persistently refuses to sleep in anything else than loose straw. I have known her to tear open a tick made of very strong canvas, and pull the straw out, in order that she might sleep in it. She has done this on every occasion she has had the opportunity.

10133. Is it true that patients are placed in these rooms quite naked? As a rule not; I believe Case No. 15 is generally put in naked.

10134.

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10134. Is this the only case you recollect? Yes; there may have been other patients who occasionally for a short period would not use bed clothing or night clothing. At other times these patients will use both, and whenever they will do so they are provided with clothes by the matron.
10135. The evidence of the witness Josephine Mackay is to the effect that they are always put in these rooms naked at night; that of Marshall that they were always put in naked; that of Verity was that all the patients were stripped and had no night-dresses or chemises; and that of Macleod that the patients were stripped and put in quite naked with a bag of straw;—what do you say of these statements? That they are utterly untrue.
10136. *Dr. Garran.*] Do I understand you to say you never put patients in these rooms without clothing if they will wear it? Certainly.
10137. Do you gradually withdraw these comforts from the patients as you find them becoming a source of danger or injury? Yes.
10138. Do you do this in the interest of the patients? I believe so.
10139. Do you make any personal profit by withdrawing these comforts? Certainly not; I do this because it is the usual method of dealing with such cases.
10140. Do you, in that course of action, follow the customary treatment of such cases? Yes.
10141. Have you ever done so harshly or do you do it only when necessity requires it to be done? I have always endeavoured to do the reverse of harshly.
10142. *President.*] In this particular part of the institution have you been latterly in the habit of having a night patrol? At the present time I have not a night patrol.
10143. Before the Government patients were removed at the end of last year, and since Case No. 1 became so prominent, had you a night patrol? Yes; up to the time the Government patients were removed I had a night patrol.
10144. Why did you not adopt that practice in the earlier history of the institution? The custom had not been adopted by my predecessor. I was under the impression that the establishment was working satisfactorily, and I did not deviate from the custom.
10145. What induced you to deviate from the custom when you did? Because of the prevailing idea outside that there was something wrong in not having a night nurse.
10146. Was that your real reason for making the change? Yes; I did it in deference to outside public opinion.
10147. Have you always considered the presence of the nurses sleeping one at each extreme end of the single rooms adequate provision during the night-time? I have always found it to be so.
10148. Without any periodical examination of the patients during the night? Yes.
10149. Must there not have been various classes of cases in these rooms at night? Yes.
10150. Did an accident occur on one occasion in one of these rooms whereby a patient fractured her arm? Yes.
10151. Do you not think the circumstances of that case amounted to an inducement for you to provide a night patrol? Taking that as an illustration it would be just the reverse. There was a night nurse on duty when this accident happened, and all the time there was no night nurse there was no accident.
10152. Do you think that night nurse patrolled the wards satisfactorily on that occasion? I do.
10153. Did she not stand at the door and see the patient without entering the room? Yes; there was no necessity to enter the rooms. The patient was up, standing inside the door. She spoke to the nurse, and was quiet in her behaviour. She asked the nurse for her clothes as she wanted to get up.
10154. Would that accident have occurred whether there had been a night patrol or not? I think so; I do not think the patrol made any difference one way or another in the circumstances.
10155. *Dr. Garran.*] During the period you had a night patrol, where did she sit while she was not making her rounds? In No 1 dining-room.
10156. Was it her duty to go the round every two hours? Yes.
10157. How long did it take her to make her round? About a quarter of an hour.
10158. Would she then remain an hour and three quarters in the dining-room? Yes; if she visited the wards every two hours.
10159. Would the patients then be actually under observation for a quarter of an hour in every two hours? Yes; but the whole time they were in close proximity to other nurses, and the matron was sleeping within a very short distance of the Government patients, who seemed to me to have quite sufficient night supervision. I have never had any anxiety on that point from anything having occurred.
10160. Of your own motion would you have made the change? I do not think I would.
10161. Did you make it simply to meet outside clamour? Yes.
10162. *Mr. McGowan.*] Do you know any well-regulated institution in which there is no night patrol? I do not think there is a better regulated institution than Bayview House. I know of no institution of its size where there is a night patrol. I have had a night nurse whenever there has been occasion for one.
10163. Are not your single rooms on the female side made of wood? Yes.
10164. Is this wood not pretty rotten outside? No; the walls are not rotten at all.
10165. Not the outside panelling? No. Every now and then there are indications of the presence of white ants, but these are always seen to at once.
10166. Do you remember when the members of this Commission were at Bayview House last? Yes.
10167. Did you see a hole in front of one of those rooms about the size of the palm of my hand? No, not that size.
10168. Did you not see one of the Commissioners poke his umbrella into the hole? Oh, yes; I remember now; that was the hole in which the bolt goes.
10169. Did you not notice a hole in the front of one of the panels which comes down to where you shut the door? Yes.
10170. Was not that hole caused by something having been pushed through the rotten wood? No; the only hole I saw was the one in which the bolt fits.
10171. Are you still positive that the wood is not decayed? Yes; whenever there is a sign of decay in the weatherboards I have them repaired.
10172. In the event of a fire, would these rooms burn very speedily? They would, but I do not see how a fire can occur.
10173. In case of a fire breaking out in these rooms, what chance would there be of saving patients in these

these rooms? In the first place, I do not think a fire can take place in these single rooms, and I have yet to learn that patients on the ground floor of a weatherboard structure are worse off in case of fire than they would be in a two or three-storied building made of brick or stone. These weatherboard buildings are on the ground floor, and the patients could be taken out much quicker than they could be removed from a stone building, two or three stories high; and although their consumption by fire might be more rapid, the exit of the patients could be effected more speedily than from the second or third storey of a brick building. I believe they are actually safer from fire than they would be in other structures.

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10174. Would not some cases require two nurses to get them out—a case like Case No. 15, for instance? I can assure you there are few more active persons than Case No. 15; she would be out like a lamp-lighter.

10175. Do you think, in case of fire, you would be able to get these patients out safely? Yes; I think they are safer in Bayview House than they would be sleeping upstairs in another building.

10176. If you had no night nurse, might not a fire burn for some considerable time before it was discovered? One can imagine all sorts of things. You might say the whole block of buildings could burn down while the nurses are in No. 1 dining-room.

10177. Do you think the risk from fire has been minimised by not having a night-nurse? I do not think it has been increased, because there are nurses in the dormitories, and there is always somebody awake with the toothache or headache or some other little trouble.

10178. *Dr. Manning.*] Are most of the cases in the single rooms chronic cases? Yes.

10179. Almost invariably? Yes.

10180. Do you always have a night nurse for acute cases while the patients are in the acute stage of their malady? Yes.

10181. *President.*] How often do the official visitors visit Bayview House? They make not fewer than twelve visits annually.

10182. What is generally the length of time between their arrival at and departure from the institution? I do not think the visits occupy less than half an hour, and frequently they occupy more than an hour and a half.

10183. Do they go through all the different departments? Invariably they do.

10184. Do they always examine the books and records of the institution? Yes, and very frequently they hold private conversations with the patients.

10185. Have they, from time to time, recommended the making of improvements? Yes.

10186. Can you give us a few examples of their recommendations? I can scarcely call to mind any special recommendation now. They are noted in the report book. The last one was the introduction of the gas into the associated dormitories.

10187. Do you remember any other? Yes; they recommended the erection of the new laundry and kitchen.

10188. How many patients have been discharged from the institution on their recommendation? I think one has been discharged, but not directly by the official visitors. I think one was discharged some years ago at the request of Sir Alfred Roberts, and on that occasion the action for the discharge was taken by myself. I do not think the official visitors have ever discharged a patient.

10189. When you have recorded patients as having been in seclusion have the official visitors seen these patients and inquired particularly into the causes of seclusion? I do not know that anything special has been done in this direction. I think the matters have been spoken about, but not invariably.

10190. In cases of restraint have they paid any special attention to the patients? They have always had an opportunity of seeing the record and the patients.

10191. Have they seen these patients and conversed with them? Yes.

10192. Have they inquired into the particulars connected with these cases? Yes.

10193. Do the official visitors pay any special attention to the deaths in the institution? As a rule, all deaths are noted in their reports. If a patient is in bed some statement is made in the report, giving the reason for being in bed and the name of the malady.

10194. Having had a considerable amount of experience in this and other institutions, will you give the Commission your ideas of the practical utility of these official visits—not the official visits of the Inspector-General of Insane, but the value of the official visitations made by Government visitors? I think the position they fill is a very useful one.

10195. Do you not say they have made but few recommendations for improvements in the buildings of the institution; and you cannot give us any idea of what they have done in regard to patients? That is because I do not remember. I have no doubt they have made many recommendations.

10196. What is the special value of these official visitations, especially in the case brought so prominently under our notice, which was brought under the notice of public and private persons before the official visitors knew of it;—if you will tell us the value of these official visits I shall personally be much obliged;—is it a mere question of oversight and supervision? I do not think it is a mere question of oversight, although I certainly think that it is one of the functions of the official visitors also to check the work of the institution, and see the patients. They have no interest in the institution pecuniarily. Their remuneration by the State places them in quite an independent position. They have an opportunity of seeing the patients and the patients' friends, and full powers to investigate all complaints. If anything is reported to them in connection with the management of the institution they have an opportunity of ascertaining whether it is correct or not, and I think these are advantages to the public. They see the official books, and I do not think it would be a difficult matter for them to detect any irregularity in those official books.

10197. Can you suggest to this Commission any way in which the duties of the official visitors may be more satisfactorily performed than at present? No; I do not think I can.

10198. Do you think the system is perfection at present? I do not think anything is perfection, but I think the system provides a fair and reasonable guarantee of the efficient management of institutions of this kind. I do not think a too inquisitorial system of visitation would be beneficial. Gentlemen experienced in this branch of work, visiting as frequently as they do, are able to ascertain whether a place is properly carried on or not.

10199. *Dr. Garraan.*] Generally speaking, do you consider the examinations have been sufficient? I think so.

10200. Imagining yourself rogue enough to want to conceal anything from the official visitors, could you do so? I think it would be a very dangerous experiment to try.

10201.

- Dr.  
A. J. Vause,  
5 Feb., 1895.
10201. Do you think it sufficient examination when the fact that Case No. 1 had been sleeping in that room was not found out for months by the official visitors? I do not see what there was to find out. It is supposing there was something dreadful to find out. I do not see that there was anything wrong to find out.
10202. Did not Dr. Cox express astonishment and surprise that the fact was not reported, and do you not think a vigorous examination would have resulted in its being discovered earlier? I think if a medical superintendent is fit to occupy his position he should have the full confidence of the official visitors to treat patients properly. It is difficult for me to realise anything remarkable about the single-room treatment, because I do not look upon it otherwise than in the light of ordinary treatment.
10203. Is it an important part of treatment in cases of this kind? It is an important part of treatment, but it is recognised as part of ordinary treatment.
10204. Where a patient has been so long in a single room under this treatment, and especially a patient like Case No. 1, would it not be a natural thing for the official visitors to inquire how he was getting on? Well, perhaps it would; and I do not know but what they did ask that question, but that would not imply asking whether he slept in a single-room at night or not.
10205. Did you, by evasion or otherwise, attempt to hide the fact that the patient was sleeping in a single room from the official visitors? Certainly not. I should have no object in hiding it. The rooms are there for my use.
10206. Do you not think it would have been a proper thing for the visiting doctors to ask whether or no single-room treatment had again become necessary in this patient's case? I should not have regarded it as being remarkable if they had, any more than I regarded it as being remarkable that they did not.
10207. Do not special cases naturally lead up to special inquiries? Yes.
10208. Was not this a special case? Well, I suppose it was.
10209. During the whole period of your being at Bayview House have you had another case exactly like it? No; and I might say the same of every other case in the house. His was a more marked case than usual.
10210. Was it a case more likely to necessitate single-room treatment? Yes; but single-room treatment has not given rise to so much attention previously, and there is no special column in any of the official books for the entry of patients sleeping in single rooms at night.
10211. *Dr. Manning.*] It has been given in evidence that instruments of restraint—muffs—were used on and removed from Case No. 15 and Case No. 32 without your knowledge;—is that true? I do not believe it was done.
10212. In these cases have you entries in your books of occasions when muffs were used? Yes.
10213. In both cases is the use of restraint recorded? Yes.
10214. Would taking them off while the official visitors are there deceive these gentlemen? No; because the fact of restraint being used is always entered in the medical journal.
10215. Do you take some of the patients to Narrabeen for a change of air? Yes.
10216. Do you always ask the permission of their friends before doing so? Yes.
10217. Before they are taken there do you also obtain leave from the Inspector-General of the Insane? Yes.
10218. Have you occasionally taken patients to Manly for a change, and kept them there in a house specially rented for the purpose? Yes.
10219. *President.*] Do you wish to put in any additional papers for the use and information of the Commission? Yes; I hand in a list of accidents that have occurred at Bayview House from 1884 to 1893 inclusive; a return showing the nature of accidents at Bayview House from 1884 to 1893 inclusive; a return showing the average percentage of recoveries on admission and readmission; the percentage of patients relieved on admission and re-admission; the average percentage of deaths on average numbers resident; and the average percentage of those discharged either recovered or relieved, all for the ten years 1884 to 1893; a list of names of patients who have died at Bayview House during the years 1890 to 1894, including cause of death and duration of illness; a letter from the Hon. Edward Greville, M.L.C., relative to the probability of Dr. Tucker having visited Australia during 1894; a letter from Mr. F. Gannon, solicitor, re Miss Macleod; and two letters from the father of Case No. 12, and a drawing of the isolation rooms on the male side of the institution. [*Documents handed in, and marked Exhibits J1, K1, L1, M1, N1, O1, P1, and Q1—See Appendix.*]

[Witness withdrew.]

FRIDAY, 15 FEBRUARY, 1895.

[*The Commission met at 11 a.m. in the Board Room, Chief Secretary's Office.*]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
ESQ., M.D., INSPECTOR-GENERAL OF THE  
INSANE.

ANDREW GARRAN, Esq., LL.D.  
JAMES SINCLAIR TAYLOR MCGOWEN,  
Esq., M.L.A.

A. J. Vause, Esq., M.B. et C.M., re-examined:—

- Dr.  
A. J. Vause,  
15 Feb., 1895.
10220. *President.*] We desire to ask you a few more questions in connection with this investigation, and in the first place we wish to know if you have brought the rugs as requested on a former occasion? I have.
10221. Are they the kind of rugs used in your single rooms, and similar to those found in the room occupied by Case No. 1, when Professor Anderson Stuart paid his visit to the asylum? One of the rugs I now produce was in the room on that morning, and the other is a new sample of a more modern article of a kind in general use at Bayview House now for this particular purpose.

[10222.

Dr.  
A. J. Vause.

15 Feb., 1895.

10222. Of course the one used by Case No. 1 has been cleaned, so that you do not produce it in the same condition as it was when seen by Professor Stuart? Certainly, it has been washed the same as these rugs: always are washed during the day after having been used at night.

10223. With regard to the room itself, with the exception of having been cleaned, is it in exactly the same condition as it was on the morning it was inspected by Professor Stuart? It is, with the exception you make, precisely in the same state. There was a lining board that required painting, and I have not even had that touched.

10224. Has anything at all been done in the way of repairing or altering the building in any shape or form? Nothing at all, except that the outside has been lime-washed and whitened. The interior remains exactly as it was.

10225. Have you done or had anything done to the floor? Certainly not.

10226. Has the ventilation under the floor been in any way changed? No.

10227. Have any additional windows been put in the room? Certainly not.

10228. *Dr. Garvan.*] Did you ever go to see Case No. 1 in this room after midnight? I think I have done so, but I cannot be certain on that point. I think, however, I have seen him at all hours throughout the night.

10229. Have you ever been present when he was taken out in the morning? Yes; before my illness, but not since.

10230. Can you remember how often you have been present on those occasions? Occasionally; I did not make any record of it when I did so.

10231. Do you think you have seen him removed half a dozen times? Yes.

10232. On these occasions did the room smell as foul as it did on the morning of the 20th of May? It would smell as bad sometimes; and, perhaps, at others, the patient had not been so dirty, and then the offensive smell would not be so prominent.

10233. Was the odour on the morning of May 20th exceptionally bad? No.

10234. In your previous experience of asylums for the insane in the mother country had you much opportunity of seeing cases of acute mania? Yes.

10235. In these asylums were you ever present at the first opening of the doors in the morning? I do not know that I have been.

10236. Then can you compare the rooms of acute maniacs you saw in the British institutions with those at Bayview House? Not exactly in that way, perhaps. The cases I saw at that particular time probably required single-room treatment in the daytime, or perhaps only for intervals of a few hours; but I have seen single rooms in a dreadful state even in the daytime.

10237. As bad as your room was on the morning of May 20th? Yes, and a great deal worse. I remember seeing a case at Morningside, where a man had a large abscess, and a linseed-meal poultice was applied. He tore the dressings, and scattered the poultice all over the room, the whole presenting a very dreadful spectacle.

10238. Do you consider that the room occupied by Case No. 1 was exceptionally bad—in fact worse than that of other patients of the same class? I do not think there was anything very remarkable about it. The room was in an average condition.

10239. When the patient first arrived at your institution was he dirty in his habits? No.

10240. Did he develop dirty habits before he was removed from the ordinary room to the single room? Yes; but he was not removed from the upstairs room because of his dirty habits altogether, but because he was so very noisy and excited.

10241. When he was placed in the upper room was he worse in his condition of excitement? He was still very excited.

10242. For what reason? He knew he was surrounded by people, and that had a tendency to increase his excitement.

10243. Had the companionship of other people a bad effect upon the patient? Yes.

10244. Was separation good for him? Yes.

10245. Was there any window in the room upstairs through which he could have fallen? I had a certain amount of doubt of that window, but it was fixed up as well as we could fix it; I think he might have wrenched off the internal protection, but he could not have damaged himself by falling out without breaking the inner shutters. It was not as strong as it might have been, and it was partly on this account that I removed the patient to the stronger room below.

10246. Was the cubical capacity of this room equal to that of the isolation room in the court-yard? No; I think it is considerably less.

10247. Talking of the proximity of attendants;—it has been stated by Doherty in evidence that the patient became very irritated by anyone looking at him;—is that the case? Yes; he was always irritated when under observation like this.

10248. Do you believe that a person being in the outside room would have irritated him? Certainly.

10249. Do you think that an attendant, by looking through the observation hole in the door, caused him irritation? I feel sure it did; in fact, as far as I recollect, he actually expressed his objection to anyone being in the room.

10250. Even his attendant? Yes, or anybody.

10251. It is an important point on which I want you to be clear, and I ask you now, why did you move the patient from one room to the other? My great reason was to obtain greater isolation, because this isolation was calculated, in my mind, to reduce the excitement and to induce sleep.

10252. How long was he in an excited state before it was necessary to remove him to the isolation room in the yard? I do not know exactly, but I think the excitement gradually increased. I think he spent the whole of the winter in the larger dormitory. I know we had a fire there, and that he would get up and walk about. Then he became more excited and I, considering the larger room unsafe for him, strengthened the inner and smaller room for his occupation.

10253. Did he use the outer room as his day-room? Yes, to a certain extent. He was not very steady on his feet, and when he could get down stairs he used the downstairs room as a day-room. He used both rooms as a day-room more or less. He was for several weeks downstairs and several weeks upstairs, according to his condition.

10254. Was there any difficulty in getting him up and down stairs, owing to physical weakness? Yes; it was on that account he was downstairs. I would have preferred managing him upstairs if I could have done so.

10255.

- Dr.  
A. J. Vause.  
15 Feb., 1886.
10255. Looking back on the case, have you any doubt of the wisdom in removing Case No. 1 from the upstairs room to the single room? Not the slightest.
10256. Would you have done the same to your own brother if you had him under your care? Most undoubtedly.
10257. Up to the time of the patient leaving Bayview House was he out and about every day? Yes; he was out every day for some months.
10258. The reason I ask you this is because we have it in evidence that after his removal to Callan Park it was four months before they could get him dressed? The excitement then must evidently have increased.
10259. Do you attribute the increase in his excitement to his removal from one institution to the other? Yes.
10260. Was it only at night that the excitement developed itself in such a marked degree in the patient? Yes, mainly, so far as my experience with him is concerned.
10261. Were his periods of excitement generally after 5 o'clock in the evening? Yes.
10262. Was he a special case in that respect? I do not think so. He was particularly noisy at night and would not keep in bed, and he was fairly quiet in the daytime.
10263. At the time he left Bayview House do you think he was improving in his condition? I think he was improving.
10264. What was there to indicate the improvement? I think there was a slight indication of greater tranquility than there had been formerly in his case.
10265. At the time Copley left your employ had you any fault to find with him as an attendant? No.
10266. Did he leave at your wish? Certainly not, and I was sorry to lose him.
10267. Did he make any complaint to you before leaving? Not the slightest.
10268. Did he mention in any way that he thought the patient had not been properly treated? Not in the slightest.
10269. Did you ever see him after he left? No.
10270. Did you know at the time he left your institution he was going to South Africa? I heard something about it.
10271. Had you anything to do with his leaving for South Africa? No.
10272. From the manner in which Mackenzie refers to him, it implies that Copley might have given similar evidence if he had been here;—do you know if he could? I don't know how he could.
10273. Mackenzie, in his evidence, said the patient was not a dirty patient, but owing to not having the use of a utensil, he dirtied the room; he would then walk about, and the room being quite dark he might fall in the filth;—is there the slightest justification for this witness to make such a statement? Absolutely and certainly not.
10274. Do you dispute Mackenzie's evidence on this point? Most decidedly.
10275. *Mr. McGowan.*] In the event of patients developing dirty habits, was the fact entered in the case-book? Yes; as a rule, I think it was.
10276. How long before Case No. 1 was removed to Callan Park did he develop dirty habits? I think seven or eight months.
10277. Therefore, were the official visitors made aware of the fact that he had developed dirty habits? I do not know; but I did not make it a special point of telling them that he had.
10278. If the fact was entered in the case-book would they be able to see it? Yes; certainly.
10279. What is the usual hour for taking the patients out of the single room in the morning? It varies according to the nature of the case. I think between 7 and 8 o'clock.
10280. Do you have different hours for different patients? It depends upon the case and the kind of night experienced. There is no fixed rule. We are guided to a large extent by circumstances.
10281. If you had kept the patient in the upstairs room would it have been possible for an attendant to have been so close to him as to have kept him under supervision? Yes.
10282. Do you think it was a wise thing to keep him under constant attention? Oh, yes; I think I kept him under supervision the whole time; but my one object was to avoid annoying the patient as much as possible.
10283. *President.*] Would it have been equally convenient to have had a personal attendant constantly on duty? It would have been more convenient for me, and it was on that account I did everything I could to keep him upstairs, until circumstances told me it would be injudicious to do so any longer. Before he was removed from the upstairs room he had an attendant sleeping in the next room. In this respect I had to be guided entirely by the varying conditions of the case. From Callan Park you have had evidence that it was better for the patient for an attendant not to be in too close proximity. We also know that temporary improvement is incidental to his case. He has improved before; he will probably have another relapse, and will improve again.
10284. Do you not think he was much better by having been under constant supervision by an attendant sitting during the night outside his half-opened door? It is very close supervision certainly, but I say it would probably be too close for the patient. I consider that I had him under sufficient supervision at night when I had an attendant watching over him with instructions to see or hear him every two hours, or whenever necessary in the meantime.
10285. Do you not think his removal to Callan Park was conducive to his improvement there? I do not think so.
10286. Judging by effects? I have treated him without this constant supervision with equally as good, if not better, results. He never was in such an exhausted state at Callan Park as he was when he came to Bayview House. When first at Bayview House he was as near death as he possibly could be. He recovered, however, while there, and I certainly did not have his room-door open with an attendant constantly watching him. I do not say it is treatment I should condemn, but I say that my treatment is equally as good. I also think that treatment might, to some extent, allay the state of feeling which would be likely to arise in the minds of people who do not, perhaps, understand what is best in the treatment of insane patients.
10287. You stated in the early part of your examination that you take attendants who have not had previous experience, and prefer to train them for yourself? Yes.
10288. Can you tell us why three of your attendants who know something about the patient's affair left your establishment soon after it became prominently known—I mean "Mick" and "Pat," and Copley? These

These attendants left under ordinary conditions as far as I know, and I did not ask them to go. They left of their own accord, and I can say I was cross with one for giving me notice. With one of the men you name I had some words for giving me notice. He, however, said he was very sorry, but he had other work to do, and wished me to let him go. I had no other alternative than to comply with his request. Mackenzie I discharged for reasons already explained. Copley left me on friendly terms, but why, I do not know.

Dr.  
A. J. Vause.  
15 Feb., 1895.

10289. Did the other two men assign any reason? No.

10290. Were these two men others? I do not think so.

10291. What is the average time attendants and nurses remain in your employ? I cannot tell you that.

10292. Especially after training them, I mean? I do not know; I have had nurses from four, eight, nine, ten, and twelve years. If they mean staying, they generally stay a long time. If they mean to go, they generally go early. If they once get accustomed to the place they generally stay on for years.

10293. Was the percentage of attendants leaving you during the last seven months from the removal of Case No. 1 greater than heretofore? Last year the percentage was much greater than ever before.

10294. Can you inform the Commission whether any fresh directions have been issued to you by the Inspector-General of Insane since the statements in regard to Case No. 1 were published in regard to the entries in the medical journal of patients being placed in the single rooms at night? I do not think I have received any official instructions on this point; I have heard something of a suggestion to enter the names of patients sleeping in single rooms under the heading of "general observations," but not under the heading of "seclusion." That was a suggestion made, I think, by myself, and approved by the Inspector-General.

10295. When did you first practise that mode of entry? Only after the occurrence to which attention has been made.

10296. Was that rule a new departure? Yes.

10297. Is it to a large extent opposed to the practice adopted elsewhere? I think so.

10298. What induced you to suggest it? I do not think I actually suggested it. I think I made an entry on this subject under "general observations." It was approved, and then it was suggested to carry on the same course in future.

10299. Do you now carry on the plan systematically? Yes.

10300. Do you now produce samples of the rugs used in the isolation rooms, at Bayview House? Yes; there are two. The smaller one, unlined at present, is one of the three rugs found in the room after it had been vacated by the patient, on the morning of 20th May. The other is a new blanket-lined rug, of the kind generally used at Bayview House by patients under single-room treatment.

[These canvas rugs were spread on the board-room floor, and examined and measured by members of the Commission. The one unlined, but showing signs of having previously had a blanket square stitched on the inner side, with pieces of blanketing still adhering, measured 5 feet 9 inches long by 3 feet 9 inches wide. The ordinary and unused rug, fully lined with blanket, was 5 feet 9 inches long by 5 feet wide.]

[*Examination continued.*]

10301. *President.*] Do these rugs that you have brought to us to-day represent in a general way the kind of rugs used in the treatment of Case No. 1? Yes.

10302. Do you positively identify the one now minus lining as being one of those seen in the isolation room by Professor Stuart on the 20th May? Yes.

10303. Is that the rug which measures 5 feet 9 inches by 3 feet 9 inches? Yes.

10304. Were the other two rugs similar in size? Yes.

10305. Can those other two canvas rugs be produced now? No; they have been torn up or worn out by now.

10306. Are you satisfied that they were equally large, and as sufficient in warmth for covering purposes as the one produced? Yes.

10307. *Dr. Garran.*] Supposing the patient had picked off the blanket lining of one or two of these rugs, do you think the three unlined pieces of canvas were sufficient to keep the patient warm at night? Yes; more than sufficient.

10308. Are two of these unlined rugs sufficient for this purpose? Yes.

10309. Would one be sufficient? Well, hardly; I should prefer two. In all probability, if the blanket was not picked off, he would have two.

10310. Do you think three, with the blanket torn off, would supply the place of two, with the blanket still on? Yes.

10311. Was the number supplied left to the attendant, or was it done under your observation? I gave general instructions to keep this patient warm; but I did not see what rugs the attendants gave him.

10312. Are you satisfied that when you saw this patient from time to time that he was kept warm? Yes.

10313. Supposing he became exhausted at night, and required milk or cocoa, and the night-attendant, owing to oversleeping himself, or other neglect, failed to give this nourishment, could you tell by the state of the patient in the morning that he had been so neglected? I think I should speedily be able to notice the result of neglect, and especially continued neglect, of that kind. Of course I could not tell if he had received a cup of tea or cocoa in the night; but still there was no reason why he should not have it whenever necessary. It would be but a common act of humanity on the part of the attendants to look after patients in this way; and judging by the condition of the patient, and the general character of the attendant, I cannot suppose he was neglected in this respect.

10314. Was it left to the patient to ask for nourishment? I think, as a rule, the attendants asked the patients. As a rule, they take nourishment of this kind to them. Sometimes they might take one thing and the patient will ask for another. Say he was given tea, he might ask for cocoa or something else, and when he was taking food he would get whatever he asked for.

10315. Do you not state on the 19th of May you inspected the isolation room on the male side? Yes.

10316. Are you quite certain on that point? Yes; I am perfectly sure about it.

10317. Did you hear the evidence of Professor Anderson Stuart when he said that he smelt stale urine in the room, and that the room itself could not have been sweet? I did; and I say in contradiction that the room has always been sweet and clean. It is exactly in the same state now as it was then, except that it has not been used of late. I have always visited the single rooms daily, and have never known them to be otherwise than quite sweet.

10318. Are you perfectly certain on the point that this room was sweet on the morning in question;—I mean that there was no stale smell caused by neglect in cleaning? Yes; I am positive that this room was sweet on this and every other morning after it was washed out.

10319.

- Dr. A. J. Vause. 10319. Do you say so, even though Professor Anderson Stuart says at the same time just as positively that it was not sweet? I can only say emphatically that it was.
- 15 Feb., 1895. 10320. Did you inspect this room day after day for a week previous to Professor Stuart's visit? Yes; I visited the room every day, and I say again it was always sweet.
10321. Was it O'Brien's duty to be on watch during the night of 19th May and the early morning of 20th May? Yes; I think it was.
10322. How was it he did not seem to be out and about when this party made their visit? I do not know how it was he did not see them immediately on their arrival. When first I saw him in the morning he was with the patient.
10323. Would the fact that he was in a room that had no window facing the courtyard account for it in any way? It might.
10324. Would it be possible for people to come into that yard without a night attendant in the room seeing them? Yes.
10325. *President.*] We understand, Dr. Vause, that reports are in circulation to the effect that persons have been invited to give favourable evidence before this Commission in reference to your institution, and that they have been offered compensation for so doing;—do you know anything of such offers having been made? Certainly not.
10326. Have you taken any part in any matter of that kind? I have not.
10327. If it has been said that it would be to the interest of certain persons to give evidence favourable to your institution and its management, would such things have been said without your knowledge and consent? Certainly they have.
10328. Personally, I have heard remarks to this effect, and I want you to give a satisfactory denial of anything of the kind if you can? All I can say is that, as far as I am concerned, such statements are utterly untrue.

[Witness withdrew.]

FRIDAY, 1 MARCH, 1895.

[The Commission met in the Board Room, Chief Secretary's Office, at 11 a.m.]

Present:—

THE HON. SIR ARTHUR RENWICK, KT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
ESQ., M.D., INSPECTOR-GENERAL OF THE  
INSANE.

ANDREW GARRAN, ESQ., LL.D.  
JAMES SINCLAIR TAYLOR MCGOWEN,  
ESQ., M.L.A.

Professor Anderson Stuart re-examined:—

- Professor Anderson Stuart. 1 Mar., 1895. 10329. *President.*] The Commission has recalled you for the purpose of asking certain questions in connection with the evidence you gave on a former occasion, and more particularly some questions in regard to the dormitory, or sleeping place, in which Case No. 1 was kept. I know some members of the Commission wish to ask you questions on the general subject. The first point I would direct your attention to is how long did your visit, as far as the single room was concerned, last on the morning of the 20th of May? I really do not know how long it lasted. My commission was an extremely limited one. I was not told to make a report upon the place such as I would have made in the course of a sanitary inspection, neither was I requested to report on Case No. 1 from a medical point of view, or to inquire into the treatment of the case medically. All I was told to do was to see whether the report of the story connected with this case to the Colonial Secretary, and through him indirectly to me, was a true statement of the circumstances. From that you will see that the time required to verify a story of that sort would be short, because I was not called upon to make a detailed description, nor to get the history of the case; so that my stay may have been somewhat brief, but it was by no means a hurried visit. My stay was quite sufficiently long for the purpose I had in view.
10330. The reason I ask you this question is that we have had a statement from Dr. Vause to the effect that there was some misunderstanding on your part in regard to the particular evidence you gave in connection with the attendance on Case No. 1 in this room. You stated that Dr. Vause said the patient was put in the room and was not visited by any attendant between 10 at night and when he was taken out at 7 o'clock in the morning. Upon this point Dr. Vause said that your visit was of such a hurried character that there was no time for any explanation of this kind, and that there must have been some misunderstanding on your part as to what Dr. Vause really said on this occasion? I entirely and specifically deny that it was a hurried inspection. It was a deliberate inspection, and I was careful in adhering to facts when stating what I saw.
10331. But do you not see the importance of this question? I am going to add something. Dr. Vause, on the occasion of my visit, took matters extremely quietly; he had every possible opportunity of making any statement he liked, but Dr. Vause, on every occasion I have seen him, said very little, and appeared to me to be an exceedingly silent man. I have only seen him on three occasions, and he always struck me as being particularly silent. Therefore his not saying much at Bayview House on the morning of my visit on 20th May did not strike me as anything extraordinary.
10332. Did you not, at the request of the Commission, pay a second visit to Bayview House for the purpose of ascertaining if there was any difference in the building now, as compared with it when you saw it on the 20th of May under different circumstances? I think I had better divide the answer to that question. First there is the structure itself, and I do not see any difference in it structurally. But on the second occasion I made my visit about 11 o'clock in the forenoon on a bright sunny day. I found the door, I think, about half open, and fixed so. I saw a window high in the wall open, and the whole place was deluged with air and sunshine. This was a very different set of circumstances from when I saw it on the first occasion. The first time I saw it was at the end of the night after the place had been actually occupied by a patient who had not the use of a utensil, whereas the second visit was in the forenoon after the place had been thoroughly ventilated, and had not been used, therefore the difference was very manifest. On the first occasion the room was a stinking den, not fit to keep a dog in, and on the second occasion

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occasion it was sweet and wholesome. On the second occasion I examined the floor carefully, and found that it was made of ordinary unprepared wood. It was not painted nor impregnated with any material to make it impervious, but it was ordinary wood which had shrunk a good deal. At the joining the boards had been tongued and grooved, but owing to the shrinking, the tongue had come away from the groove, leaving a space, and this space was filled with dust and sand. The result of this parting of the boards was that fluid excreta could find their way through the boards into the floor. I put my open knife into the division between the boards, and that blade [*an ordinary penknife produced*] I pushed into the groove. It can be easily imagined that owing to the wood being unprepared the liquid excreta would soak into it, and it could only be washed with water imperfectly. Another result would be that this room, if used night after night, would be difficult to wash and get dry in the time from when it was vacated in the morning until it was used again the next night. One, therefore, can easily understand a foul odour arising from decomposed excreta, an odour I experienced and distinctly remember. I maintain that my statement is entirely supported by the patient's son, who told me he went there at 11 o'clock in the forenoon of the morning on which the patient was removed, saw that the room had been washed out, that the floor was very wet, and that there was an abominable stench. On the second occasion that I visited the place there were none of these surrounding circumstances.

10333. Had you such experience in regard to cases similar to that of this patient, and their treatment in single rooms, as to know whether the conditions you saw on that morning were such as frequently occur in cases of this kind, under similar circumstances, in all institutions for the insane? In reply to that question, I can say that I foresaw the possibility of having to make comparisons, and on the very day I visited Case No. 1, I went to Callan Park and was shown over that institution, or the single rooms of that institution, by Dr. Blaxland. The difference between his single rooms and the room I saw at Bayview House was comparatively that of a palace to a den. The rooms at Callan Park were pure and wholesome and sweet. There may have been some slight smell, but nothing much, especially as the patients using the room were of the same character as Case No. 1 was. Regarding the distinctive smell of the urine of those patients, I can say I have made a good deal of inquiry on this point, and I can say the odour I smelled in that room was an entirely different smell to that of fresh urine. It was the smell of decomposing urine—a rotten foul smell of decomposed matter coming from a wooden floor.

10334. Do you not think it is possible for a distinct smell of what you call decomposed urine to be passed by a patient under certain maniacal conditions, and it has been suggested that the urine of Case No. 1 was in this condition? When the question was put to me previously I was not in a position to say much about it, but I have made inquiries since, and as far as I can ascertain the urine of this patient was not in that condition up to the time of which I speak. I may say here to the members of this Commission, that when making inquiries concerning Bayview House, the patient and his treatment, and in so doing, only performing my duty, I have been subjected to all sorts of petty persecutions.

10335. What are these persecutions to which you refer. I may add that the Commissioners will defend their witnesses from any persecution to which they may be subjected? Your Commission cannot defend me in this respect. The persecutions to which I am subjected are of a social nature. One gentleman with whom I was extremely friendly before this Bayview House affair has now cut me dead, simply because I did my duty, and obeyed the instructions of my Ministerial chief. When I first met this gentleman, who is a Member of the Upper House, after I had made my inspection and report he passed me by, and I said to myself, "Surely he did not see me." I met him a second time, and on the second occasion he cut me dead. I said to myself, "This seems very strange." I spoke to a friend of mine, who said he considered this gentleman did not see me, or something of that sort. I met this gentleman again, and again he cut me. This time I stopped the gentleman in question, and said to him, "Mr.—, why won't you recognise me now?" He turned shortly round and said, "I think you should not have gone to Bayview House." I said, in reply, "I was sent by my Ministerial chief. It was my first duty to obey that command." He said, "I would have seen them in blazes before I would have gone." I said, "That is very curious, and it is not my notion of discipline. My notion of discipline is to obey orders first. Good morning." That is a type of the treatment I am receiving now. It is a kind of persecution that is difficult to describe, but all the same it is very real.

10336. *President.*] Have you any idea of the cubic contents of the room at Bayview House? I can only speak after having measured it with my foot. It is about 12 feet by 8 in floor surface, and judging by my own height, I should say it is about 13 or 14 feet high.

10337. Have you been to Callan Park and seen the single rooms there? Yes.

10338. Are the cubic contents of those at Callan Park greater or less than those at Bayview House? I do not know, but I should think they are about the same.

10339. We have it in evidence that it is greater at Bayview House than at the Government institutions? I have not made any exact calculation, but I should say they need to be.

10340. Have you anything to say about the window in that room? I think the words I used in my report were that there were no means of ventilation or lighting. I must ask you to bear in mind the circumstances of this visit. It was made at a very early hour in the morning before it was properly daylight, and only the door of the room was opened. You must know that if you look into a room with only the door open, especially a small room with a high ceiling, the other part of the room is absolutely dark; and on looking round the room on the morning of the 20th of May I saw no window, and none of the party saw any window. Of course, when I went to the room the other day I saw that the wall contained one small window, which, I may add, was totally insufficient as a means of lighting the room. The size of that window is no more than is necessary for ventilation, and instead of regarding it as a means of lighting the room it cannot be regarded as anything more than a mere accessory to the means of ventilation.

10341. We have been told in evidence that if the night was cold this window was shut, and if it were warm it was open;—would that be the case? All I can say is that if it is shut it keeps out the light more effectually in the morning. I must ask you to remember that this night was a very cold night, and that the room is situated on land; in fact the whole institution is on the edge of a swamp—a very cold place. All I can say is that I did not see the window, which is worked from the outside by a rope. I never saw that before.

10342. Did you examine the ventilation of the room? Yes.

10343.

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10343. Was there any ventilation under the floor? Yes; there were some ventilating bricks.
10344. Do you consider that the ventilation was satisfactory? It was not.
- 10344½. With regard to the contents of the room, did you not say that the sole contents were lying upon the floor, and consisted of a mattress, three pieces of a coarse canvas cloth, all in a filthy condition? Yes, I counted them myself.
10345. Do you think if you saw these three pieces of canvas cloth washed that you could identify them? No, I do not think I could identify them now, because having been washed would make a great difference.
10346. Do you know anything about the size of that canvas cloth? Yes.
10347. Do you think if we were to show you one of the rugs you could tell us if it was anything like the size of those you saw on the morning in question. We have had such different evidence regarding the size of these pieces of canvas cloth, as you call them; but do you think you could identify one if it was placed before you? I am under the impression that I should have some idea of the size.
- [Two rugs were produced, one of which had been identified by Dr. Vause as one of the three seen by Professor Stuart in the room on the 20th of May, and another unused rag, blanket-lined, which was said to be a fair sample of those now used in the single rooms for patients of this class at Bayview House. Professor Stuart examined both rugs, and described how he saw the canvas coverings on the occasion of his visit to Bayview House.]
10348. Do you think the rug without the blanket-lining was one of the three pieces of coarse canvas cloth you saw when you paid your first visit? It seems to me that this is slightly bigger than the pieces I saw. Of course you must remember that the light on that occasion was not good. The pieces of canvas were foul and stank. I picked them up with my thumb and finger, saying "one, two, and three." They stank beyond description. The tick of the mattress was in the same condition, and from the top I felt the straw and found that it was hard and matted.
10349. When you were before the Commission on a previous occasion, did you not say that the floor of this room could be made to slant slightly, and that it might be of asphalt? No, I did not recommend that it should be of asphalt.
10350. If you will turn to question No. 60 you will see that you were asked if urine could pass through the cracks in the floor to the ground underneath. You replied that you should think so. You were then asked if this could not be remedied, and your reply was "Yes, you could put down a floor and fill up the seams, or, as I said before, it might be of asphalt"? That is not what I said. I said nothing of the kind. If I am reported to have said it, the report is inaccurate.
10351. *Dr. Garran.*] I understood you to say that, and when I asked you this question on a former occasion it was from memory I asked it, for I had not then seen the printed evidence. I understood you to recommend that you would use an asphalt floor in preference to the wooden one; in fact you said the floor could be made to slant slightly, or that it might be of asphalt? I certainly did not mean it then.
10352. In question 58 I asked you if there were any means by which this odour could be removed, and as far as I remember you said in reply, "I think so, the floor could be made to slant slightly, and if of wood it could be impregnated with paraffin oil or many other things. The floor might be of asphalt; it should certainly not be allowed to get into the state it was, and a little trouble might make it comparatively sweet"? I never said one word about paraffin oil; I said paraffin. It would be absolutely absurd to recommend the use of paraffin oil for the purpose of impregnating the floor.
10353. Then does it amount to this: that you do not recommend asphalt floors? No, I do not, because they would be too cold.
10354. Do you then, in regard to your evidence as previously given, desire to alter the suggestion that these floors should be of asphalt? Certainly; I never said that they should be.
10355. Do you suggest now that these floors should not be of asphalt? I do.
10356. Why then did you suggest that they should be of asphalt on a former occasion? I was only speaking then of asphalt in regard to the question of odour, and if you read this evidence over, which I now see for the first time, you will see that the whole of the questions have a distinct bearing on this matter of odour. I said that asphalt would be suitable, because it would make an impervious floor, meaning that to apply to the prevention of foul odours arising. I never intended to say that asphalt floors were best for single rooms. I suggested in a general way without having reference to this particular room, but on the other hand as a preventive of the continuance of foul odours.
10357. In question 60, when you were asked could not this be remedied, you say, "Yes, you could put down a floor and fill up the seams, or as I said before, it might be of asphalt." What do you mean by "it"? The floor.
10358. And that is what you deny now? —
10359. *President.*] Am I to understand that when you said to the Commission that the odour could be removed, you wished to convey that it might be done by treating the wooden floor by paraffin or asphalt? Yes, in a general way I said that.
10360. Did you mean to state that the floor of this cell should be covered with asphalt? No; it would be too cold. I should recommend an impregnation of paraffin.
10361. Your object of course being, as far as possible, to keep the room clean and sweet? Certainly.
10362. When you visited Callan Park did you see the rooms in their ordinary condition as they are in the day-time? No; I saw them with patients in them.
10363. At what time of the day? Three o'clock in the afternoon, but after the rooms had been occupied for some time.
10364. Did you visit Callan Park, or see the patients in the single rooms early in the morning, after having been confined there all night? No; I thought of doing that; still, on second consideration, I did not think it was my business.
10365. We have had it in evidence, both from the attendants at Callan Park and other sources, that the single rooms there after having been used all night by patients of this class, are in much the same condition as you found the single room at Bayview House on the 20th May;—do you think that is possible? I do not believe it. I cannot imagine such a thing.
10366. But we have had evidence to this effect from not only the attendants at Callan Park, but from the Medical Superintendent at that institution? I do not care. I do not believe it. I myself saw Case No. 1 and his room at Bayview House. Those at Callan Park did not see him there. They did not see this place at that particular time, and if you were to bring down a cloud of angels with statements to the contrary, it would not alter my opinion. I know what I saw on that occasion, and I have

have seen from the short notices appearing in the Press from time to time who have been examined by this Commission. Their evidence does not shake me in my opinion.

10367. Do you not know that these gentlemen, especially the Medical Superintendents of the public institutions, are placed in positions of great responsibility; that one of them, at all events, has had this particular case under his care for a considerable period; and that they have been specially trained for the purpose of dealing with and treating patients of this kind; and yet you give no weight to the evidence of these gentlemen as given before the Commission? But I can say this, they did not see Case No. 1 in this room on that particular morning, and they, therefore, could not know of the surrounding circumstances.

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10368. Are you not aware that some of them, at all events, have seen him in similar conditions at Callan Park? They did not see him that morning at Bayview House any more than I have seen him at Callan Park, and, therefore, I stand to my opinion and by my statements made in reference to that occasion.

10369. *Dr. Garran.*] In a question asked by Dr. Manning, No. 86, when asked what actual experience you had had in the treatment of insane patients, you are reported to have said, "I was born in one, and bred and brought up in two of the largest asylums in the world. I intended to have made a study of insanity, but I changed my mind. I have been, however, an inspector of asylums in various parts of the world, and have been in many Australian institutions of a similar nature?" "I never said anything of the sort. It is utterly untrue to say I was born in one—why, it is absurd. Why, I was born in a town near to a large asylum.

10370. You said you were born and bred in two as a matter of fact? I said nothing of the kind.

10371. You said you were born and bred and brought up in two of the largest asylums in the world, and that you intended to have made a study of insanity? The report is altogether incorrect. To say that I was born in an asylum, or that I was an inspector of asylums in various parts of the world is altogether wrong.

10372. Have you ever been an official inspector? Certainly not.

10373. *Dr. Manning.*] I remember Professor Stuart using the term, but I considered that he had merely inspected asylums as a visitor and not as an official.

10374. *President.*] I understood you to say that you had been an inspector of asylums, but not in the performance of official duties? I said I had visited asylums in various parts of the world, but to say that I was born in one and bred and brought up in two, and that I had been an inspector of asylums is ridiculous.

10374½. *Mr. McGowen.*] I took a note of it at the time, before having seen the evidence. That is what I understood you to say.

10375. *Dr. Garran.*] As a matter of fact you said you were born and bred in two? Well, then, why does the report say that I was born in one? You see there are three statements. The report says I was born in one, you say I said I was born in two, and I say I said nothing of the kind.

10376. *Dr. Manning.*] I think you said it, and I know you said you had intended to have made a study of insanity but changed your mind. I took it that you said you had seen several asylums, but I did not understand that you had been an official inspector.

10377. *Dr. Garran.*] I certainly was under the impression that you said you were born in an asylum, and from early life were acquainted with institutions for the insane? I was born very near to two, with both of which I was perfectly familiar from my earliest days. I paid frequent visits to asylums as an undergraduate, as a student, and in my early graduate days, and then when travelling extensively over the European continent I always made it a point of visiting the asylums.

10378. Have you given any special study to insanity? No; I intended to have studied insanity but I changed my mind. I have read up the subject, and have frequently paid visits to asylums.

10379. In the course of your visitation have you ever been present at the opening of a single-room door early in the morning when a patient in an acute stage of mania, after having occupied the room all night, has been taken out for his bath? No.

10380. Was your visit to Bayview House the first occasion on which you had seen a patient removed early in the morning after having occupied a single room during the previous night? Yes.

10381. Have you paid any special attention to the treatment of patients suffering from acute mania? No; not beyond the ordinary study.

10382. So far as you have read and studied this subject, do you approve of putting this particular class of patient into single rooms at night? Yes; it is necessary treatment.

10383. Is that quite unavoidable? Yes; it is universally done.

10384. *President.*] Is that done to avoid recourse to mechanical restraint? Yes. The custom used to be to place these patients in strait-jackets and muffs, but I believe it is abandoned now.

10385. On account of using the single rooms? Yes.

10386. Do you believe in using as little restraint as possible, and that the great object in the treatment of these patients is to keep down the irritation and secure as much sleep as possible? Yes; I believe that is the proper treatment.

10387. Does it not follow, as a matter of course, that you should remove everything from the room with which the patient could damage himself? Yes.

10388. Would not that make it an extremely comfortless room? I should say by no means would I make it comfortless, for that would be a mistake. I think the room should contain an india-rubber utensil, and all sources of danger could be removed without making the room extremely comfortless.

10389. *Mr. McGowen.*] Would you give these patients a bed on the floor? Yes.

10390. What would you make it of? Clean straw, in a tick.

10391. What would you use as bed-covering? I would give them rugs and night-clothing in sufficient quantity to keep them warm and comfortable.

10392. Would you put sheets in rooms with this class of patient? No; I think such patients would probably tear them up.

10393. Would you give them blankets? No; they would tear them up. The rugs I refer to are what you might call blanket-cum-canvas, or two layers of canvas with a blanket between. I had some of this kind shown to me at Callan Park.

10394. We have had it in evidence that the rugs you saw at Bayview House had had the blanket picked off them by Case No. 1 himself, who disliked the blankets;—did you notice if there had been any blankets

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blankets on the three pieces of rough canvas you saw and counted on the morning of your visit? I did not notice any blanket there.

10395. In the short time it took you to pick up the canvas rugs and drop them might you have seen the blanket if there had been any? I did not see anything of the sort.

10396. Did you notice any stitching on the canvas? I did not see any.

10397. In the absence of the blanket, supposing it had been torn out, would those three pieces of canvas and pyjamas have been sufficient covering for the patient? Even with pyjamas I question whether they would. I saw no pyjamas. I felt the body and legs of the patient to see what clothing he had on, and I felt nothing more than the three garments I mentioned—a flannel shirt, a woollen jacket, and trousers.

10398-9. We have it in evidence from the attendants who removed Case No. 1 that he had on pyjama trousers and singlet when they entered the room, and that they put the day-clothes you saw him wearing over his pyjamas before taking him across the yard? If they did that those attendants should have been dismissed on the spot. The three rugs and the mattress lying upon the floor were befouled and filthy beyond description. There were excreta and urine on the floor. And do you mean to tell me, that finding a patient in these conditions with his pyjamas on, that these articles could be clean and dry and in such a condition, that clean clothes could be put on over them;—do you believe that possible? I do not.

10400. What, then, was your impression regarding the patient before the attendants put his day-clothes on? My impression is, that he was in that room absolutely naked.

10401. Were you sent to Bayview House to ascertain the conditions and surroundings of the case? I was told to see if certain statements set in circulation in reference to this patient were true or not.

10402. When you saw the attendant taking the patient to his bath could you not have followed and have seen him undressed? I did not consider it was my business to do so.

10403. Do you not think it was part of your business to see the condition in which his body was? It was my business to see that certain statements made in reference to his alleged maltreatment were true or untrue.

10404. But was not a part of the story in circulation that the patient was put naked in this room? Perhaps so. But one is not always as wise before as after the event. I paid my visit to Bayview House fully disbelieving the story I had heard. At the time I made the discoveries I did, I was, so to speak, knocked over by the smells and the horrible condition of the room. Before I saw it I did not believe one word of it, and I told everybody so.

10405. Do you not say in your evidence that you were under the impression that this patient was being taken to a cold bath, and did you form that impression from something you had heard? I was told that he said he was cold and did not want a bath. So far as I recollect, that is the substance of what I heard. You may take my report, which was written about three hours after I saw the patient, as a true statement of what I saw. Whatever I wrote in my report I saw there that morning.

10406. You have a distinct impression that the patient was to have a cold bath, but you say you did not see him bathed, and do not know whether the water used was warm or not? No. It was enough for me to see that the statements made with reference to his sleeping-room were substantially true.

10407. You stated previously that your impression was that the patient was shivering, and that it was due to cold? I do not think I stated that in my report. In writing my report I strove to plainly relate my actual experiences and to avoid all inferences. You will find that there is not one inference there.

10408. Take question 71, where you are asked, "Do you know anything about the patient having a cold bath?" You answered, "I only heard something to that effect." Then turn to questions 92 and 93; you were asked, "Did he look cold?" and you answered, "Yes; he did." Then you were asked, "Was he shivering?" and you answered, "Yes." Does not shivering in this instance mean that the patient was cold? Well, perhaps it would have been better to say that the patient was shaking.

10409. Dr. Vause says emphatically that the patient was shaking on this occasion, but that his movement was nothing more than the muscular tremor arising from his affliction;—was it your impression that he was shivering from cold? If a man did shiver from cold in the circumstances surrounding him on that morning, he would only do what I should have expected him to do.

10410. But still might not his shaking have been the muscular tremor of paralysis? Yes. I said he was cold; and he said he was cold, and he shook as if he was cold.

10411. We have it in evidence that he never had a cold bath during the whole time he was at the institution? And a very good thing for him too, for he could not have been made clean with cold water.

10412. *President.*] Are you quite sure he used the words, "I do not want a cold bath?" I do not know whether he did or not; but I do not think you will find such words in my official report.

10413. But we have it in evidence that when crossing the yard he used those very words to the attendants and others? I do not know whether he did or not, for I was not there when he was taken from the room across the yard. I saw him first as I entered the lavatory by one door and he entered it by another.

10414. *Dr. Garran.*] Dr. Vause told the Commissioners that you were not in his company on the premises at Bayview House on May the 20th for more than ten minutes, and that you were not in the single room across the courtyard for more than two minutes on this occasion;—what have you to say to that statement? I was in that room a good deal longer than that, and saw quite as much as I desired to see.

10415. Still you did not appear to minutely notice several matters relative to ventilation and other details you saw on your second visit? No, I did not in the darkness of the room and the morning.

10416. Do you not say that you had not been to Callan Park early in the morning to see wet and dirty patients in the single rooms after having been kept in them all night? No; I have not.

10417. Therefore you cannot compare these rooms at Callan Park, as seen the first thing in the morning, with the room as you saw it early in the morning at Bayview House? No; just as little as the Callan Park authorities can compare their rooms with that at Bayview House which they have not seen.

10418. Why cannot they make this comparison? Because they have not seen the room at Bayview in the condition I saw it on my visit.

10419. But is not the patient exactly the same patient at Callan Park as he was at Bayview House? Yes; he is the same patient, but under different circumstances.

10420. What are the different circumstances;—is not the treatment the same? I do not believe it is.

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10121. Is not the single room similar in every respect? I do not think the one at Callan Park is as high, consequently there is better ventilation.

10122. But is not height supposed to be a factor in rooms of this class, and we have evidence to say that when these rooms were built, twenty years ago, special attention was given to this question of height? You can have too much height. To secure efficient ventilation there should be a true relation between height and floor space.

10123. In answering questions 68 and 69 you say, in reference to the rugs in the room, that they were three pieces of hard canvas—not sufficient covering to keep a man warm at night;—do you think those pieces of canvas were too hard for this particular patient to tear? I think it was a good deal too hard for this patient's use.

10124. Would you recommend the use of softer canvas? It is a difficult thing for me to say. At all events, I would recommend the use of something in this room at night that would keep him warm.

10125. Would you, with a patient having destructive tendencies, make his rugs just hard enough to prevent him tearing them to pieces? There is a wide difference between hardness and strength. I would endeavour to make them strong enough to resist his attempts to tear them up.

10126. How could you regulate the degree of coarseness in this canvas? That does not follow, and it is a subject upon which one cannot express an opinion. What I said about these pieces of canvas was, that they were three pieces of coarse canvas cloth, wet and foul, and not sufficient covering for any man.

10127. Do you not say that the stink from these rugs was abominable? Yes, I do.

10128. And yet you tell the Commissioners this morning that you made inquiries, and ascertained that the patient was not a specially dirty patient? I should say that he was not up to the time I made the inquiries.

10129. Do you say that the same smell would go into the floors as you distinguished in the rugs? Yes.

10130. We have it most positively stated that this room was properly cleaned every day—that the smell was taken out before the patient was put in at night? I do not believe it was possible; a rug and a room saturated with fresh urine would not stink as those did on the morning of my visit. I am certain of there having been a distinct smell of stale urine.

10131. Are you not aware that these rugs are specially treated in the laundry, and that the visiting doctors inspect these rugs and these rooms every time they go round the institution? Yes; but how often do they make their visits?

10132. They go at least once a month, and yet they, after making inquiries, have not notified any complaints of this character? I cannot tell anything about what they see on their visits; I only saw what was there when I made my own inspection.

10133. Do I understand you to say that you infer from the state of the room on the morning of your visit that it could not usually have been properly cleaned? Yes.

10134. We, on the contrary, have most positive evidence from Dr. Vause and Senior-attendant Doherty that it was not only the fixed rule that this room should be well scrubbed out every day, but that it was visited by Dr. Vause, who said he was in the buildings every day after it was cleaned, and swore most positively that there was no urinous smell arising from the floor;—what have you to say to that? Then you have the two men's word for it. I swear that there was a stale urinous smell.

10135. You state your opinion that the floor became impregnated with urine, and that the stale smell arising was the result? Quite so.

10136. And that you saw the room on the second occasion in the daylight and sunlight, and after it had not been used for some time? Yes, and it was clean at the time.

10137. We have it in evidence that this room was thoroughly cleaned by being scrubbed every day after it was vacated by the patient, and that it was fit for use again at night? Yes; and the patient's son told me that when he saw the room after it was washed out, and he saw it at 11 o'clock in the morning when it had been vacated at 7, that it stank abominably.

10138. On what day was this? On the very day I visited it. I was in that room between 6 and 7 in the morning, and at 11 a. m. on the same day the patient's son went to the institution, saw the room, the floor of which was wet, and he said it smelled abominably.

10139. The general tenor of the evidence on the other side is that this room was properly scrubbed out every morning, and that all the smell had gone by 11 o'clock in the day? I am not so sure about that being reliable. You cannot take a brush and scrub an unprepared wooden floor clean after it has been used and fouled in the manner I saw. There is ample time for liquid filth to soak into these boards between 7 in the evening and 6 in the morning, and it would take a good deal of washing to get this out.

10140. Mackenzie, a hostile witness, who was an attendant at Bayview House, and subsequently discharged, said it was his duty to scrub the floor of this room, and he, although one of the most hostile witnesses examined by the Commission, said he always scrubbed it thoroughly? It is not likely that this man would tell the Commissioners that he scamped his work.

10141. Mackenzie stated that, as a rule, he scrubbed this room out every day in obedience to instructions, and that he could not get the smell out of the place, although he cleaned it as well as he could? Yes; that is very likely. I should think the same would happen to the rugs if they were not washed properly.

10142. On the other hand, the other attendants say this room was uniformly well scrubbed out every day; that it became sweet and fit for occupation every night; that it received more daylight and sunlight than the single rooms at Callan Park; and that the floor dries quicker than the floors at Callan Park;—do you think the room at Bayview House, being detached from the main building instead of being in a corridor, makes it more airy? Yes; the air and light get all round the building.

10143. Do you think it is so well ventilated that you would keep the shutter down if you desired to keep the room warm? No.

10144. Would you open that window in the winter time? That is where you are between the "devil and the deep sea." If you open the window for ventilation, you would lower the temperature, and if you close the shutter, you keep out the light.

10145. In answer to question 55, do you not say you had almost to force your way in, and yet, on the other hand, Dr. Vause says he is positive he used no resistance of any kind towards you or your party? Yes, that is quite so, as far as Dr. Vause is concerned.

10146. Then why do you say you had almost to force your way in? That implies to the impediments put in my way by the attendants before I saw Dr. Vause. When I first arrived at the place I opened the gate

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gate and entered the grounds and saw no one. Then a nightsoil porter, I think, came along wheeling a barrow, and I asked him who was in charge, and he said, "The head attendant"; then I said where shall I find him, and he replied, "Round there to the left." We went round to the left, but it was a long time before we saw anyone at all, and then the head attendant appeared, and he evidently had been roused from his bed. When he first came I do not remember what he said. I do not know that he was uncivil exactly. I told him the nature of my business and my authority for being there. He then took us to the office and the bell was rung. Nobody came for about twenty minutes, when a maid servant arrived. In the meantime I had asked him to take my card to Dr. Vause, but he would not. The maid servant took my card to Dr. Vause, who shortly afterwards appeared and conveyed me to the lavatory where we first saw the patient.

10447. Was there any direct resistance on the part of the attendant? He said he was in charge, and his instructions were that no one could see any patient without the authority of Dr. Vause.

10448. Was it his duty to call Dr. Vause to you? I should think so, but we had to wait nearly an hour, or from 6 o'clock till a quarter to 7 before we saw Dr. Vause.

10449. Did Dr. Vause, when you saw him, offer any resistance or hesitancy in complying with your request? Not the slightest, and when I spoke of having to almost force myself in I was referring to the attendants and the delay prior to seeing Dr. Vause.

10450. Now, returning to the asphaltting of the floor, am I to understand that you would make the floor as impervious as you could by putting asphalt in the cracks, so as to prevent liquid matter soaking through to the ground beneath? I would do the best I could to make the floor impervious; I do not say that I recommend a solid asphalt floor, but I would make it impervious.

10451. Do you say that with a little trouble a floor of that kind could be kept sweet and clean? In answering that as a general question, I should say it would be possible with a little trouble to keep single-room floors sweet and clean, but, in the first place, what sort of floor must one have to keep clean?

10452. Well, for instance, would you condemn a wooden floor? No, not if properly made and impregnated.

10453. Do you think a floor of ordinary colonial hardwood is sufficient and suitable? No, not if unprepared.

10454. In what way would you prepare a floor? I should first have a floor properly made and go over the seams with marine glue; and caulk the seams exactly as I would the deck of a ship. I should then sprinkle it over with paraffin, and then go over the whole surface with a hot iron.

10455. Have you prepared any single-room floor in this way? No; but I have had the dissecting-room at the Sydney University so treated.

10456. Have you tested it with urine and faces? No; but I think bits of decomposing bodies are just as bad in odour. With urine I never did make a test, but, if properly done, I think such a floor would be effective.

10457. As you have not seen Callan Park single rooms early in the morning when first opened, do you think you can make a fair comparison between them and the room you saw at Bayview House? Just as fair as the people from Callan Park can make between their rooms and the two at Bayview which they have not seen when first opened in the morning. In this examination, if I may be allowed to express an opinion, I think you are going into details which were beyond the scope of my inquiry. I was not instructed to make, neither did I make, inquiries into the medical treatment of the insane, and I think it is too much to expect me to answer questions of this nature off-hand without having made inquiries.

10458. *President.* We regard you as a gentleman holding a high position, a man of great medical knowledge, a Professor of Physiology at the University, and we desire to know from you if you have noticed any alterations or any improvements in the building you designated as a stable-like outhouse, since you made your former examination; I do not think that is an unnecessary detail? I do not think it is fair to me, in my capacity, to expect that I should have a complete knowledge of details of everything connected with the patient and his treatment. If I had desired to ascertain these details of treatment I might have sent one of the Government medical officers to make inquiries, but I certainly did not think of making them myself, or going beyond the instructions I received. You will see from my report that I studiously avoided going too much into detail. I merely adhered to a strict relation of facts as I saw them.

10459. I do not think I have asked you any questions of unnecessary detail;—did you not say you smelled a stale urinous odour, which must have been of long standing? I said, and I say now, that I smelled a distinct smell which could not have been fresh urine.

10460. Do you not say that the building itself appeared to have been a stable? I say it presents the aspect of a stable. It looks as if it had formerly been a stable and converted into its present condition. It is in outline what you would expect a stable to be.

10461. *Mr. McGowan.* Supposing you had possessed considerable experience as a medical superintendent of a lunatic asylum, would that fact have been any material assistance to you, on the morning of May the 20th, when making your inspection, as to the condition of the room? It would only have been so by enabling me to compare the condition with other rooms when opened in the morning; that is all.

10462. Would it have assisted you or made you better qualified to state whether it was in an extremely filthy condition? No; I could only arrive at exactly that conclusion with experience or without it.

10463. Having said that on your second visit the boards in the floor are divided one from the other to such an extent that you could put your knife between the tongues and grooves, do you think this would be a fit room to put a sane person in to sleep; I mean from a sanitary point of view? Well, it would not be first-class accommodation.

10464. From a sanitary point of view, would it be a healthy place in which to put a sane person to sleep, judging from the state it was in on the 20th of May? No, I do not think it would be; and, of course, if not fit for a sane person it is not fit to be used by an insane patient.

10465. Are you positive that urine and other fluid matter could soak into the ground between the boards of this floor? Yes.

10466. Do you believe that with any amount of ordinary scrubbing the smell could be removed from the floor? If the room was occupied every night by a dirty patient for six or seven months, I do not see, with the floors continually getting into the condition in which I saw, it could be kept sweet and clean.

10467. Are you still positive that you did not see any utensil in this room? I am positive that I enumerated in my report, and so did other visitors, all that we saw in the room on that occasion. I did not see any utensil, and if there was one in the room I do not think it could have escaped observation.

10468. Were there any fragments of clothing or bedding on the floor or in the room other than the three pieces of canvas-cloth? No.

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10469. Were the day-clothes on the patient, which you felt and describe, clean and dry and suitable for his use? Yes; they were clean and dry.
10470. In your opinion, judging from the state of the room, if the patient was wearing pyjamas under his day-clothes must they have been in a dirty state? Yes, I should think so; but it is hard for me to say. You can only imagine what they would be like. I do not think he had pyjamas underneath, for when I felt his trousers I did not feel any under garment, neither did the trousers look sausagey, as you would expect them to look with pyjamas underneath.
10471. Do you infer, from what you saw, that the patient, before his day-clothes were taken into the room, was in a nude condition? That was the conclusion I came to.
10472. One of the charges is that he was put into that room naked;—was that charge, in your opinion, proved? Yes.
10473. Do you not say that the room was unfit for the purposes of a dormitory? Yes; results proved that. If it was fit for sleeping purposes, it would have been sweet when the door was opened, instead of which it stank horribly.
10474. Do you not mention in your report that Dr. Vause said the patient was put in the outhouse when violent and specially ill, but no attendant remained in the outhouse with him, and that no attendant would see him between 10 at night until he was taken out in the morning? I do not remember the exact words, but it was something to that effect.
10475. Do you remember if Dr. Vause did say that? If it is in my report I have no doubt he did.
10476. Do you not also say that when you first arrived at the institution you experienced some difficulty in finding an attendant;—did you go to the isolation room before you went to Dr. Vause? Yes; we went to the vicinity of the room first, and waited outside until the head attendant came, and then we went with him to the office, leaving Gearey and O'Brien where they were.
10477. We have it in evidence that there was a night attendant on duty during the night of May the 19th, and that he visited the patient every two hours;—did you see the attendant when you arrived? No; the only attendant I saw was the head attendant, who came after we had waited some time.
10478. Was he roused up out of bed? Yes.
10479. It has been said that this night attendant was in the main building fourteen paces away from the isolation room sitting by the fire through the night when he was not actually engaged in making his visits to the isolation room;—do you think this attendant was in the room when you arrived early in the morning? There is nothing to show that he was.
10480. While you were round at Dr. Vause's private residence did the head attendant remove the patient from the room? Yes.
10481. Had you then told the head attendant the object of your visit? Yes.
10482. Did you tell him that you had come to see the patient in his room? I cannot remember that. I think you will find what I saw and did in my report. I think I told him my mission in a general way. I think, however, Dr. Vause was the first I told that it was the patient I wanted to see.
10483. Do you think the attendant knew, from the fact that Gearey and O'Brien standing near the isolation room, that Case No. 1 was the patient you wanted to see? I believe he did.
10484. Do you think the patient was removed to defeat the object of your visit? It might have been done with that object.
10485. Regarding these coverings, do you say you do not think the piece produced was one of the pieces you saw? I cannot identify it. I merely stooped down and picked three pieces up, saying, as I did so, "one," "two," "three."
10486. Do you remember if the edges were frayed? I do not remember whether the edges were frayed, but I have a distinct impression that they were pieces of old canvas.
10487. Were they about that size? I do not see any great difference.
10488. Do you think this room being away from the main building is suitable for the purposes to which it is put? I think it is most improper, because it cannot be seen from the main building in which the attendant is said to sit. There is neither window nor aperture of any kind through which the room can be seen. There should be an adjoining room for the use of an attendant.
10489. Do you describe this room as a dark cell? It was a dark cell when the shutter was down.
10490. Do you think it is as dark as dark cells in the gaols? No; I do not say that.
10491. *President.*] Were the day-clothes worn by the patient decent and clean? They were clean, but not such as one would wear to walk down George-street.
10492. Were they dirty and soiled so as he should not have worn them in the circumstances of that morning? No; I do not think so.
10493. We have it in evidence from Gearey that these clothes were entirely unsuitable for this patient? I do not think they were unsuitable for an insane patient.

[Witness withdrew.]

Edmund Sager, Esq., re-examined:—

10494. *President.*] Did you, in complying with the request made by this Commission, and in company with Professor Anderson Stuart, pay a second visit of inspection to the isolated room in the courtyard on the male side at Bayview House? Yes, I did, on Monday last.
10495. Did you see any difference in this room, as compared with its condition when you saw it early on the morning of the 20th of May? I was able to see something different, because on my second visit it was broad daylight, and I observed more than I saw in the early morning light on the 20th of May.
10496. Did what you saw on your second visit modify your views in respect to the evidence you gave before this Commission on a former occasion? I think the only mis-statement I made when giving my first evidence was that I said I saw no window, or that there was no window in that room. On the second visit I saw a window high in the wall, covered by a sliding shutter, which is manipulated from the outside. This window could not have been open when I was there previously; I am sure of that. I did not observe the shutter or any woodwork when I was there on the 20th of May.

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10497. On the occasion of your first visit do you remember how long you were in that room, or in the vicinity of that room? I think we were in the yard for about a quarter of an hour when one of the party said to me, "That is the stable," I understanding it to be the room in which the patient was. We waited there about a quarter of an hour, when an attendant came.
10498. After you had roused Dr. Vause and returned in the direction of this yard, did you see Case No. 1 taken out of that room? No, we did not see him taken out; we first saw him in the lavatory, immediately after he had been removed from the room.
10499. When you went into that room with Professor Stuart, how long were you occupied in making the observations of details which you supplied in your previous evidence? I should say about ten minutes; perhaps not ten minutes, but we were fully ten minutes in the room and near it.
10500. Amongst other things, did you see three pieces of canvas on the floor of this room? There were two or three pieces. I think I said there were two.
10501. Have you any idea of the size of these pieces of canvas, or, in other words, supposing we were to show you one of the pieces which is said to have been on the floor on that occasion, do you think you could identify it? If it is near the same size, I do not think I could identify it.
10502. If you will look behind you you will see the piece of canvas to which I refer? [*Witness examining the piece of canvas.*] Yes; I think that is about the size of the pieces that were on the floor.
10503. We have it in sworn evidence that this was one of the rugs in the room on that occasion? If it is it is quite a different colour now.
10504. Yes, it has been washed since;—but were the others you saw much about the same size? I think there were only two pieces of canvas on the floor.
10505. We know there were three, and were they all about the size of the one you have just examined? I think they were rather smaller. The one I have just seen looks rather larger than those I saw on the 20th May.
10506. Does it seem to you to be about the same size as the others? I am not quite certain.
10507. *Mr. McGowen.*] Do you think the pieces of canvas you saw on the 20th of May were smaller than the piece now spread upon the floor? It is a long time ago. I cannot remember definitely, but my idea is that the pieces I saw on that occasion were smaller than the piece now before me.  
[*Witness withdrew.*]

TUESDAY, 12 MARCH, 1895.

[*The Commission met at 11 a.m. in the Board Room, Chief Secretary's Office.*]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
Esq., M.D., INSPECTOR-GENERAL OF THE  
INSANE.

ANDREW GARRAN, Esq., LL.D.  
JAMES SINCLAIR TAYLOR MCGOWEN,  
Esq., M.L.A.

Dr. Vause was in attendance, to hear evidence and examine witnesses on his own behalf.

Charles E. Jeanneret, Esq., resworn and re-examined:—

- C. E. Jeanneret,  
Esq.  
12 Mar., 1895.
10508. *President.*] We recall you, Mr. Jeanneret, to ask a few additional questions in reference to Bayview Asylum, and your association with the charges made against its management? I should like to explain the reason of my long absence. I saw by the newspapers that I was expected to be here and give further evidence. I must point out that I received no official intimation before I left Sydney announcing that I was wanted. I had business which called me to the Richmond River, and I came back as soon as I could. Immediately after my arrival here I communicated with your secretary, and informed him of my return, and that I was ready and willing to give whatever evidence was required of me which it was in my power to give.
10509. In the course of this investigation it has been said in evidence that you have been offered a bribe, or something tantamount to that, if you would cease your action in regard to Bayview Asylum;—is it true that any offer of any kind has been made to you, in the hope of getting you to cease action as a Member of Parliament after you had moved the adjournment of the House in regard to this subject? There is some foundation for that statement, but no direct offer was made to me. I was, however, approached by a person at Parliament House, who said someone desired to see me. I had never seen him before, but he was pointed out to me as being Mr. Young, the accountant at Bayview House. He desired to be introduced to me through a mutual acquaintance, but I declined to be introduced. The matter was thrust upon me, and naturally I asked the reason and object of the proposed introduction. The gentleman told me that Mr. Young wanted to explain certain matters in connection with Bayview House; in fact, that he wanted a conversation with me on this subject. I said, in reply, "I know nothing myself more than I stated to the House," and that I could not hold any conversation with any person connected with Bayview Asylum about the affairs of that place. This gentleman, however, strongly pressed upon me to be introduced to Mr. Young, but I declined. The person whom I have named followed me down Macquarie-street, along King-street, and my friend said, "He wants to see you to know if you could prevent things going any further, for if you could, it would be worth a thousand pounds to you." I told my friend that I could not do anything in the matter; that is all that took place. I never spoke to this individual myself, and I do not mind giving you the name of the gentleman with whom I had the conversation. That gentleman's name is Mr. A. F. Twine, a friend of mine from the western district. I have never spoken to him since on this subject, and I do not know whether he will like me mentioning it to you at all.
10510. Did Mr. Young himself make you any definite offer? Mr. Young never spoke to me at all.
10511. Did the suggestion, then, come indirectly from him through Mr. Twine? Yes; Mr. Twine made the suggestion. I could not say that Mr. Twine was authorised by Mr. Young to make any such offer.
10512. Did you know Mr. Twine before this occurrence? I had known him for a month or two before.
10513. Had you a good opinion of his character? I had. 10514.

10514. Did you really think that there was something behind this suggested offer? I could not doubt but what there was. You know how things of that sort are said. It was said in such a way as to lead me to believe there was a good deal of money in it, and that probably I could get a thousand pounds if I stayed my proceedings.

C. E.  
Jeanneret,  
Esq.

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10515. Do you think he must have thought that you could be tempted by an offer of this kind? Probably he did. As a matter of fact I know that people are tempted that way; but I am happy to say that I have never been so tempted yet.

10516. *Mr. McGowen.*] Do you say that Young has approached you in Parliament buildings? He came up there for the purpose of seeing me, so I was told.

10517. Was Mr. Twine there then? Yes.

10518. Did he ask you to see Young? He did.

10519. For what ostensible purpose? To explain matters in connection with Bayview Asylum.

10520. When you were going down Macquarie-street, did both Young and Twine walk with you? I think I was walking with Twine, and that Young followed.

10521. When Young was following down, could you see him? Not while he was following, but just at the intersection of the street with the tram-line, Young came up and spoke to the person with me, and called him back.

10522. And then did Twine tell you clearly that Young wanted an interview? Yes; he told me that on several occasions.

10523. On the same night? Yes.

10524. Did he tell you that Young particularly wanted to see you? Yes.

10525. Did he tell you who Young was? Yes; he told me he was the accountant at Bayview House; in fact, I am not quite certain whether it was Twine or Gearey who told me Young was accountant at Bayview.

10526. Was Gearey with you? Gearey was there at the same time.

10527. With you in the street? Yes; I believe Gearey was with us.

10528. Did Gearey hear Twine make this offer to you? I do not think so, but I believe it was Gearey who told me that Young was accountant at Bayview House.

10529. Are you fully satisfied that Twine said to you there was a thousand pounds in it if you took no further action? Yes.

10530. Coming to the statement you made in the House, did you not say, from your own personal knowledge, you knew the charges you made to be true;—had you any personal knowledge concerning the information you gave us? Yes, I had. Before I made that statement I perfectly satisfied myself of the correctness of the information given to me.

10531. How did you satisfy yourself upon this point? I accompanied Mr. \* \* \* to the Health Office, and I there saw Mr. Sager and, I believe, Professor Stuart, and I had in my possession the report made by Gearey to Professor Anderson Stuart.

10532. Did you see anyone else who gave you information? Not up to the time that I moved the adjournment of the House—not as to the treatment of the patients in the asylum.

10533. After you moved the adjournment of the House did you get information? Immediately after I did.

10534. Where did you get it from? I received letters from several people, and I was spoken to by several people. I was spoken to by one or two gentlemen in the Town Hall after a meeting held there. One or two gentlemen spoke to me about matters that came within their knowledge in regard to the institution, and the statements made to me led me to think more seriously of the whole matter than I did before I said what I said in the House.

10535. Did you get any information from nurses or attendants, or from patients or anyone who had been patients at Bayview House? From only one patient, and from one or two friends of patients.

10536. Have you any objection to telling us what the patients said? Unless I am compelled, I will not say what one patient said to me. I prefer not to name the patient unless compelled to do so, because I promised that I would not disclose the name. I promised that I would not disclose the name without the consent of the patient. I have not received that consent.

10537. *President.*] Is this patient at present in Bayview House? No; it is a patient who is discharged cured.

10538. *Mr. McGowen.*] How did you become acquainted with this patient? I first received an anonymous letter which I handed to Dr. Manning, and he said he knew the writing. Immediately after receiving that letter I received a second duly signed telling me that a mistake had been made in writing to me anonymously, and expressing a wish that the name should not be disclosed. I then went to Dr. Manning and asked for the letter. I called upon the patient, who made a statement to me, and evidently took a very great interest in what was going on at the asylum. Gratitude was expressed to the authorities for what had been done in this particular case, but at the same time it was hoped by this patient that I would proceed with what I was doing, as it was really in the interests of humanity that an inquiry should be made into the management, not so much on account of this particular patient, but on behalf of other unfortunate people who were still there. I was told by this patient that women were dragged by the hair of the heads across the yard, that they were treated in a very rough manner, and that there were circumstances which could not be explained to me; and that the lavatory arrangements were such as no woman could be expected to submit to. A lady sent word to me of certain things in the institution; one or two wrote to me; in fact I got so many letters that I put them on one side, not considering it my business to make an inquiry, but the duty of the Government. I have lost the run of those letters. I saw the cousin of Case No. 34, too, and she made a statement as to the way in which a relative was treated there. I tried to see a lady who had written to me who had asked me to keep her informed as to what was going on. I intended to ask this lady to give evidence, and waited the whole of one evening at her residence in the hope of seeing her, but the next day I was informed that she had left the Colony. She expressed a strong desire that justice should be done, and I wrote and asked her to give evidence. She wrote back and said that she had consulted her medical adviser, who told her she had better not attend this Commission. I did not think that was sufficient reason, and called at her lodging in the hope of persuading her to give evidence. After waiting a considerable time she failed to come, and I subsequently learned that she had departed from the Colony.

10539. Do you know who the medical adviser was? She mentioned the name to me in her letter, but I have forgotten it.

10540.

- C. E. Jeanneret, Esq.  
12 Mar., 1895.
10540. Was it Dr. Crago? Yes; it was Dr. Crago, I remember now.
10541. Did that anonymous letter you received contain inferences similar in effect to the statement you made on the floor of the House? Yes, generally speaking.
10542. As soon as you received it did you give it to Dr. Manning? I did.
10543. And do you say that he at once recognised the handwriting? He did not there and then, but he told me afterwards that he did.
10544. Did he tell you before you received another letter from the lady with her name attached that he recognised the handwriting? He told me when I asked him to give me the letter back, which was after I had received the letter containing the signature.
10545. In the second letter did the writer retract anything she had said in the first? No, she did not. She merely said she had been told that she had made a mistake in writing to me anonymously.
10546. Did she tell you who told her this? No; she simply said that some friend had told her she had made a mistake in writing anonymously, and that it was her duty to apologise at once and give me her name.
10547. Do you not say that amongst the various complaints made by this lady she said the lavatory arrangements were not suitable and were not what they ought to be? Yes.
10548. Do you mind explaining what that means? She did not explain exactly what she meant. I cannot tell you what was meant, but it was evidently something that should not be allowed.
10549. Were you satisfied before moving the adjournment of the House that there was a considerable amount of truth in what had been stated to you? I felt convinced there was from the statements made to me. My informant was Gearey, who told me a lot of things, and I thought I had ample confirmation from this lady and another lady, and there were gentlemen who mentioned certain things to me.
10550. Did these gentlemen appear to know anything? Yes, two or three gentlemen spoke to me about it, two of them at the Town Hall, and others, whose names I forget, in the street. There is one thing I should like to say here in reference to that building. I have no doubt it was a stable, for I have heard that when Bayview House was a school the place was a stable, and that it was built for a stable and used as a stable. If there is any doubt on this point, I shall be able to get proof of my statement that the place was built originally as a stable when the whole building was a school.
10551. Did you not state on the floor of the House that you claimed no privilege to shield you in making these statements, and that you were prepared to make the same statements outside? Yes, I said so then, and I say so now.
10552. Have you seen much of Gearey? Yes.
10553. Has he made any complaint to you with regard to the action of this Commission? Yes; he says that either he or I should have been permitted to be present here, as the charges made by me were based upon his information; his reputation being at stake and my reputation being at stake, he maintained that either one or the other should have been represented here throughout this inquiry. He urged me to take some steps in this direction. I said that I had full confidence in the integrity of the Commission. Still Gearey maintained that either he or myself, who made the charges, should be allowed an equal opportunity to cross-examine witnesses called for the defence as Dr. Vause had to cross-examine witnesses brought to support the charges.
10554. What proof have you got that this building was used for a stable and built for a stable? I can bring evidence to prove that it was a stable and used as a stable in connection with this place originally.
10555. *Dr. Garran.*] Did you not say in the House that you knew certain things of your own knowledge—I mean that you knew of your own knowledge that the charges you made were true? Yes; I knew the information I got concerning them was correct. That, I think, I can call my personal knowledge.
10556. Do you not regard personal knowledge as being a personal acquaintance with the facts as represented by you? I regard it as personal knowledge when this information was placed in my possession.
10557. Do you mean to say that without having seen the place itself? Yes.
10558. Take the question of the stable;—have you ever seen it? No; I have never been there.
10559. How then can you say you have a personal knowledge that it was a stable? Because if I did not see it Professor Anderson Stuart did, and he reported that it was a stable-like building, and Gearey said it was a stable.
10560. If you were taken out to the place, do you think you could point out where Case No. 1 slept? I do not know that I could.
10561. How then do you know that this building was a stable? I have the best authority that it was a stable. I can prove that it was.
10562. Does not all that you know come from other people; or, in other words, is not your knowledge from hearsay source? Yes, and I maintain that that is my personal knowledge. I do not think it is necessary for me to go and see the place, when I believe I have correct information from others who have seen it.
10563. Do you mean that what somebody else saw and told you is sufficient to warrant you in saying you know such and such a thing of your personal knowledge? I am confident I can prove that this was a stable, if that is necessary.
10564. Do you consider that bringing somebody else to prove this statement is sufficient to warrant you in saying you knew of your personal knowledge that it was a stable? I can bring a person to prove that it was. A gentleman who knew it to be such when he was a youth, and the old asylum buildings were used as a school.
10565. *President.*] Did the gentleman who informed you about it being a stable do so on the strength of knowing it as a stable when he was a youth? Yes.
10566. Do you not think it is possible that in the number of years between now and then, and the various changes that have been made in the buildings and their surroundings, that two or three places may have been built and used as stables? Perhaps so; but I think I could prove this from the plans.
10567. But suppose we produce the architect who drew these plans and erected the building, and he says it was designed for the special purposes of an isolation room, what would you say to that? I should like to take that architect down there, and ask him to point out the building.
10568. Do you say that you have no personal knowledge on this point, except what was told you by a gentleman who says that he remembers this building being used as a stable when he was a youth and Bayview House was a school? Yes; and if there is anything in that point I can produce this gentleman to go out and identify the building.
10569. But what do you say if we produce the architect who designed it and superintended its erection? I should like to have him here, and question him on that point.

C. E.  
Jeanneret,  
Esq.  
12 Mar., 1895.

10570. You have mentioned Gearey's name, and as he is a witness from whom both you and the Commission have received a considerable amount of information, we should like to know who Mr. Gearey is, and what has been his relations with you; for instance, we know that Mr. Gearey is an inspector under the City Corporation, and what we would like to hear from you is whether he has ever had any political relationship to you? He was a constituent of mine in Cowra, where he was at that time a storekeeper. He was secretary or president of the Freetrade Association there, and that is how I became acquainted with him at Cowra. He was a strong supporter of mine in that electorate; he afterwards became connected with the City of Sydney Corporation.

10571. Was Gearey at any time a political agent for you? No; he was never a paid agent in any shape or form. He was connected with the political association in my electorate.

10572. Was he a supporter of yours? Yes; he was a supporter.

10573. Was he occasionally a canvasser? No; he was either secretary or president to the Freetrade Association, and one of my prominent constituents.

10574. *Mr. McGowen.*] Do you not say you have certain evidence in your possession by which you can verify the assertion that this place was a stable; if so, why did not you send or give that information to the Commissioners? I was not asked for the information. My principal informant has been before the Commission and made his statement; he could have given the names of all these persons; he knows them all, and I was not the prosecutor in the case; I do not think it was my duty to hunt up witnesses for the Commission.

10575. *President.*] Do you think that you did your duty as far as was necessary under the circumstances? I think so.

10576. Did you not see that the Commissioners specifically advertised in the daily newspapers, asking anyone and everyone to appear here and give all the information in their possession upon this subject? Yes; but I did not know that my duty compelled me to do anything further than what I have already done.

10577. *Dr. Vause.*] Referring to the statements about Young, did you ever see Young? Oh, yes.

10578. Would you know him if you saw him again? Yes.

10579. Did he ever speak to you? Not that I know of.

10580. Did you give Gearey the report which was placed on the Table of the House? I did.

10581. May I ask you how you obtained possession of those papers? I obtained the papers by having copies of them made at my own expense.

10582. How did you obtain possession of the original before these copies were made? They were placed on the Table of the House for the information of Members. As a member, I had access to them, and had them typewritten in the House, and paid for that typewriting being done.

10583. Is it not a fact that these documents were supplied for private information to Members of the Legislative Assembly? No; they were laid on the Table of the House, and then they became public documents.

10584. *Mr. McGowen.*] When documents of this kind are laid on the Table, even though they are not ordered to be printed, they are accessible to Members of the House. They are public documents as far as the Members are concerned as soon as they are laid on the Table.

10585. *Dr. Vause.*] I endeavoured to see the nature of these documents, and was informed that the information was for the Members of the House only, and that I could not see it.

10586. *President.*] But you were not a Member, and, perhaps you had no friend at court who could take you into the House, or the precincts of the House, and let you see it.

10587. Can you give us the name of the person who can prove that this building was built for, and used as a stable? I cannot at the moment, but I think I could give it you either this evening or to-morrow.

10588. *Mr. McGowen.*] Can you give us the address of Mr. A. F. Twine, who approached you in this matter? I think a letter addressed to Enfield would find him. I have not seen him myself for a month. I have never seen him frequently.

10589. *Dr. Garran.*] Have you the slightest idea how he became able to tell you there was £1,000 in it if you would cease action? He must have had some conversation with Young.

10590. Had you any reason to believe that this gentleman was in a position to find that amount of money? I was quite prepared to believe that there was some powerful interest at work, because before I moved the adjournment of the House every possible effort was made to prevent me taking that course.

10591. *Mr. McGowen.*] Do you object to mention the names of those who endeavoured to prevent you taking that course? No, I do not object. One is the Hon. Dr. MacLaurin, who spoke to me before I moved the adjournment. Dr. MacLaurin urged upon me very strongly not to do it for many reasons, one of which was that it was a private matter and not a public matter at all. I combatted that argument, because I felt fortified in bringing it before the House after a conversation with a gentleman occupying a high position, whose name I will not give, and whom I saw before Dr. MacLaurin spoke to me. I told Dr. MacLaurin that for many reasons I could not follow his advice, and he then said, "If I were Mr. Speaker I would not allow you to do it."

10592. Did anyone else besides Dr. MacLaurin ask you to desist—you said persons in authority had urged you not to move the adjournment of the House? Yes; I believe Mr. Critchett Walker, the Principal Under Secretary, told me that I had better not proceed. I believe he did. I never brought the matter before the Colonial Secretary myself, but I think it was brought before him at my instance by Mr. \* \* \* and Mr. \* \* \* during my absence from here.

10593. Have you any idea that Mr. Critchett Walker and Dr. MacLaurin asked you to desist with any other intention than saving unnecessary trouble? No.

10594. Do you think they had any object, personal to themselves, in saying what they did to you? I do not think so. I think their reasons were that my action would, perhaps, hurt the friends of some of the patients, or that the friends of these patients would feel hurt at the affliction of their relatives being made public.

10595. Or, in other words, that your action in the House might give rise to unnecessary scandal? Yes; I think that was their object.

[Witness withdrew.]

Dr.

Dr. Vause re-examined:—

- Dr. Vause. 10596. *President.*] You have heard the evidence given a few minutes ago by Mr. Jeanneret; did you ever induce Mr. Young, the accountant at Bayview House, to make, either directly or indirectly, an offer or overture such as the one mentioned by Mr. Jeanneret? Certainly not.
- 12 Mar., 1895. 10597. Did you ever hear of any steps having been taken by anybody in this direction? Decidedly not; this is the first information I have heard or known upon this particular matter.
10598. If Mr. Young made any attempt in that direction, was it made without your knowledge? Most decidedly; it was entirely without my knowledge.
10599. As a matter of fact, have you ever heard anything at all relating to such a proposal? No, not until I was in this room to-day.
10600. *Mr. McGowen.*] Have you ever heard that Young approached any witness on this subject? Certainly not; not in any way whatever. I suppose Mr. Young will be sent for to corroborate or deny this statement; at all events, I express the wish that he should be recalled and questioned on this matter.
- [Witness withdrew.]

WEDNESDAY, 13 MARCH, 1895.

[The Commission met at 11 a.m., in the Board Room, Chief Secretary's Office.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.  
 FREDERIC NORTON MANNING, Esq., M.D., INSPECTOR-GENERAL OF THE INSANE. | ANDREW GARRAN, Esq., LL.D.  
 | JAMES SINCLAIR TAYLOR MCGOWEN, Esq., M.L.A.

Dr. Vause was in attendance to hear evidence and examine witnesses on his own behalf.

Mr. John Young re-sworn and re-examined:—

- Mr. J. Young. 10601. *President.*] When you gave evidence on a former occasion you stated that you had on several occasions visited Parliament House;—is that so? Yes.
- 13 Mar., 1895. 10602. Do you remember visiting Parliament House on one occasion with Mr. A. F. Twine, when he spoke to Mr. Jeanneret, who was then a Member of the Assembly? Yes.
10603. Do you know Mr. Jeanneret; Yes; by sight.
10604. Have you ever had any communication with him? Never; not the slightest.
10605. Do you know Mr. Twine? Yes.
10606. Intimately? Yes.
10607. Did you ever have any conversation with him to the effect that it would be desirable to cease further inquiry in relation to affairs at Bayview House? Certainly not.
10608. Did you ever induce Mr. Twine on any occasion to suppose that money might possibly be given to Mr. Jeanneret, or to any other person, to prevent further inquiry into the management and other affairs at Bayview Asylum? Never.
10609. Are you perfectly sure of that? I am positive.
10610. Did you ever have any conversation of that nature? Never.
10611. Did such an idea as that enter your mind at all? Never. Indeed I can say it was the furthest from it.
10612. Did you know at the time that there was any occasion to make such an offer? Certainly not.
10613. Are you perfectly ignorant of any suggestion to bribe any person in the hope of preventing an inquiry into the management of Bayview Asylum? I am positive that I knew nothing of such a suggestion.
10614. *Dr. Garran.*] Did Mr. Twine on that occasion to which reference has been made speak to you on this particular subject? No; I never had any conversation with him, either on that or any other occasion on this subject.
10615. Have you ever heard any reports to this effect? I heard so last night.
10616. Was that the first time you heard of it? Yes; it came upon me as quite a new idea, and I was surprised to hear it.
10617. Have you any reason to think that Dr. Vause would make such an offer? No; it would be my last thought that he would do so.
10618. Do you know any other person who would be likely to make such an offer? No.
10619. So far as you are aware, do you think such a rumour had any foundation in fact? No, not to my knowledge.
10620. *Mr. McGowen.*] Were you at Parliament House with Mr. Twine when he saw Mr. Jeanneret? I went there with him when he was going to see Mr. Jeanneret.
10621. Do you know whether he saw Mr. Jeanneret? No, I do not.
10622. Did you follow them out of Parliament House? No.
10623. Not down Macquarie-street and King-street? No. On another occasion Twine asked me to wait for him, as we were going home in the same direction. He was then with Mr. Jeanneret; they went down the street, and I waited some five minutes, thinking he would come back again. I then walked down the street, and saw them.
10624. Supposing Mr. Jeanneret has said Twine made an offer to him while you were walking behind both;—is such a statement true? No, it is false.
10625. Did you request Mr. Twine to get you an introduction to Mr. Jeanneret? No; he offered, if necessary, in the event of the Government taking over the place, that he would get me an introduction to Mr. Jeanneret, who was supposed to have some weight with Dr. Manning, the Inspector-General of the Insane. As the accountant to Bayview House, I thought it was possible if the Government took over the place, that I might, through Dr. Manning, retain that position.
10626. *Dr. Manning.*] When you went to Parliament House and saw Mr. Twine, was that after Mr. Jeanneret had moved the adjournment? Yes, some considerable time. It was Mr. Twine who told me first about this matter.
- 10627.

10627. *Dr. Vause.*] Do you know in what relationship Gearey stands to Mr. Jeanneret? I only know that after Mr. Jeanneret made his statement in the House Gearey took me round to Mr. Jeanneret's committee-room, and I then know that he was working politically for him. Mr. Jeanneret was contesting Carcoar, and he had an office in one of the arcades, working from Sydney for the Carcoar contest. Mr. J. Young.  
13 Mar., 1895.

10628. What was Gearey? Gearey seemed to be running the office round there, and I believe Twine was some kind of secretary for Jeanneret in the country.

10629. Do you mean to say that Gearey was working politically for Mr. Jeanneret? Yes; and it was Twine who came to me on the Monday before Mr. Jeanneret made his statement, and asked me if I had heard that Bayview House was to be closed.

10630. *President.*] What office do you mean? I mean that Mr. Jeanneret had an election committee at an office in one of the Sydney arcades, and that Mr. Gearey took me round there one night.

10631. Did Mr. Gearey seem to be a leading spirit in that office? Yes; he was working there in the interests of Mr. Jeanneret when he was last contesting the Carcoar election, and Mr. Twine was working as secretary in the country.

10632. *Mr. McGowen.*] What time in the day did you see Gearey in this office? About tea-time—6 o'clock at night.

10633. Did you see him there more than once? Yes, on other occasions when passing the place.

10634. In the night-time? I saw him there one afternoon, and on the night I was there with him he spoke as if he had been there earlier in the day, as he informed me he was in a hurry to get there again.

[Witness withdrew.]

A. J. Vause, Esq., M.B. et C.M., re-examined:—

10635. *President.*] There are one or two further questions I should like to ask you. The first is with reference with the proprietary of Bayview Asylum;—did you originally purchase this property from Mr. Tucker on the 31st of December, 1885, for the sum of £14,500? Yes, that was the first price, but I do not remember the exact date. Dr. Vause.  
13 Mar., 1895

10636. Was it in 1885? I think so.

10637. Did you give a mortgage to Mr. Tucker? Yes.

10638. For £12,500? I do not for the moment remember the exact figures. Yes, that must be right, for I remember I paid off £2,000 at the time.

10639. Did you pay off certain sums in instalments in April and July, and in other times in 1889, and further instalments up to the 1st of January, 1894;—on the 2nd of April last year did you borrow from the Mutual Life Association of Australasia the sum of £9,000 on the whole property? Yes, on the property I purchased from Mr. Tucker, not on the new house, and with what I borrowed then I paid off my liability to Mr. Tucker.

10640. Was Mr. Tucker's mortgage then discharged? Yes.

10641. So that virtually now the property is mortgaged for the sum of £9,000 to the Mutual Life Association of Australasia? Yes; but I have paid off a few hundreds since then.

10642. Have you had a considerable amount of outlay upon the new premises? Yes; I have spent over £500 on furniture outside the £14,500.

10643. Did the addition of the new house cost you £2,500? Yes.

10644. Of which sum you have paid off £500? Yes.

10645. Leaving out a balance of £2,000? Yes.

10646. Do you say that the original purchase money of £14,500 is now reduced as a balance owing to £8,500, and over that have you got a fresh mortgage? Yes, for £9,000 with reductions.

10647. Does that mean that at the present time your indebtedness on your original purchase is £8,500 in addition to the debt on the new property? Yes, quite so.

[Witness withdrew.]

FRIDAY, 15 MARCH, 1895.

[The Commission met at 11 a.m. in the Board Room, Chief Secretary's Office.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
Esq., M.D., INSPECTOR-GENERAL OF THE  
INSANE.

ANDREW GARRAN, Esq., LL.D.  
JAMES SINCLAIR TAYLOR MCGOWEN,  
Esq., M.L.A.

Dr. Vause was in attendance to hear evidence and examine witnesses on his own behalf.

Mr. John Thomas Wells sworn and examined:—

10648. *President.*] What is your occupation? I was a saddler and harness maker, but I have now retired from business. Mr.  
J. T. Wells.  
15 Mar., 1895

10649. Where do you live? At 128, Palmer-street, Woolloomooloo.

10650. Have you any acquaintance with Bayview House, Cook's River Road? I have known it for many years I knew it as a lad 14 years of age, as far back as 1860. I was a boy then, and attended the church in the grounds. The place was then a school kept by Rev Mr. Sevigny, who was an ordained minister and had a church there, and I used to attend that church.

10651. Did you go to the school? I was always in the grounds, as my brother-in-law was the head teacher.

10652. Are you therefore very well acquainted with those grounds? Yes.

10653. Was there a stable belonging to the buildings in the ground? Yes; the stable was behind the church.

10654. What sort of a stable was it? It was a stable with doors, and a small loft over the doors.

10655. Was it built of brick? It was built of brick.

10656.

- Mr. J. T. Wells,  
15 Mar., 1895.
10656. What was the loft like? It was a small loft with an opening over the door to put the hay through.
10657. Where was the door? It was facing the west—that is, facing the main road. That is where the door was as far as I can recollect.
10658. How did that stable lie in relation to the main building? It is so many years ago that I do not remember. I should, however, know the building if I went into it.
10659. Do you think you could recollect it from this length of time? Oh! yes. I think I could.
10660. Now that the church is pulled down? Yes.
10661. Have you ever seen the new buildings that have been erected in the grounds? No.
10662. Do you know that the whole character of the place has been altered? Yes; I have heard so.
10663. Do you think you could recognise the stable you knew as a boy? I think I should know it if I saw it.
10664. Have you been in this stable? Yes; it was a stable and coach-house, or, at all events, there was room for a buggy.
10665. How many stalls were there in that stable? Two, I believe.
10666. Have you any definite recollection of the place? You see it is so many years ago.
10667. Can you remember the exact position in which the stable stood;—in regard to the main building, do you know how far it was from the house? I almost forget, it is so many years ago. I should know the place at once if I saw it.
10668. Do you think it was distant 100 yards from the house? I do not think it was quite 100 yards.
10669. Well, how far do you think it was? I would be a difficult thing for me to swear or say how far it is without seeing the place; it is so many years ago since I saw it.
10670. Could you say whether it was 50 yards from the house? No; I would not like to confine myself to anything without again seeing the place. If I saw it now I would know whether it was the same building or not. I know it was situated some distance from the house.
10671. *Dr. Garran.*] Do you think it would be more than 16 yards from the house? It is so long ago—since 1864—since I have seen the building that I cannot say.
10672. Was it usual in those days to build a stable quite close to the house? Yes, it was.
10673. *President.*] Can you tell us on which side of the house this stable stood? I believe, to the best of my recollection, it was on the north side.
10674. Have you any distinct recollection as to where it stood? I will not swear to its position in relation to the house, but if I saw the place now I should know it by the doors and the old loft.
10675. *Dr. Garran.*] Are you quite sure that there were two stalls and room for a buggy? That is so, I believe.
10676. Was the door by which the horses entered and the opening through which the buggy was put into the building facing St. Peter's Church, in the Cook's River Road? Yes, I think so; but I would not like to bind myself to any statement like that. [*At this stage the plan of Bayview Asylum was produced and examined by witness.*]
10677. *President.*] With that plan before you, can you say where that stable stood? [*After examining the plan, the witness said the place seemed to him to be different altogether.*]
10678. *Dr. Vause.*] Can you recollect of what material that stable was built? I believe it was a brick building, with a stone floor.
10679. *President.*] Do you say you have been in that building? Yes, years ago—as far back as 1864.
10680. Was it a high building? No; I should not imagine that the stable proper would be more than about 10 feet in height, and the loft was just above it.
10681. What height above it? The loft started from the ceiling of the stable, and would not be more than about 10 feet high.
10682. What kind of roof was on the building? It was a pitch roof, sloping down both sides from the centre.
10683. Was it of iron or shingles? I think it would be shingles in those days.
10684. Was the door in that loft big enough to admit a truss of hay? No, not such trusses as we get to-day. Such things as those did not exist in those days. The hay was generally put into the loft in a loose state.
10685. Do you recollect the size of the door at all? I think it was about the size of that window over the door [*pointing to the sunlight over the door in the Board-room*], or about 2½ feet square. But I do not like to bind myself to these points for certain.
10686. Have you been out to Bayview House of late years? No; I drove past the place, some eight years ago, and saw that some alterations were going on, but I could not see actually what they were.
10687. Have you made any personal inspection of the place since you were a boy? None whatever.

[Witness withdrew.]

Mr. Alfred Fletcher Twine sworn and examined:—

- Mr. A. F. Twine,  
15 Mar., 1895.
10688. *President.*] What is your occupation, Mr. Twine? A commercial traveller.
10689. Do you know Mr. C. E. Jeanneret, formerly a member of Parliament? I do.
10690. Do you also know John Young, the accountant at Bayview House? I do.
10691. It has been given to us in evidence that on a certain occasion you, at the Legislative Assembly, had a conversation with Mr. Jeanneret about Bayview Asylum matters;—is that a fact? I have had several conversations with him.
10692. Do you remember having a conversation with Mr. Jeanneret when Mr. Young was present, or in the vicinity of the House, about Bayview Asylum? I do not remember it.
10693. Do you recollect suggesting to Mr. Jeanneret in a conversation, at any time, that it would be to his interest not to make public certain matters he knew in connection with Bayview House? I never did anything of the sort.
10694. Do you say you never did? I certainly never did.
10695. Do you remember walking from the Legislative Assembly with Mr. Jeanneret and saying to him that it would not only be worth his while, but worth a thousand pounds to him, if he would not make public certain disclosures in the House in connection with Bayview Asylum? No, I never made any such statements.
- 10696.

10696. Did you ever, in any shape or form, tell Mr. Jeanneret it would be to his pecuniary advantage to withhold from the public certain information about Bayview House? No, I am quite sure about that.
10697. If Mr. Jeanneret himself says that you did, is he mistaken? He is mistaken, unquestionably.
10698. Is he under a misapprehension altogether? He is, unquestionably.
10699. Did you on any occasion walk down from the Legislative Assembly in company with Mr. Jeanneret, with Mr. Young in close proximity behind you? Yes; I did one afternoon.
10700. Did you on that occasion give Mr. Jeanneret to understand through Young or some other person it was possible some advantage might accrue to him if he ceased taking action in connection with certain disclosures concerning Bayview Asylum? Not in the slightest. And if he says I did, he is under a misapprehension altogether. I think I might make a statement here that will clear this matter up. I will commence at the beginning so that I may state more clearly the whole of my connection with the matter. My first knowledge of anything in connection with Bayview Asylum was in consequence of Mr. Jeanneret stating that he was going to do something which would transpire in a few days in connection with the institution, but I was to treat the communication as a confidential matter. I did so to this extent: Mr. Young, the accountant at the asylum, who is an intimate friend of my brother-in-law, but not of my own, I thought might have his position jeopardised if something did occur, and in a friendly way I told him something was to be disclosed in connection with the asylum which might affect him, and therefore it would be well for him to be on the look-out. I had no idea what it was at this time.
10701. At what time did this conversation take place? Months ago, before anything came out in Parliament at all.
10702. Was this before Mr. Jeanneret moved the adjournment of the House and made certain disclosures? Yes; about a fortnight before.
10703. As far as you recollect was it about a fortnight before? Yes. On subsequent occasions when I met Mr. Young this question cropped up, and I said to him that if anything resulted in the Government taking over the institution I would use what little influence I had to secure the continued employment of Mr. Young as an accountant. That led up to Young wishing to meet Mr. Jeanneret or wishing me to introduce him to Mr. Jeanneret, to see if he would use his influence to secure a continuance of his employment. But it is not a fact that I ever referred to or suggested in any way that Mr. Jeanneret would receive any pecuniary benefit.
10704. Did you ever ask Mr. Jeanneret to speak to Young? I asked him if he would allow me to introduce Young to him. He was in a hurry at the time, as we wanted to get some electioneering posters that were to be taken up country, and he did not seem inclined for an introduction.
10705. Do you think he expressed reluctance to speak to Young, because he thought him to be a kind of go between, in regard to the proposal to which we referred a few minutes ago? No, nothing of the kind.
10706. Did any suggestion of that kind crop up in your own mind? Certainly not. My only object in speaking about Young was to do him what I considered to be a friendly turn by endeavouring to secure his employment, and I did this because he was an intimate friend of my brother-in-law.
10707. *Dr. Garvan*] Did you ever say anything to Mr. Jeanneret in the direction of advising him to drop this Bayview House matter? No, I did not.
10708. *Dr. Manning*] On this occasion on which you walked down the street with Mr. Jeanneret and asked if you might introduce Young to him, had Mr. Jeanneret made his statement in the House? I would not like to swear positively when it was, but my impression is it was before the statement was made.
10709. Was anything said by you in this connection to the effect that Mr. Jeanneret might benefit to the extent of a thousand pounds? Oh, dear no; nothing of the kind; I would not have dared to suggest such a thing to him; I know he would take steps to prevent any such thing.

[Witness withdrew.]

A. J. Vause, Esq., M.B. et C.M., re-examined:—

10710. *Dr. Manning*] Have you ever seen the official visitors going round the institution with a list of A. J. Vause, patients in their hands, checking off the names? I do not think so.
10711. Have you seen me with a list sometimes? I have frequently seen you checking them off.
10712. Have they ever examined your day or night reports? Yes.
10713. Often? Occasionally; I cannot say how often.
10714. Are these reports always available to them? Yes.
10715. *President*] In reply to Dr. Manning, one of the nurses stated distinctly that she had seen the official visitors with a list in their hands pricking off the names of the patients;—must she have made a mistake? I think so.
10716. Was it a usual practice for the official visitors to do this? It was not.
10717. Was it ever done? It may have been done occasionally; but it was not a habitual occurrence with the official visitors. It was habitual with the Inspector-General of the Insane.
10718. *Dr. Manning*] Did the official visitors ever ask you to make up a list of the patients from the returns? Not of the names of the patients.
10719. *President*] Then how did they identify the Government patients with your records, as regards number, supposing patients had been admitted or discharged? From the official records. They could see entries of all admissions, and then interview the patients; and from the official records they would be able to see all discharges. The only thing I do not recollect them doing was to tick off the name of every individual case in the house, as did the Inspector-General.
10720. Is any list of patients provided for the official visitors? I do not think so.
10721. Then how could they compare the number of inmates with the official records? They might have had a list for anything I know to the contrary. The list used by Dr. Manning was not prepared by me. A notice concerning every case is sent to the Inspector-General's Office, and the list must be compiled there, for it is not provided by me.
10722. *Dr. Manning*] The Inspector-General is the Government's representative, and as such he would know all about patients; but I want to know whether the official visitors had a list in their hands to compare it with the number of patients in the institution? I do not think they made a comparison in that way; but I am quite sure they saw every patient recently admitted, and were always particular in asking to see every case that had come into the house.

Mr.  
A. F. Twinc.

15 Mar., 1895.

Esq.  
15 Mar., 1895.

- A. J. Vause, Esq.  
15 Mar., 1895.
10723. *Dr. Garran.*] Is it a fact that the official visitors coming round at uncertain times operated in any way as a check against abuses? The idea of abuses never came into my mind. My personal view of this matter is, that the official visitors occupy a useful and important position, and do most effective work. I would not be without the official visitors on any account.
10724. What good are they to you? They are of good to the entire establishment, as they have full opportunity of seeing the whole of the patients, of listening to whatever complaints may be made; and they make reports to the Colonial Secretary quite independent of me.
10725. Do you think that promotes contentment amongst the patients? I do not say that; but I think it secures uniform action in the establishment; and it certainly strengthens the position of the Medical Superintendent with the attendants.
10726. Do you think it has a wholesome effect on the attendants? Yes; if they are lax in the performance of their duty it strengthens the position of the Medical Superintendent.
10727. Does it enable you to exercise discipline more firmly? It does, most decidedly.
10728. Is it a help to you in that way? Yes; and it also affords additional security to the friends of the patients for the good treatment of the inmates when they know that these gentlemen visit the institution. In fact, I prominently state in my prospectus that Bayview House is under the periodical supervision of the Inspector-General of the Insane, and the official visitors (whose names I give) appointed by the Government. I do this as a certain guarantee that there is full supervision by the authorities. I have always courted inspection. For a long time past I have contemplated the organisation of some kind of inspection, but I scarcely know how to effect this purpose. I could not afford to pay a committee for this purpose, and one could hardly ask competent gentlemen to undertake the duty without remuneration. The idea of increased inspection has been in my head for some time, and the only reason it has not been carried into effect is, that it is surrounded by practical difficulties. I even thought of introducing a ladies' committee but for these practical difficulties.
10729. Do you consider that more inspection would increase public confidence? Yes. But in throwing the place more open there is the danger of throwing it open too much, an inevitable result of which would be inquisitive and mischievous people talking too much about the patients.
10730. In view of what you now say, are you completely satisfied with the official visitation? Personally, I am perfectly satisfied with it. As you are aware, in the minds of many people there are most peculiar ideas concerning asylums for the insane. I have heard most absurd things said about the treatment of patients, and it was with a view of obviating as far as possible this absurd talk by people who know little or nothing of these matters, that I entertained this idea for increased inspection.
10731. Do the official visitors go to Bayview House once a month? They are quite irregular in their visits, but they pay twelve or thirteen visits a year.
10732. How long do these visits last? They vary in duration. The shortest time is perhaps half-an-hour, and the longest an hour and a half.
10733. Do you mean to say that during a visit of an hour and a half once a month, the official visitors can make themselves familiar with the cases, and the condition of the patients? I think so; these gentlemen are accustomed to that kind of work.
10734. How many patients have you? During the last eight years I have had between eighty and ninety, and fifty of these were Government patients of a chronic character. At the most there have not been more than two new cases to inquire into on the occasion of official visits.
10735. Do you think that the whole duty of the official visitors is comprised in looking at new patients? No; they have full opportunity in making a thorough investigation of the whole place.
10736. Do the official visitors go round in the company of the matron or yourself? Yes, generally.
10737. Do they ever ask questions of the nurses or attendants? I think they generally ask questions of myself or the matrons.
10738. Not of the nurses, nor attendants? Not unless some special information is required.
10739. Do you think it is sufficient inspection to have communication with yourself or the matron regarding individual cases? No; I do not say that. It is quite open for the visitors to specially examine the nurses, and I know that from time to time they have examined both nurses and patients specially when anything has cropped up which they thought required particular inquiry.
10740. Is the evidence which we have received correct, when it is stated that the official visitors never questioned the nurses, but that the patients were merely collected together, and that the inspecting officials with you or the matron passed through their midst, patted one and another on the shoulder, and just said, "How do you do"? Certainly not.
10741. That, however, is the substance of the evidence given by Bridget Morrissey, one of your former matrons? I think it was a loose kind of evidence.
10742. It was given on oath and reported as such, and do you say it is not true? I am perfectly sure the official visitors have in the office and in the reception room examined both nurses and patients most carefully.
10743. When you were under examination on a previous occasion did you not tell the Commissioners that only very few suggestions had been made by the official visitors, and that most of the improvements originated with the Inspector-General or yourself? Yes; and I suppose that is because they have in the main been satisfied with the state of affairs at the asylum. Suggestions have been made, I know, by the official visitors in regard to ventilation and several trifling matters, and many suggestions of minor matters have been made.
10744. *Mr. McGowan.*] Am I to gather that the official visitors inspect your institution at least once a month? Their visits average once a month, I believe. I have not counted them.
10745. You have an entry on the 23rd April in your case-book that Case No. 1 was in the single room, and he was removed from there to Callan Park on 20th May;—did the official visitors inspect Bayview Asylum in that interval? I cannot recollect without referring to the official books in which the dates of visits are entered.
10746. Is it customary for the official visitors to look at the case-books? Yes.
10747. If they paid a visit between the 23rd of April and 20th May, and examined the case-book, was there an opportunity for them to ascertain that Case No. 1 was under single-room treatment? Yes.
10748. *Dr. Garran.*] I understood that these gentlemen always inspected the case-book? They always look

look at every entry of a new case, and at anything unusual that may have transpired. I had some most A. J. Vause, Esq.

10749. *Mr. McGowan.*] Can you explain how it was you entered the fact of Case No. 1 being in the single room in November, 1893, and that there was no other entry until April, 1894? I was very ill from January to about April. The case was entered by Dr. Ramsey, and I could only take up the dates as they came. 15 Mar., 1895.

10750. But had not Case No. 1 been two months in the single room before you were ill? Yes; but I had a great deal of trouble about that time, and we had this overdose of chloral case. Then I regarded the patient being in that single room as ordinary treatment—absolutely necessary treatment—which I should have been happy to have avoided, if I possibly could.

[Witness withdrew.]

MONDAY, 18 MARCH, 1895.

[The Commission met at 11 a.m. in the Board Room, Chief Secretary's Office.]

Present:—

THE HON. SIR ARTHUR RENWICK, KNT., B.A., M.D., M.L.C., PRESIDENT.

FREDERIC NORTON MANNING,  
Esq., M.D., INSPECTOR-GENERAL OF THE  
INSANE.

ANDREW GARRAN, Esq., LL.D.

F. H. Reuss, Esq., sworn and examined:—

10751. *President.*] Have you, Mr. Reuss, been practising as an architect in Sydney for a considerable time? Yes; I began practice here in 1851, but I have been out of business for some time. F. H. Reuss, Esq.

10752. Were you at one time architect for Dr. Tucker at Bayview House? Yes. 15 Mar., 1895.

10753. Do you recollect any of the original building, before Mr. Tucker took the place over—I mean, in Mr. Toogood's time? I remember it when it was Mr. Toogood's place.

10754. Do you remember making some few alterations in the buildings? Yes; I had two contracts, and if you will allow me I would like to tell my own story, because I can remember better if I can go on from point to point. One contract was for an associated dormitory, a building behind the old house, and a strong room. Messrs. Smith and Bennett were the contractors for the big building, and I have forgotten the names of the contractors for the other.

10755. What was Messrs. Smith and Bennett's contract? It was a long room with ventilators on the top, built under Dr. Tucker's observation.

10756. Was it a wooden building? Yes; a wooden building and a strong room.

10757. What was the next contract? A large building with a verandah in front.

10758. Do you remember designing a structure very like a stable, for the isolation of insane patients? Yes; Smith and Bennett built that. I made the designs, and could have given you the plans and specifications, only all my papers got burned in a fire in Pitt-street. I can therefore only speak from recollection.

10759. Could you identify the positions of these isolation rooms if you saw a plan? Yes; I think I could. It was on one side of the house, I think.

10760. Before asking you to identify that, could you tell us, from recollection, where the stable was when Mr. Toogood occupied the house? I do not think I could tell you that without the plan.

10761. This is a very old plan, as you will see [*Plan produced; Exhibit C2*]? Yes, I can see it is. It is one of my own, drawn many years ago. [Witness examined plan, and pointed out the old house, the place where the strong-room and other buildings referred to were erected, and where he thought the old stables stood.]

10762. Is there not a stable marked on that plan as being in the paddock (near the site of the present billiard-room in Bayview House grounds)? I think in the early days that was a cow stable, or milking-shed.

10763. Here is another plan [*Exhibit A produced*];—do you recognise anything on this? Yes; it is more modern. This is the dormitory I built, Smith and Bennett being the contractors. There is the strong-room. [Witness identified the place named, and proceeding to describe the isolation-room, said:—"The room was padded with leather, and there was an observation hole in the door, with a cover falling over it from the outside. Dr. Tucker was very particular about this room and these things, and had everything done just his own way."]

10764. Did the style of architecture you adopted make the building look like a stable? No style of architecture was adopted, for Dr. Tucker told me he had no money to spend on ornamental work, and all he wanted was a plain useful building. He said at the time, "Let me have everything of the best—plain and useful, not ornamental—for I am not made of money." He employed the best contractors in town at that time, and they built this room.

10765. *Dr. Garran.*] Are you perfectly sure that these two isolation rooms under one roof which you built are not an adaptation from an old building? I do not think they are.

10766. Was there any structure on that site before these isolation rooms were put up? That I cannot tell you now.

10767. Did you have to clear anything away to make room for this building? I cannot remember that. It was in 1868 when the rooms were built.

10768. Can you say positively that this building was not an old stable re-arranged for this purpose? I have no recollection of an old stable being there.

10769. Did you have to draw special plans for the contractors? I drew plans for this building, and the contractors built to those plans.

10770. Were those plans an alteration or an adaptation of an old building? They were quite new.

10771. Did you design this as a very lofty building? Yes; that was a special instruction.

10772. Do you remember of what wood the floor was made? I cannot go into such details, but it was hardwood probably. I remember the padding that was placed all round the walls as high as I could reach.

10773.

- F. H. Reuss, Esq.  
18 Mar., 1895.
10773. Were the hardwood flooring-boards tongued and grooved? That is a detail I cannot recollect.
10774. Do you recollect if you made provision for a current of air to pass under the floor? I do not recollect, but it must have been done. There must have been iron gratings.
10775. Was Dr. Tucker particular about the ventilation? Yes; always.
10776. Do you recollect what ventilators were put in the room? No; I can only presume that, as a matter of ordinary construction, I put in cast-iron ventilators.
10777. Are you reasonably certain as to the position of these rooms? Yes; I am certain about that, because I remember it being in view of the verandah.
10778. Are you certain you drew the plan for it? Yes.
10779. Was the construction of the isolation room included in the contract of Messrs. Smith and Bennett? Yes.
10780. *President.*] How was this room padded? It was padded with leather stuffed with horsehair, and this padding was about 7 feet high round the walls. I distinctly remember the hole in the door.

[*Witness withdrew, and this concluded the taking of evidence.*]

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ROYAL COMMISSION TO INVESTIGATE CERTAIN CHARGES AGAINST  
BAYVIEW ASYLUM.

APPENDIX.

A.

[PLAN OF BAYVIEW ASYLUM.]

B.

PRESCRIPTION—\* \* \*

Rx Sp. Chlor.  
Tr. Opii.  
Syr. Zingiberis aa ʒ ss.  
Aq. ad ʒiii.

Sig.—One third part three times a day.  
21.7.94. A.J.V.

C.

CASE NO. 34 CERTIFICATE.

Lunacy Act, 1878.—Fourth Schedule.

I, THE undersigned, hereby request you to receive \* \* \* \*, an insane person, into the Asylum for the Insane, of which you are Superintendent. Subjoined is a statement respecting the said \* \* \* \*.

Hotelkeeper, \* \* \*.

Degree of relationship (if any) or other circumstances of connection of the person signing the request with the patient.—Cousin.

Dated this 14th day of May, 1892.

Witness to Signature,—W. H. YARRINGTON, M.A., Licensed to Celebrate Marriages.  
To Superintendent of the Bayview House Asylum at Tempe, near Sydney.

Lunacy Act, 1878.—Fifth Schedule.

Statement.

Name in full?—\* \* \*

Age?—43 years.

Married, single, or widowed?—Widow.

Number of children?—Three children.

Age of youngest child?—11 years.

Previous occupation?—Housewife.

Native place?—\* \* \* New South Wales.

Late residence?—\* \* \*

Religious persuasion?—Church of England.

Supposed cause of insanity?—Mental worry.

How long has the attack lasted?—About twelve months.

Has she been insane before?—No.

Age (if known) at first attack?—42 years.

Has she any insane relations?—No.

Has she ever been an inmate of any institution for the insane?—No.

Is she subject to fits?—No.

Is she suicidal?—No.

Is she dangerous to others?—No.

Name and address of nearest relations or friends?—\* \* \*

Lunacy Act, 1878.—Second Schedule.

Medical certificate to accompany order or request for reception into an Hospital for the Insane or Licensed House.

I, THE undersigned, being a medical practitioner, hereby certify that I, on the 28th day of April, 1892, at Newcastle, separately from any other medical practitioner, personally examined \* \* \* of \* \* \* \*, and that the said \* \* \* is insane, and a proper person to be taken charge of and detained under care and treatment; and that I have formed this opinion upon the following grounds, viz.:—

1. Facts indicating insanity observed by myself:—I have known Mrs. \* \* \* for the last twenty-five years; she is naturally of an active and lively disposition; of late she has become morose and taciturn; her appearance has also altered, having become vacant; she told me that different men were in the habit of coming into the room and climbing up the bed-posts and singing to her.

2. Other facts (if any) indicating insanity communicated to me by others:—Her mother, \* \* \* informs me that she has latterly become violent, and cannot be kept in bed; that Mrs. \* \* \* does not recognise her or any others about her.

Dated this 13th day of May, 1892.

JOSEPH L. BEESTON,  
Newcastle.

## Lunacy Act, 1878.—Second Schedule.

Medical certificate to accompany order or request for reception into an Hospital for the Insane or Licensed House.

I, THE undersigned, being a medical practitioner, hereby certify that I, on the 14th day of May, 1892, at West Maitland, separately from any other medical practitioner, personally examined \* \* \* , and that the said \* \* \* is insane, and a proper person to be taken charge of and detained under care and treatment; and that I have formed this opinion upon the following grounds, viz. :—

1. Facts indicating insanity observed by myself :—She rambles in her talk, and is listless and stupid; at times refuses to speak for hours together; refuses food; has loss of memory, and cannot say how long she has been ill; is dirty in her habits, and attempts to tear her clothes; has delusions, fancying that birds are singing around her bed, and other fancies of that sort.

2. Other facts (if any) indicating insanity communicated to me by others :—Her relations say that she has been gradually failing in health for over a year, and at times falls into a listless state, and remains staring at something for some time, but does not know anything about it, and at times does not know her intimate friends.

ROBERT GEO. ALCORN, L.R.C.P.E.,

West Maitland.

Dated this 14th day of May, 1892.

## C 2.

[PLAN OF BAYVIEW ASYLUM, SIGNED BY MR. REUSS.]

## D.

CASE No. 29 CERTIFICATE.

7 Vic. No. 14, s. 11; and 13 Vic. No. 3.

Application for Admission into a Lunatic Asylum.

To His Excellency Sir Hercules George Robert Robinson, Knight Commander of the Most Distinguished Order of Saint Michael and St. George, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies, and Vice-Admiral of the same.

The Petition of \* \* \* \* \*, surveyor.

Respectfully sheweth,—

THAT Case No. 29, spinster, has been examined and found to be of unsound mind, as will appear by the annexed certificate; and that your petitioner, who is the father of the said \* \* \* \*, is desirous of procuring her admission into a lunatic asylum, in order that she may there have such medical care and attendance as may be most likely to ensure her eventual recovery. It has been said that her entire removal from home associations and general change may probably result in her ultimate recovery. The said \* \* \* \* \* will be (is proposed to be) maintained by your Petitioner.

Your petitioner, therefore, prays that Your Excellency will be pleased to direct that the said \* \* \* \* \* may be received into such lunatic asylum as Your Excellency may think fit to appoint.

\* \* \* \* \*

Upon reading the foregoing memorial, and the annexed certificates of G. Fortescue, M.B., and Walter W. Spencer, M.R.C.S., legally qualified medical practitioners, I sanction and approve of the application.—JOHN H. HARGRAVE, one of the Judges of the Supreme Court of New South Wales.

## Joint Medical Certificate.

WE, the undersigned, being legally qualified medical practitioners, do hereby certify that we have examined \* \* \* \* \* spinster, and that we find her to be of unsound mind, and a proper object for reception into a lunatic asylum; and we further certify that in our opinion the said \* \* \* \* \* would be benefited by treatment in such asylum.

G. FORTESCUE, M.B.

WALTER W. SPENCER, M.R.C.S.

December 24, 1874.

STATEMENT of particulars connected with \* \* \* \* \*, a Lunatic, examined by Walter W. Spencer, M.R.C.S., duly qualified medical practitioner, with a view to her admission into a lunatic asylum.

What is her age :—35 years, 9th March, 1874.

Religion ?—Church of England (Protestant).

Native place ?—London (city).

Late residence ?—

Previous occupation ?—Private governess; for past seven years, private life.

Is she single, married, or widowed ?—Single.

What is the form of mental disorder ?—Dementia.

What is the supposed cause ?—Her friends attribute her condition to a fright she suffered as a child.

How long has it existed ?—Many years.

Has its approach been sudden or slow ?—Slow.

Has any personal restraint been employed ?—Occasionally.

Has the patient been insane before ?—Has been getting worse for some years.

Have there been any lucid intervals ?—Occasionally.

Is the disease hereditary, constitutional, or casual ?—Casual.

Have you observed anything peculiar in her habits ?—Yes.

Has she shown any disposition to refuse food ?—Yes; frequently.

Is she disposed to injure herself or others ?—Yes.

Have any medical means been employed ?—Yes.

Has she ever been in any asylum for lunatics ?—No.

Is the patient's bodily health good ?—Yes.

Then describe the particulars of the disease.—Dementia, with occasional maniacal paroxysms.

What property has she with her ?—None.

## Separate Medical Certificate.

I, WALTER WILLIAM SPENCER, do hereby certify that I, separately and apart from any other medical practitioner, personally examined \* \* \* \* \* (to whom the certificate jointly signed by George Fortescue and myself relates), and that I form my opinion of the said \* \* \* \* \* 's unsoundness of mind, on the following grounds :—

1. From the facts next mentioned, indicating insanity, observed by myself :—Incoherent and inappetent in her conversation; her manner is wild and excited; states she is wronged in many ways by her parents and other relatives, who are exceedingly kind to her.

2. From the facts next mentioned, indicating insanity, communicated to me by other persons :—Is subject to paroxysms of the wildest excitement; declines to take food, on the ground that it is poisoned; after retiring to rest has occasionally gone out into a paddock and lain down on the damp grass; regards with suspicion and dislike all her family, who are most considerate towards her.

WALTER W. SPENCER, M.R.C.S., &c.

December 21, 1874.

Separate

## Separate Medical Certificate.

I do hereby certify that I, separately and apart from any other medical practitioner, personally examined \* \* \* \* \* (to whom the certificate jointly signed by Walter Spencer and myself relates), and that I form my opinion of the said \* \* \* \* \*'s unsoundness of mind on the following grounds:—

1. From the facts next mentioned, indicating insanity, observed by myself:—Manner, restless and excited; incoherence; complains constantly of the want of respect and kindness towards herself of her relations, who, I believe, are most considerate to her; is much more incoherent and restless in manner than she appeared to be when I first knew her about eighteen months ago; appears to have absolute delusions as to her position and means in life.

2. From the facts next mentioned, indicating insanity, communicated to me by other persons:—Complete change of former and ordinary demeanour; says that everything that is put before her is poisoned, and frequently refuses to eat in consequence; goes out, and buys food for herself; is often exceedingly violent and excitable; has gone out at night in her nightdress, and sat for hours in the garden; is very incoherent, and wanders from one subject to the other, but recurs frequently to the want of respect and consideration shown to herself.

G. FORTESCUE, M.B.

December 24, 1874.

We, the undersigned, having examined \* \* \* \* \*, recommend that she should be discharged to the care of some relative or friend, on their entering into a bond in the sum of £10 for her safe keeping and peaceable behaviour.

Hospital for the Insane, Gladesville, 17th December, 1875.

H. G. ALLEYNE.

F. NORTON MANNING.

## E.

## CASE No. 29.—CASE-BOOK NOTES.

AGE, 30 (when admitted); social condition, single; nativity, England; residence, \* \* \* \* \*; religion, Church of England; form of mental disorder, imbecility; duration of attack, 6 years; admitted, 1st April, 1875.

*Before Admission.*—Her father, who was a nervous, excitable, and peculiar old gentleman, reported that she had been peculiar in speech and manner for many years. He attributed this to a scene which was enacted in their house many years ago, and in which a considerable amount of blood was sprinkled over the walls. He declined to give any further particulars of the scene. Since that period she had been ill-tempered and wayward. The final cause of her being sent to hospital was a grand row (in her parents' absence) with the servant, whom she turned out of doors, and then proceeded to demolish all the furniture, window glass, &c., in the room.

*On Admission.*—A well-grown, fair complexioned, and pleasant-looking woman; very flighty, jerky, and peculiar in manner. Laughed unmeaningly at trifles, and was sulky and silent. Her conduct that of a wayward, spoiled child on its best behaviour.

*After Admission.*—She was correct in habits, obedient to direction, worked a little in the sewing-room, took her food well, and was quiet at night. She continued to be flighty and very peculiar in manner and thought. At times would not occupy herself except in writing the most strange letters to her father, trying to induce him to take her home. She was very stout and healthy, remained most peculiar in manner and conversation, and on 24th December, 1875, she was discharged on bond to care of friends.

## F.

## CASE No. 29.—CERTIFICATE ADMISSION—BAYVIEW.

## Lunacy Act, 1878.—Fourth Schedule.

I, THE undersigned, hereby request you to receive \* \* \* \* \* an insane person, into the licensed house of which you are the Superintendent. Subjoined is a statement respecting the said \* \* \* \* \*

Solicitor, Chatswood, North Shore, \* \* \* \* \*  
Dated this 17th day of August, 1891. \* \* \* \* \*

Witness to signature,—J. F. KING, J.P.

## Lunacy Act, 1878.—Fifth Schedule.

## Statement.

Name in full?— \* \* \* \* \*  
Age?—52.  
Married, single, or widowed?—Single.  
Number of children?—None.  
Native place?—New South Wales.  
Late residence?— \* \* \* \* \*  
Religious persuasion?—Protestant.  
Supposed cause of insanity?—Sexual derangements.  
How long has the attack lasted?—Seventeen years.  
Has she been insane before?—Yes.  
State the number of attacks?—One.  
Age (if known) at first attack?—37.  
Has she any insane relations?—No.  
Has she ever been an inmate of any institution for the insane?—Yes.  
Is she subject to fits?—No.  
Is she suicidal?—No.  
Is she dangerous to others?—No.  
Name and address of nearest relations or friends?— \* \* \* \* \* and \* \* \* \* \*  
North Shore. \* \* \* \* \*  
Solicitor, \* \* \* \* \*

## Lunacy Act, 1878.—Second Schedule.

Medical certificate to accompany order or request for reception into an Hospital for the Insane or Licensed House.

I, THE undersigned, being a medical practitioner, hereby certify that I, on the 19th day of August, 1891, at Bayview House, Cook's River, separately from any other medical practitioner, personally examined \* \* \* \* \* of Bayview House, and that the said \* \* \* \* \* is insane, and a proper person to be taken charge of and detained under care and treatment, and that I have formed this opinion upon the following grounds, viz.:—

1. Facts indicating insanity observed by myself:—Incoherent and rambling in conversation; accuses her attendants of neglect of her; says that something has gone wrong in her mind, and that there is something wanting.

2. Other facts (if any) indicating insanity communicated to me by others:—Her brother informs me that she is full of complaints whenever he comes to see her, and is also very suspicious of those about her. She at times becomes very violent and unruly.

Dated this 19th day of August, 1891.

FREDK. ASHWELL,  
94, Glebe Road.

Lunacy

## Lunacy Act, 1878.—Second Schedule.

Medical certificate to accompany order or request for reception into an Hospital for the Insane or Licensed House.

I, THE undersigned, being a medical practitioner, hereby certify that I, on the 19th day of August, 1891, at Bayview House, Cook's River, separately from any other medical practitioner, personally examined \* \* \* of Bayview House, and that the said \* \* \* is insane, and a proper person to be taken charge of and detained under care and treatment; and that I have formed this opinion upon the following grounds, viz. :—

1. Facts indicating insanity observed by myself :—Rambling in conversation, constantly changing the subject; very voluminous in her conversation. Tells me that Dr. Vause is rude; looks down on her; that the late Mrs. Vause accused her of jumping out of the store window; that the food is not good; and that the tea they get in the asylum is gradually poisoning her. Got very excited whilst conversing.

2. Other acts (if any) indicating insanity communicated to me by others :—Her brother \* \* informs me that she once attempted to empty a kettle of boiling water over her niece. Threatened the servants of her mother by brandishing knives. Never contented in any one place. Always absconded from the friend with whom she is placed, and, when found, was in some place unfitted for her station in life.

Dated this 19th day of August, 1891.

MARK HENRY LONG,  
67, Regent-street, Chip., Sydney.

## G.

## CASE NO. 29—DISCHARGE AND READMISSIONS.

Lunacy Act, 1878.—Tenth Schedule.

Notice of Discharge.

I HEREBY give you notice that \* \* \*, a patient admitted into this hospital, or licensed house, on the 31st day of May, 1881, was discharged not improved, under section 85 of the Lunacy Act, by the authority of \* \* \*, who is the trustee of the patient under the will of her mother, the late \* \* \*, and who made the last payment on her behalf on the 20th day of August, 1891.

H. B. HETHERINGTON,  
Superintendent of the Licensed House, situated at Cook's River.

Dated the 20th day of August, 1891.

Lunacy Act, 1878.—Eighth Schedule.

Notice of Admission.

I HEREBY give you notice that \* \* \* was admitted into this licensed house on the 20th day of August, and I hereby transmit a copy of the order and statement and medical certificate on which she was received.

Subjoined is a statement with respect to the mental and bodily condition of the above-named patient.

H. B. HETHERINGTON,  
Superintendent of the Licensed House.

Dated this 20th day of August, 1891.

To the Colonial Secretary.

Lunacy Act, 1878.—Eighth Schedule.

Statement.

I HAVE this day seen and examined \* \* \*, the patient mentioned in the notice of admission of the 20th day of August, and hereby certify that, with respect to mental state, she is suffering from delusional mania, her expression is shifty and wild; she sits for the most part alone and does not attempt to employ herself in any way, and is frequently to be seen giggling and laughing to herself with no apparent cause; when spoken to she generally laughs in an unmeaning manner; she says that since she came to the Colony everything has been confused, her friends, food, clothing, and everything; she is frequently excited, incoherent, and abusive; and with respect to bodily health and condition, she is in very fair health and condition.

H. B. HETHERINGTON,  
Superintendent of the Licensed House, Cook's River.

Dated the 24th day of August, 1891.

To the Colonial Secretary.

## B1.

Case No. 29.

(Extracted from case-book, No. 3, fol. 164. Reg. No. 355.)

Age, 42; S.; native of N.S.W.; residence, \* \* \*; religion, Protestant; form of mental disorder, delusional mania; supposed cause, sexual derangement; duration of attack, seven years; admitted, May 31, 1881; leave of absence granted from December 12, 1882; went to reside with her parents; returned to hospital on August 7, 1884, having been out on leave of absence since December 12, 1882; discharged, August 20, 1891; re-admitted, August 20, 1891; medical certificates signed by Dr. Fortescue and Dr. Hodgson in the first instance; medical certificates signed by Dr. Ashwell and Dr. Mark Henry Long subsequently on August 20, 1891.

## EPITOME OF CASE.

1881—May 31—Incoherent and rambling in conversation; suspicious of her nearest friends; charges them with bad intentions towards her; complains that she is misunderstood, and says that everyone is against her; five years previous to this date (May 31, 1881) she was in Gladesville for a year; has occasional paroxysms of excitement, during which she is violent. August 22—Excited and violent, attempted to strike a lady patient. 1882—April 8—Excited and violent; using abusive language to everybody about her; placed in seclusion for one hour. While on leave from December 20, 1882, to August 7, 1884, she talked and behaved very much the same as when at Bayview; nothing was suited to her taste, and everybody was plotting against her; even if they looked at her she thought they did her harm; she would not remain with anybody for any length of time, and wandered away by herself whenever she could get the opportunity; on one occasion she remained out all night. 1891—May 9—Since re-admission she has been much the same as before; complains of insults being heaped upon her, but fails to specify any particular insult; says she has been reduced to the state of a maniac, although she has no menial duties to perform; complains that her clothes are insufficient, which is not the case. June 3—Since the visit of her sister-in-law, \* \* \*, yesterday morning, the patient has been much excited; she lies on the sofa complaining that she is very ill for want of change, and that the people about her are constantly insulting her about her relatives, and that they are all brutes and low women. 1894—June 18—She visits her brother, \* \* \*, from time to time, and goes out driving and walking; occasionally visits the theatres, concerts, and public gardens accompanied by a nurse. Mentally and physically there is but little change; at times she is violent and abusive, and at others she sits down laughing to herself; seldom occupies herself in any useful way; full of her own grievances without any consideration for others.

THE father of \* \* \*, who signed the request on which she was received into the licensed house for the insane at Cook's River, being dead, I, the undersigned, being the person who made the last payment on behalf of the said \* \* \*, now direct (under the provisions of section 1884 and 1885 of the Lunacy Act) that she may be discharged with a view of fresh proceedings being taken for her re-admission under new request and certificates, in accordance with section 8 of the Lunacy Act.

18th August, 1891.

Lunacy

Lunacy Act, 1878—Fourth Schedule.

I, THE undersigned, hereby request you to receive \* \* \* \* \*, an insane person, into the institution of which you are the superintendent. Subjoined is a statement respecting the said \* \* \* \* \*

Degree of relationship (if any) or other circumstances of connection of the person signing the request with the patient.—Father.

Dated this 30th day of May, 1881.

To Dr. Tucker, Superintendent of the Licensed House for Insane Patients at Cook's River.  
Witness to Signature,—J. ANTHOBS, J.P.

Lunacy Act, 1878—Fifth Schedule.  
Statement.

Name in full?—\* \* \* \* \*  
Age?—42 years.  
Marrical, single, or widowed?—Single.  
Previous occupation?—None.  
Native place?—London, England.  
Late residence?—\* \* \* \* \*  
Religious persuasion?—Church of England.  
Supposed cause of insanity?—Sexual derangements.  
How long has the attack lasted?—Seven years.  
Has she been insane before?—No.  
Has she any insane relations?—No.  
Has she ever been an inmate of any institution for the insane?—In Gladsville.  
Is she subject to fits?—No.  
Is she suicidal?—No.  
Is she dangerous to others?—Slightly violent at times.  
Name and address of nearest relations or friends?—\* \* \* \* \*

Lunacy Act, 1878—Second Schedule.

Medical certificate to accompany order or request for reception into an Hospital for the Insane or Licensed House.  
I, THE undersigned, being a medical practitioner, hereby certify that I, on the 29th day of May, 1881, at \* \* \* \* \*  
\* \* \* \* \*, separately from any other medical practitioner, personally examined \* \* \* \* \*  
and that the said \* \* \* \* \* is insane, and a proper person to be taken charge of and detained under care and treatment; and that I have formed this opinion upon the following grounds, viz. :—

1. Facts indicating insanity observed by myself: Incoherent and rambling in conversation; restless and excitable in manner; seeming suspicious of her nearest friends, and charges them with bad intentions towards her; complains that she is misunderstood, and says that every one is against her.

2. Other facts (if any) indicating insanity communicated to me by others: She was about five years ago in Gladsville for about a year; she is now always more or less strange, but has occasional paroxysms of excitement, during which she is violent and has actual delusions, attributing all kinds of absurd motives to people, and frequently turning upon indecent subjects.

G. FORTESCUE, M.B., I.,  
6, Lyons Terrace, Sydney.

Dated this 30th day of May, 1881.

Lunacy Act, 1878—Second Schedule.

Medical certificate to accompany order or request for reception into an Hospital for the Insane or Licensed House.  
I, THE undersigned, being a medical practitioner, hereby certify that I, on the 14th day of May, 1881, at \* \* \* \* \*  
\* \* \* \* \*, separately from any other medical practitioner, personally examined \* \* \* \* \*  
\* \* \* \* \* and that the said \* \* \* \* \* is insane, and a proper person to be taken charge of and detained under care and treatment; and that I have formed this opinion upon the following grounds, viz. :—

1. Facts indicating insanity observed by myself: Excessive haughtiness; violent attacks upon domestics; excessive suspicion of her family's conduct; occasional supreme contempt for any or all of her friends; undue inattention to personal attire.

2. Other facts (if any) indicating insanity communicated to me by others: Violence towards her mother; continual persecution of her parents by insane and suspicious remarks.

WILFRED HODGSON, M.D.,  
67, Regent-street, Sydney.

Dated this 30th day of May, 1881.

B2.

Sir,  
I hereby request you to allow my daughter, \* \* \* \* \* to leave the licensed house for the insane, Cook's River, in which she is now a patient, on leave of absence for six months. I propose to remove her to the premises of \* \* \* \* \* near my residence, \* \* \* \* \* and I undertake to make due provision for her proper care and safe keeping.  
I am, &c., \* \* \* \* \*

The Inspector-General of the Insane. \* \* \* \* \*

I recommend that leave of absence for the period above stated be granted in the case of \* \* \* \* \*

ARTHUR J. VAUSE,  
Superintendent.

Dated, 7/12/82.

I SANCTION the absence of \* \* \* \* \* from the licensed house at Cook's River from the twelfth day of December, 1882, to the twelfth day of June, 1883.

F. NORTON MANNING, M.D.,  
Inspector-General of the Insane.

Extension of leave applied for to dates as under.	Recommended.	Date.	Approved.	Date.
12 September, 1883 .....	A. J. Vause .....	26/6/83	F. Norton Manning .....	3/7/83
12 March, 1884 .....	A. J. Vause .....	10/10/83	F. Norton Manning .....	12/10/83
24 December, 1884 .....	Mark H. Long .....	24/11/84	F. Norton Manning .....	25/7/84

I hereby certify that, having examined \* \* \* \* \* in her case for a further period of six months is desirable.  
Dated 10 October, 1883.

S. SOUTTER HARWOOD, M.D.

I hereby certify that, having examined \* \* \* \* \* in her case for a further period of six months is desirable.  
Dated 24th June, 1884.

MARK HENRY LONG, M.D., L.R.Q.C.P., L.M.

H.  
OFFICIAL PAPERS.

Sir,  
Lunacy Department, Inspector-General's Office, Gladesville, 23 July, 1894.  
In accordance with your B.C. Minute of the 18th instant, on a petition by Mr. \* \* \* \* \* for the release of his sister from the licensed house at Cook's River, I have the honor to report,—

- 1st. That \* \* \* \* \* is decidedly insane, and unfit to be at large, except under special care.
- 2nd. That she was placed at Cook's River on the request of Mr. \* \* \* \* \*, solicitor, one of her trustees under the will of her mother; the other trustee, \* \* \* \* \*, the patient's elder brother, consenting to and joining in this arrangement.
- 3rd. That some three years ago \* \* \* \* \*, the petitioner, moved the Supreme Court to deliver the patient over to his care, but that this application was refused, as I understand; first, on the ground that the trustees of \* \* \* \* \* under her mother's will, one of whom was her elder brother, were the proper guardians of the patient, and second, that \* \* \* \* \* was an unfit person to have charge of his sister.
- 4th. That I am unaware of anything which has happened since to invalidate the view the Supreme Court took of the matter, and if \* \* \* \* \* is aware of anything, it is open to him to make further application to the Court.
- 5th. That the allegations in the petition as to the patient being ill-treated are altogether without foundation; and
- 6th. That the Lunacy Statutes contain no provisions under which the Chief Secretary can order the discharge of a patient except in Section 91, where the Inspector-General, Official Visitors, or Medical Superintendent certify that the patient is detained without sufficient cause.

I have, &amp;c.

F. NORTON MANNING,  
Inspector-General.

The Principal Under Secretary, Sydney.

THE humble Petition of \* \* \* \* \*, of \* \* \* \* \*, dated this 3rd day of July, 1894.

To the Honorable Sir George Richard Dibbs, K.C.M.G., Premier of New South Wales, Macquarie-st., Sydney.

Your petitioner prays that under the circumstances related herewith you will accede to his request. Your petitioner desires the release of his sister, \* \* \* \* \*, from the Bayview Asylum, St. Peters, where she is now, and has been confined for the past two years. Your petitioner, understanding that any person having a relation confined in the above asylum, may obtain an order for his or her release by applying to you, Sir George Richard Dibbs, K.C.M.G., I presume to address you to that end. My reasons for applying for the release of my sister are as follows:—That up to the year 1883 when my father died, it was not by him considered necessary to confine her, and she was allowed perfect liberty, and retained such until 1884, the time of my mother's death; that after the death of my mother, at the instigation of my brother, \* \* \* \* \* she was taken to Bayview Asylum, and has remained there ever since; that both my father and mother specially recommended her to my care, as I was always her favourite brother; that her condition is and always was harmless, and she has never committed any rash or foolish action; that she has been confined for over ten years to secure the pecuniary ends of my brother, \* \* \* \* \*; that the only charge made against my sister at the asylum was that her conversation was lewd; that she is a christian woman of over fifty years of age, of high educational attainments; that any irregularity of speech (if any) she must have learned at asylum; that her memory is clear and retentive, remembering days and dates and facts of over forty years back; that \* \* \* \* \*, by whom \* \* \* \* \* was confined, has frequently stated to her friends who have tried for her release that she "shall never come out"; that my sister has informed me that she has been cruelly treated (the particulars of this treatment involve a serious charge and are of a delicate nature); that Dr. Vause and \* \* \* \* \* work together to defeat me in my endeavour to release my sister; she has a life income sufficient for her maintenance and support, which reverts to \* \* \* \* \* at her death; that the patient (my sister) is very much attached to both myself and wife, and has repeatedly begged of us to procure her release that she might live with us, and that we thoroughly understand her; that my brother, although standing in exactly the same position towards the patient as myself, is permitted to, and does at any time he likes, take her out of asylum and return her at his will, whilst my wife and I are only allowed to see her in the presence of attendants, who overhear our conversation; that Dr. Vause peruses any letters that my sister writes me; that he treats both my wife and self with uniform discourtesy; that I am a resident of over thirty-five years in Sydney, and both my wife and self of middle age; that I am in receipt of an annuity, and therefore unoccupied, and well able to look after my sister's welfare; that my sister desires me to inquire into her estate; that I cannot do so while she remains in asylum—kept there to prevent this inquiry among other things; that she is a paying patient; that it is my sister's urgent request, and my sole desire to alleviate her condition, that prompts me to forward this petition; she is perfectly sane and rational and has suffered long martyrdom, and would pray for speedy dissolution—death—rather than live longer in such an institution, and not like a prisoner looking to the expiry of a term, but without hope. I am in receipt of a letter from my sister, which I take the liberty of inclosing, and which to me shows no signs of insanity.

Your petitioner prayeth that you will grant the prayer of the petition, namely an order to Dr. Vause, proprietor of Bayview Asylum, for the release of my sister, \* \* \* \* \* to myself and wife.

And in duty bound your petitioner humbly prayeth.

18, Redmond-street, Leichhardt. \* \* \* \* \*

In view of the recent disgusting disclosures of the treatment of patients in Bayview Asylum, as shown especially in the case of \* \* \* \* \* I would beg to urge that you will kindly see fit to grant me an order for my sister's release. I have had a long conversation with Mr. Segar, of the Town Hall, Sydney, who furnished evidence *re* Asylums with others. His opinion is condemnatory towards the institution. He recommends this method of bringing the matter before you, with every hope of succeeding in obtaining the desired end.

The Hon. Sir George Richard Dibbs, K.C.M.G., Premier, N.S.W.

Refer to Dr. Manning.—C.W., 13/7/94.

18, Redmond-street, Leichhardt, 9 July, 1894.

REPORT of Mr. Segar, of Town Hall, city, *re* the condition, &c., of \* \* \* \* \* now an inmate of Bayview Asylum, St. Peters.

At my request Mr. Segar has made inquiry as to the condition of my sister, confined as above, and states—

- 1st. That \* \* \* \* \* is an extremely quiet and inoffensive person; that she occupies her time reading, sewing, and knitting, and causes attendants no trouble.
  - 2nd. That she is allowed the use of a kerosene lamp at night, and at all times behaves as a perfectly sane person.
  - 3rd. That upon rare occasions she shows ill-temper, asking "Why am I confined?" "What for?" "Who is keeping me here?" "What harm have I ever done?" "Why am I not allowed my freedom?" "I have money and can keep myself."
- Mr. Seager further states that from inquiry that he has made \* \* \* \* \* is sane, and ought not to be kept longer at Bayview Asylum. Mr. Seager authorises me to use his name.

\* \* \* \* \*

To accompany petition in this matter placed under the notice of the Hon. Sir George Richard Dibbs, K.C.M.G., Premier, N.S.W.

My dear brother \* \* \*

Cook's River, Wednesday morning, 20 June, 1894.

Many thanks for your prompt reply to my last missive or letter. I hope \* \* \* \* \* is better than last time she was good enough to come here. I judged from her manner that she meant to take me with her away from these regions of bliss. I thought it best to write off-hand quick, to advise you not to be troubled more than you can help with regard to me. I do not understand the life I live, and it is of no use trying to know the reason why my health is not good; and I am very sorry to know of your uneasiness. It arises in the first place from not taking necessary care of yourself; this I know for a fact.

fact with regard to food you take, &c. It is so fine you can almost sit without a fire. My dear brother, I had not forgotten you when I did not write for so long. I hope you rest well, as it unfits you for anything you have to do during the day if you do not rest well at night, with few exceptions; at least, this is my opinion. I do not pretend to write letters. Rather than you shall feel neglected I write as well as I am able. You must live with the hope, as I, that I shall not have to die here, both of you. I should like to be well enough to do something, if in the order of Providence I live to come away after so very many years. It will seem a miracle. I must thank \* \* \* for coming; also for all the trouble she is at for me. I hope they are well in England. Were it convenient, I should like someone to take me a trip thereabout. I thank you for praising the last I wrote; this is not as plain. I cannot help being variable. I am not at my work now. You must keep yourselves warm; take good care of yourselves till I come. Mind take a nice house for me. Your nice cottage is so near the burial-ground. Don't you think it is, dear Sep.? I dislike being so much expense to you. Dr. Vause might make arrangements with you to have me. I am not troublesome at best. Believe me, kind love, ever your affectionate sister \* \* \* \*

## J.

## CASE NO. 30—PAPERS.

To the Honorable G. Reid, Colonial Secretary,—

Dear Sir,

Saturday, 1 September, 1894.

I beg most earnestly to draw your kind attention and urgent necessity of amending a Bill to be passed in the Lunacy Act. Why should they be such cruel arbitration in detaining patients that are harmless and not mad in private and public asylums? Such is the case of my poor, dear, unfortunate, sister, Mrs. \* \* \*, who is incarcerated and detained by her unfeeling son, \* \* \*, and is deprived of seeing any friends, or to enjoy any liberty. She is as sane as you are. No lady could write or act as she does if she was mad—never has been mad—only got out of the way, as many others are, for their money, and falsely represented. She is always pleading and praying to get her out of that Cook's River house, and to be under my care and a maid. She has no society, no amusement; no friends can see her; she is deprived of every pleasure, only an outing now and then, which she pays out of her money the expense for herself and woman. I submitted to Sir G. Dibbs on the 24th July a petition signed by twenty-six persons, and an affidavit of the doctor (M'Donough), who visited her twice, and eight letters of our lawyer in England, and one of Mr. Geary to confirm the truth, and many other boundless proofs can be proved and declared by officials if needed. Dr. Manning's report is null and void in the eyes of many, as there are medical men as capable and as clever as he professes to be. Eminent doctors, both in Scotland and England have declared to me, "Your sister, Mrs. \* \* \*, is not insane." I have papers to the effect, and the Honorable Mr. Barton read one, and told me to take an affidavit on it. I can produce a letter also of an attendant, who was witness when my sister was entrapped, and gave her evidence with another attendant of the cruelties evinced to patients. I plead with all my heart, and demand my sister to be with me. She is my sister, and my duty is to see to her release and comfort. Why should she be incarcerated at the wish of her cruel son, who hardly ever sees her or ever lived with her either? She has been represented wrongfully just to plead their own cause. A more cruel case could not exist. Dear kind friends of mine who have called with me and endeavoured to see her and sympathise with her have all been grossly repulsed and insulted and refused admittance. Even my own cousin, \* \* \*, late of Her Majesty's service, was denied, and dealt with most ungentlemanly with Dr. Manning and Dr. Vause, so he says, by order of her son. So every person that knows, or has known my sister, declares she ought not to be in an asylum. It is very painful to my feelings, having come these 15,000 miles, and sacrificed my pretty home for my dear sister's release, at her request, as she says, to be incarcerated for no offence, deprived of all liberty. It is against the law of justice and humanity. Such tyranny ought to be abolished; and a subject of Her Majesty to be tortured, as I call it—slow murder. Such unjust cruelty, I trust, will be dealt with by an honorable and Christian gentleman, as I consider you are. Pray do your best, which will be to confer an everlasting obligation on

Yours, &c., \* \* \* \*

P.S.—Allow me to state my sister is the widow of a chaplain, and her son has no right to incarcerate his mother and keep her away from everybody. Ask any reasonable person if you are locked up in a room from morning to night, and only have the society of lunatics around you, what would be the result? My grandfather, an eminent medical man, \* \* \* \* \* was a member of three different asylums in London, and my father was also a most learned and clever army medical gentleman. I could produce in writing the different forms of insanity which they have treated, and their great skill upon it. As my dear sister writes and states: " \* \* \* dear, plead to get me out under your care. Any complaint from me, however true, would be considered here insanity.—Your sister, \* \* \* "

This letter might be referred for the consideration of the Honorable the Colonial Secretary.—F.K., 8/9/94. Approved.—G.H.R., 11/9/94. The Principal Under Secretary.—F.K., 12/9/94. Seen, 10/9/94.

Sir,

Lunacy Department, Inspector General's Office, Gladsville, 22 August, 1894.

I have little to add to my report of the 2nd December, 1892, as to this case. Mrs. \* \* \* is decidedly insane and requires special care. Mrs. \* \* \* sons consider that Miss \* \* \* is a most unfit person to be entrusted with the care of her sister, and having frequently seen Miss \* \* \* , who is mentally peculiar herself, I quite agree with them. Miss \* \* \* in October, 1892, brought the matter before the Supreme Court, and Mr. Justice Owen decided that Mrs. \* \* \* must remain at Cook's River, as her sons wished and refused Miss \* \* \* application for her discharge. I am unaware of any change of circumstance which are likely to alter the decision of the Court, but it is quite open to Miss \* \* \* to bring the matter before the Court again.

Miss \* \* \* has made all sorts of insinuations as to the motives of the sons of Mrs. \* \* \* for keeping their mother in confinement. I can only say that Mr. \* \* \* , the eldest son who has consulted with me on the subject, has always seemed to me much interested in his mother's welfare, does not in any way touch a penny of her income, and has repeatedly expressed a wish that every penny of this should be expended for the benefit of the patient. Miss \* \* \* statements as to her sister being "shamefully ill-treated," given food "bad and unfit for consumption," and "subjected to cruel and rude treatment at the hands of Dr. Vause, and to the greatest tyranny and persecution," are gross and disgraceful misrepresentations. It is true that the window of Mrs. \* \* \* bed-room is barred and fastened, but this has been brought about by Miss \* \* \* attempted forcible abduction of the patient, with regard to which a man who was engaged by Miss \* \* \* to act as her agent in the matter, is now serving a sentence of imprisonment in Darlinghurst Gaol. The patient is allowed to go freely about the Institution, and goes to Sydney about twice a month with a nurse to do shopping, and spend the money especially allowed for her use, and until Miss \* \* \* by her insinuations and charges, and the manner in which she talks made her sister somewhat discontented, no one could have been more placid and happy, or on better terms with her surroundings and everyone about her. I am inclined to think that the real basis of the action and agitation in this matter, which has now been continued for upwards of two years, lies in the fact that Mrs. \* \* \* possesses an income of some £300 a year, which the sister Miss \* \* \* , who is in somewhat needy circumstances, is desirous of sharing. I may in conclusion be allowed to point out that the Lunacy Act contains no provisions under which the Chief Secretary can order the discharge of an insane patient except the Inspector General, official visitors, or Superintendent certify that the patient is detained without sufficient cause, and that the official visitors and Superintendent are at one with me in considering Mrs. \* \* \* to be insane and to require special care.

I have, &c.,

F. NORTON MANNING,  
Inspector General.

The Principal Under Secretary, Sydney.

Under this report it appears undesirable to release Mrs. \* \* \* to the care of her sister, of which she may, perhaps, be informed accordingly.—C.W., 24/8/94.

Dear

Dear Sir,

\* \* \* \* \* 20 August, 1894.

Having received no reply to my letter and petition of the 24th July, naturally I feel anxious, and should esteem it a favour if you would let me know the result of your perusal of the petition forwarded to you. If you could only realise how truly anxious I am to have my dear sister out of that inquisition of Bayview House, you would help me I am sure. I have visited her, 17th instant, and she begged me so hard for her liberty, also to interview you on her behalf. I would take great care of her with a maid, as I stated to both Dr. Cox and Sir A. Roberts; besides, my sister is as harmless as a dove, and ought never to be under restraint; her sons ought to be ashamed of themselves. They are walking in the steps of their father, a cruel vindictive man he was; and evidently her son, \* \* \* to keep her in, is in league with Dr. Vause and Dr. Manning. \* \* \* wrote to his uncle, if his mother came to Australia, he would never come in contact with her. A short time after her landing at Melbourne, he entrapped her after a three months of long voyage. A more cruel case could not exist, as the captain of the ship "Norfolk" told me when he heard of it, and said "Oh, what a cruel son." My cousin, \* \* \* came from New Zealand, also to help me, and was refused seeing her, and grossly insulted by Dr. Vause, and all my friends treated the same; as he has friends in the Press, he is going to make the matter public, unless she is released. \* \* \* is not insane, but deprived of seeing friends, and even her own sister only once a month, when the rules are twice a week, her window barred against light and sun. If that is what you call humanity, she is not the only one suffering, and all who know her well, and have left Dr. Vause's service, state she is only suffering from simple persecution—the doctors state the same—and ought not to be there or in restraint. As a sister's love, and having come these 15,000 miles, and sacrificed my pretty home for her release, surely, could you shut the ear to my prayer? I am sorry to say I have been represented quite a different person to what I am. I possess letters of high esteem, and the few friends I have here will speak for me if required; besides, I have lady friends ready to be with me and my sister. Unfortunately she left England, thinking her sons would have given her a welcome. She always states she wished she had never left. The false, false lies they have stated; pray do not believe it. The letters of my lawyer will convince you of the truth, and many others. She wishes to be with me and not with her sons, after their conduct; in fact they are not fit to have her. Ever since I have visited my sister for these two years, I have always found her rational, amusing, and sensible—no wandering. I shall end in hopes that you will listen to my demand as a gentleman, and shall confer it a great act of kindness on your part.

To Sir George Dibbs. Yours, &c., \* \* \* \*

Sir,

\* \* \* \* \* 24 July, 1894.

My sister, \* \* \* is confined at the licensed house for the insane, Bayview House, Cook's River Road, Tempe.

She is confined against her own will and inclination by her own son, \* \* \* to suit his own particular purposes. My sister is not insane, but quite capable of being taken care of by her friends, as the attached documents will show. Further, my sister, who pays £3 3s. a week for the room, which she furnished at her own expense, is shamefully ill-treated. She is kept in a room without any fire, and the only window is barred and shuttered with the view of excluding light and preventing my sister from communicating with any friends. The food is bad and unfit for consumption. In addition to this, she is subjected to rude and cruel treatment at the hands of Dr. Vause, the Medical Superintendent.

In view of the disclosures in the case of \* \* \* disgraceful and brutal treatment, I ask you to cause Dr. Anderson Stuart, the Government Medical Adviser, to investigate the case of my sister, whom I know is subjected to the greatest tyranny and persecution.

Yours, &c., \* \* \* \*

The Hon. Sir George Dibbs, K.C.M.G., Colonial Secretary.

## PETITION.

Rev. J. G. SOUTHEY, Incumbent, St. Simon and St. Jude's, Sydney; J. Lawrence, M. Baker, M. Nulman, J. J. Wood, L. Youngson, I. Youngson, H. L. Falk, M. Hunt, E. J. Falk, M. Perry, E. H. Falk, L. Falk, Sadie Bear, Katie Bear, L. Robinson, E. Robinson, T. T. Taylor, C. Taylor, C. R. Spicerwood, E. N. Kodman, E. Kenny, W. Nowland, Charlie Bear, E. Bear, R. Taylor, E. Gardiner, A. Gardiner, G. Spicerwood, W. C. Hall, L. Watson, B. C. Swinburne, B. T. Phillips, H. Stephens, W. Alexander, M. Watson, E. Lamont.

To \* \* \*

9, Brisbane-street, 20 July, 1894.

In reference to your inquiries re your sister, I can only advise you to take steps for her removal, knowing full well the brutal manner in which the patients are treated at Bayview House. The case of \* \* \* in which they were caught red-handed, is only one of the many to which the unfortunate patients are subjected. The Colonial Secretary, Sir George Dibbs, gave an order for his release, and I have no doubt, when you represent the facts in the case of your sister, the same course will be taken. The Bayview Asylum has of late obtained so much notoriety that it is wonderful the Government have not seen fit to hold an enquiry.

Yours, &c.,

H. GEAREY.

In the Supreme Court of New South Wales, }  
in Lunacy.

In the matter of the Application of \* \* \* for an Order enabling her to remove one \* \* \* a lunatic, out of this Colony, to wit, to England: and in the matter of the Act 42 Vic. No. 7.

On this 18th day of October, in the year 1892, J. M'Donogh, of Sydney, doctor of Medicine, being duly sworn, maketh oath and saith as follows:—

1. I am a legally qualified medical practitioner, and in such capacity have visited the above-named \* \* \* at the Bayview House Asylum at Cook's River, near Sydney, aforesaid.
2. From examinations, I can state that the said \* \* \* is by no means dangerous, on the contrary is exceedingly gentle and harmless, and she has, I am informed, and believe she has, been allowed out in her sister's custody.
3. I consider that removal out of the said asylum, and in fact out of this Colony, would be of great benefit to the said \* \* \*, and her state of mind and health generally would be much improved by such removal.

Sworn by the deponent, on the day and first year before written, at Sydney, before me,—

J. MURPHY,

A Commissioner of Affidavits.

Dear \* \* \*

150, Leadenhall-street, London, E.C.; 30 September, 1890.

I enclose a letter which arrived this morning from Australia. I duly received your letter and return the enclosures. I have all along been of the opinion that \* \* \* ought not to be kept under restraint; but, in the face of her son opposing her being released, I do not see what can be done for her, unless you or some one personally go over to Australia and enquire into the whole matter.

Yours, &c.,

H. RAMSDEN.

Dear \* \* \*

150, Leadenhall-street, London, E.C., 28 May, 1892.

Enclosed I have the pleasure of sending you, as requested, a letter to the commander of the "Orient."

With all good wishes for the voyage.

Yours, &c.,

A. H. RAMSDEN.

Dear Sir,

150, Leadenhall-street, London, E.C., 28 May, 1892.

We take the liberty of addressing this letter to you to introduce the bearer, Miss \* \* \* who is a passenger to Sydney by your steamer on 3rd proximo.

We have known \* \* \* whose father was the late \* \* \* for the last twenty-five years, and can say that she is thoroughly trustworthy and reliable, and any attention you can show her will be duly appreciated by

Yours, &c.,

The Commander, R.M.S. "Orient," Royal Albert Dock, London E.

RAMSDEN &amp; Co.

My

My dear \* \* \*

150, Leadenhall-street, London, E.C., 19 September, 1892.

I have to acknowledge receipt of your letters, dated 30th July, 7th of August, and 14th of August.

I have forwarded on the three enclosures contained in your first letter.

I am glad to hear of the interviews you have had with \* \* \* and others in relation to her. Give her my kindest regards, and say that I shall hope soon to have the pleasure of seeing her in England. It is too bad that she should be detained where she is, and from my knowledge of her for many years I have no hesitation in saying that she ought not to have been placed under restraint.

Wishing you every success.

Miss \* \* \* , Post Office, Sydney, New South Wales.

Yours &amp;c.,

H. RAMSDEN.

Dear \* \* \*

150, Leadenhall-street, London, E.C., 3 October, 1892.

I am to-day in receipt of your letter of 28th August, and note that you are still endeavouring to procure the release of \* \* \* , in which I hope you will be successful. From my knowledge of her I am convinced she does not require to be under restraint, but only requires kind treatment, and on her return to England I shall be only too pleased to look after her happiness and comfort.

I note that you have seen her son, but I do not think he requires much consideration—his behaviour to his mother has certainly not been what a parent has a right to expect.

The summer here appears now to have passed and autumnal weather has set in.

Miss \* \* \* Post Office, Sydney, New South Wales.

Yours &amp;c.,

H. RAMSDEN.

Dear \* \* \*

150, Leadenhall-street, London, E.C., 19 December, 1892.

Though this will not reach you by Christmas, yet I write to convey my good wishes to you. The mail has this morning brought your letter and enclosures of 11th November. I am glad you have given me in the letter some particulars of your exertions and the proceedings now in progress, and can only hope that they will ultimately result in success. The behaviour of \* \* \* son is past understanding.

I have forwarded on your letter to \* \* \* .

With kind regards,

Miss \* \* \* Post Office, Sydney, New South Wales.

Yours &amp;c.,

H. RAMSDEN.

Dear \* \* \*

150, Leadenhall-street, London, E.C., 27 February, 1893.

I am to-day in receipt of your letter of 19th January and enclosures.

I have forwarded on to the North British and Mercantile the order as to payment of the annuity.

Your letter to the Under Secretary for War has also been duly posted.

It would not be practicable for me to obtain the return of income tax as your personal signature would be required.

If and so soon as I receive the £15 from the war office, I will, as directed, send £10 to yourself and £5 to Julia.

I regret to learn that your efforts towards releasing \* \* \* have not yet been accompanied with success. I am sure you are doing all you can for her, and hope that you may still succeed.

Yours &amp;c.,

H. RAMSDEN,

Miss \* \* \* , Sydney, New South Wales.

Dear \* \* \*

150, Leadenhall-street, London, E.C., 5 June, 1893.

I was much interested at receiving some little time back a letter from you, and have, from letters from your sister \* \* \* , been kept advised of the steps being taken from time to time in your behalf. I can only say that it is a great shame that you have been detained so long in Australia, and I look forward to seeing you here very speedily, when I shall hope to do what I can to promote your interests, and to render your life happy after your enforced sojourn in Australia.

\* \* \* , care of \* \* \* , Post Office, Sydney, New South Wales.

Yours, &amp;c.,

H. RAMSDEN.

Sir,

8 February, 1893.

I have waited long and anxiously for the report you promised at an interview in October, 1892, regarding my sister, \* \* \* , who is kept in Bayview House against her wish.

Will you kindly let me know what has transpired regarding her unjust case.

Of one thing I am assured, that if my sister had not money in her own rights she would be free to-day as any of Her Majesty's subjects.

I appealed to you (Sir George Dibbs) for her release, as I was told you had the reins of justice, and would see justice was done.

I explained to you that her son placed her there sorely against her wish and will, and he has no right to deprive his mother of her liberty, as she is quite harmless, and not mad.

She writes of her incarceration, and begging of me to leave England and come out to her and get her released.

Trusting you will not turn a deaf ear to my earnest appeal on her behalf, who is detained most unjustly.

Yours, &amp;c.,

\* \* \* \* \*

To Sir George Dibbs, Colonial Secretary, Sydney.

P.S.—Quotations of letters, written by an old-standing friend of the family, and highly-connected in law:—

Dear \* \* \*

3 October, 1892.

I hope you will endeavour to procure the release of \* \* \* . From my knowledge of her, I am convinced she does not require to be under restraint, and on her return to England I shall only be too pleased to look after her happiness and comfort. I note that you have seen her son, but I do not consider he requires much consideration. His behaviour to his mother has certainly not been what a parent has a right to expect.

Yours, &amp;c.,

H. RAMSDEN, M.A., F.L.S.

My dear \* \* \*

19 September, 1892.

I am glad to hear of the interviews you have had with \* \* \* and others in relation to her. Give her my kindest regards, and say that I shall hope soon to have the pleasure of seeing her. It is too bad that she should be detained where she is, and from my knowledge of her for many years, I have no hesitation in saying that she ought not to have been placed under restraint.

Wishing you every success.

Yours, &amp;c.,

H. RAMSDEN.

Dear Miss \* \* \*

19 December, 1892.

I am glad you have given me in the letter some particulars of your exertions and the proceedings, and can only hope that they will result in success.

The behaviour of \* \* \* son is past understanding.

Yours, &amp;c.,

H. RAMSDEN.



No history of convulsions.

Previous history as to cause reveals exposure to intense heat in India twenty-six years ago. Has been continuously insane for twenty-six years.

Family history.—Doubtful.

No history of restraint.

December 29—Rather tired with long journey; talks quickly about a dozen things without waiting for a reply to any. December 30—Much the same; general health good; diet, full. Allowances: Wine, ale, milk, eggs, &c.—in fact, anything she asks for in reason. 1885.—January 2—No change. January 16—Very fidgety about her room, &c.; no medicine required beyond occasional doses of castor-oil. March 20—Continuing much the same. Treatment: Aperient medicine from time to time. Allowances: Milk, beef-tea, wine, eggs. May 18—No change. June 25—No change. August 24—No change. November 3—No change. 1886.—February 1—No change. May 1—No change. August 1—Much the same. November 1—No change. December 21—General health good; no improvement mentally; takes regular carriage exercise under the care of an experienced nurse. 1887.—March 1—No change. June 1—Continues the same. August 25—No change. November 20—No change. 1888.—February 20—Continues to take carriage exercise, also long walks and excursions in the neighbourhood; no improvement mentally. May 1—No change. August 1—No change. November 1—No change. 1889.—February 2—Still very fidgety and full of delusions; general health good; goes out shopping, &c., at short intervals. May 1—No change. August 1—No change. October 24—No change. 1890.—January 1—No change. April 1—The same. July 10—The same. September 9—No improvement mentally. 1891.—June 21—No mental improvement. August 20—No change. December 22—No change; very excitable. 1892.—June 10—There has been but little change since last entry. The following remarks may be said to embrace the leading features of the case:—Delusion of persecution from Roman Catholics, also from Ritualistic party; imagines those about her are not the people they profess to be, but other individuals whom she has known previously, and whom she imagines are working evil against her; the insane temperament is strongly developed; her acts are invariably irregular, capricious, impulsive, and aim at the satisfaction of no beneficial desires; strong inclination to spend money foolishly; very insulting and abusive towards people whom she imagines are personating people whom she accuses of working evil towards her; she is not quite sure that Miss \* \* \* is her sister, says she has altered very much, and wonders if it could be anyone personating her; similar doubts about her son, Mr. \* \* \*; will ask a waitress at refreshment rooms if they have ever been a nurse in an asylum, simply because they may happen to wear a white apron with white bands over shoulders; tendency to partake freely of stimulants; when permitted to purchase articles of clothing for herself generally occasions great difficulty to nurse in charge to prevent foolish and unreasonable expenditure; never quite satisfied with amount of money placed at her disposal, although it represents the full amount of her pension after deducting maintenance fees; destroys anything she may possess against which she appears to take a dislike; frequently destroys large quantities of clothing, bed linen, books, &c.; imagines people are paying special attention to her with a view to marriage, when such is not the case; full of delusions on the subject of conspiracy against her; very abusive and insulting to people against whom she takes a dislike, particularly abominates the Irish, whom she calls low, dirty Irish; frequently asserts that people bring bad smells and bad air with them, and does not hesitate to tell them so; there is undoubted hallucination of smell; she frequently orders a nurse out of her room, saying she brings bad odors along with her; will not allow other patients to pass near the door of her room for the same reason; destroys linen and clothing in various ingenious ways, and when spoken to on the subject excuses herself by saying they did not "smell sweet," but, as a rule, she accuses other people of doing away with the things she has destroyed; she requires careful watching to prevent her from putting all kinds of articles in the closet—towels, biscuits, knives and forks, spectacles, &c.; if she can get a jug of water she will pour it over the closet seat, or in front of her room door, with the object of removing objectionable smells; says that Dr. Vause has never been away, but that he disguised himself as Dr. Hetherington; also, that Dr. Vause has a great many other names, but that she always knows him even though he can make himself little, thin, dark, fair, &c., and that his name is not Vause at all, and that it is all done for "love of her"; very mischievous, not safe to be left alone; on one occasion picked up a letter addressed to a servant and tore it up into small pieces before it had been opened. 1892.—September 5—No change. December—No change; no medicine required. 1893.—March 3—No change. June 6—No change. September 9—No change. December 7—The same. 1894.—January 31—Mentally and physically much the same; treatment, no medicine required; allowances, milk, beef-tea, eggs, biscuit. March 9—No change. April 21—The same. June 6—No change mentally; suffering just now from slight nasal catarrh; refuses to take medicine. June 18—General health good; no change mentally. July 13—The same; eldest son, Mr. \* \* \*, called twice during past week to see his mother. September 2—The same mentally and physically. October 13—Much the same mentally and physically. December 10—No change; general health good. 1895.—January 3—Still full of delusions and strange fancies; very exacting with her nurse.

## A 2.

### Lunacy Act, 1878—Fourth Schedule.

I, THE undersigned, hereby request you to receive \* \* \*, an insane person, into the Licensed House, Cook's River, of which you are the Superintendent. Subjoined is a statement respecting the said \* \* \*

Name of person signing the request,—\* \* \*, Importer, Melbourne.

Degree of relationship (if any) or other circumstances of connection of the person signing the request with the patient.—Son.

Dated this 23rd day of December, 1884.

\* \* \* \*

To Dr. Vause, Superintendent of the Licensed House, Cook's River, Sydney, N.S.W.  
Witness to Signature,—J. I. HARCOURT, J.P.

### Lunacy Act, 1878—Fifth Schedule.

#### Statement.

Name in full?—\* \* \*

Age?—57 years.

Married, single, or widowed?—Widow.

Number of children?—Three.

Age of youngest child?—Thirty-three.

Previous occupation?—Gentlewoman.

Native place?—England.

Last residence?—\* \* \* \*

Religious persuasion?—Church of England.

Supposed cause of insanity?—Not known.

How long has the attack lasted?—About twenty-six years.

Has she been insane before?—Yes.

State the number of attacks?—Continuous.

Age (if known) at first attack?—See above.

Has she any insane relations?—None.

Has she ever been an inmate of any institution for the insane?—Yes.

Is she subject to fits?—No.

Is she suicidal?—No.

Is she dangerous to others?—No.

Name and address of nearest relations or friends?—\* \* \* \*

Special circumstances (if any) preventing the patient being examined before admission separately by two medical practitioners?—Not any.

\* \* \* \*

Lunacy

## Lunacy Act, 1878—Second Schedule.

Medical certificate to accompany order or request for reception into an Hospital for the Insane or Licensed House.

I, THE undersigned, being a medical practitioner, hereby certify that I, on the 28th day of December, 1884, at Bayview House, Tempe, separately from any other medical practitioner, personally examined Case No. 30, of \* \* \*, and that the said \* \* \* is insane, and a proper person to be taken charge of and detained under care and treatment; and that I have formed this opinion upon the following grounds, viz:—

1. Facts indicating insanity observed by myself:—She is under delusions of persecution, particularly by the Ritualists, whom she blames for all her troubles, which statement is without foundation; she makes rambling statements; is emotional and very nervous.

2. Other facts (if any) indicating insanity communicated to me by others:—Her son states that she takes violent likes and dislikes, and is apt to destroy or make away with her apparel, and abuses her attendants if annoyed.

V. MARANO, M.D.,

261, Elizabeth-street, Sydney.

Dated this 28th day of December, 1884.

## Lunacy Act, 1878—Second Schedule.

Medical certificate to accompany order or request for reception into an Hospital for the Insane or Licensed House.

I, THE undersigned, being a medical practitioner, hereby certify that I, on the 29th day of December, 1884, at Bayview House, separately from any other medical practitioner, personally examined case Case No. 30, of \* \* \*, and that the said \* \* \* is insane, and a proper person to be taken charge of and detained under care and treatment; and that I have formed this opinion upon the following grounds, viz:—

1. Facts indicating insanity observed by myself:—Delusions of persecution on board ship when travelling to Australia; delusions of religious persecution in \* \* \*; whilst at \* \* \* had a delusion that one of the patients came there specially to protect her from persecution—in fact she believes he is coming here on the same errand; is very rambling and anxious to impress one with the truth of her statements.

2. Other facts (if any) indicating insanity communicated to me by others:—Her son says she takes violent likes and dislikes to persons and things. If a dress does not please her she destroys it.

REUIER EMERICH ROTH, M.R.C.S., Eng.,

42, College-street, Sydney.

Dated this 29th day of December, 1884.

## J1

## OFFICIAL CORRESPONDENCE WITH REGARD TO GOVERNMENT PATIENTS MAINTAINED AT COOK'S RIVER ASYLUM.

Sir,

Cook's River Road, 10 August, 1874.

You having approved of the recommendation of Dr. Manning, the Inspector of the Insane, that certain additional insane patients should be placed in my charge, I beg now to submit for your ratification, on behalf of the Government, of the terms on which such patients are to be received by me, so that the letter and your concurrence therein shall form the agreement between the Government and myself.

First.—That I shall at once cause to be prepared plans and specifications of the buildings necessary for the accommodation of such patients, which are to be submitted to Dr. Manning for his approval, and that when such plans and specifications are so approved of, I shall, with all reasonable despatch, proceed to erect such buildings in accordance therewith.

Second.—That, as soon as such buildings are so erected, the Government, or the Inspector of the Insane for the time being, will at once place in my charge sixty-eight (68) additional female patients, making, with those now in my charge, the number up to one hundred (100).

Third.—That each of such patients, and all patients placed in my charge under this agreement, shall be provided by the Government, or the said Inspector, with two suits of clothing, and that I shall provide the said patients during such time as they may be in my charge with all such other clothing as may be necessary or proper.

Fourth.—That I shall provide each such patient with proper and sufficient food, drink, meat, medical and other attendance, during the time she may remain in my charge.

Fifth.—That when and so often as any of the patients so placed with me shall die or be removed, the Government, or Inspector of Insane, shall, within a reasonable time thereafter, place another female patient in my charge in the stead of the one so dying or being removed, so that I shall at all times have one hundred patients (100) under my charge.

Sixth.—That the Government shall pay me on the first day of each month during the term of this agreement the sum of four hundred and eighty-seven pounds ten shillings (£487 10s.), being at the rate of one pound two shillings and six pence (£1 2s. 6d.) per week for each such one hundred (100) patients.

Seventh.—That the agreement shall remain in force for four (4) years from the first day of January next, and that the benefits and duties thereof shall apply to and devolve upon my executors, or administrators, or other personal representatives.

I have, &c.,

G. A. TUCKER.

Sir,

Colonial Secretary's Office, Sydney, 17 August, 1874.

In acknowledging the receipt of your blank cover report of the 12th instant, respecting the terms of agreement between the Government and Mr. G. A. Tucker, Superintendent of the Licensed House for Lunatics, Cook's River Road, with respect to the intended removal of sixty-eight (68) additional female patients to his establishment from the Hospital for the Insane at Gladsville, I am directed to inform you that the terms proposed by Mr. Tucker have been approved by the Colonial Secretary, and that Mr. Tucker has been apprised accordingly.

I have, &c.,

WM. GOODMAN,

For the Under Secretary.

The Medical Superintendent of the Hospital for Insane, Gladsville.

Sir,

Bayview House, Tempe, 5 December, 1878.

Experience has proved that the office of superintendent of a lunatic asylum is of that onerous and depressing effect that every person occupying the same should periodically be removed from the scene of his labours.

I have now for a period of nineteen years had continuous superintendence of this and other asylums, and I feel that the time has arrived when I should, in justice to myself, take a trip to Europe. Such a step naturally involves, in the first instance, provision for the care of this asylum in my absence, and I do myself the honor to request that you will be pleased to grant me an extension of my contract for three years from the date of its expiration. Such an extension would put the Government contract on a permanent basis for five years, and would enable me to pay the large salary and to engage for a length of time a medical man fully qualified to undertake the charge of the institution without loss to myself or disadvantage to the patients under my care.

I have, &c.,

G. A. TUCKER.

The Hon. the Colonial Secretary.

Ask Dr. Manning to favour me with his opinion.—M.F., 5/12/78. Very urgent. The Inspector of the Insane, B.C. 5/12/78.

Mr.

Mr. TUCKER's contract was originally for four years, and on his representation that he had been put to a greater expense than he anticipated in the construction of buildings, the extension of the contract for another year was granted.

The extended term ends on the 31st December, 1879, so that the contract has now *one* year to run, not *two*, as Mr. Tucker appears to imagine in calculating that an extension of three years would make the contract permanent for five years. I cannot advise the extension of the contract for three years in accordance with Mr. Tucker's request. It is still uncertain whether the Lunacy Bill will become law, and it is inadvisable to enter into such a lengthened engagement as three years in the present condition of the Lunacy Statutes, especially considering the lax way in which the existing arrangement is worded. Neither in the present Lunacy Statutes nor in the contract is provision made for keeping the necessary records concerning the patients, for the furnishing of returns when required, or for the due inspection of the patients.

The Superintendent, when the Board of Visitors has asked for records and returns, has demurred to showing or furnishing them, and it has only been by considerable tact and forbearance on the part of the President that an open rupture between the Board and Mr. Tucker has been prevented. I am of opinion that in any future contract, in addition to provision for proper records, returns, &c., a dietary scale should be laid down, and that there should be some more definite arrangements as to clothing. At present the superintendent is to supply "sufficient food" and "such clothing as may be necessary or proper." On both points the wording is indefinite, and though I believe thus far the patients have been supplied with abundant and good food, I am not prepared to give such unqualified approval as to their clothing, which, in my opinion, is not so good as that supplied to the female patients at Gladesville and Parramatta.

I intend to report specially on this subject in my annual report, though I do not see any way, under the present contract, of effecting an improvement. I am of opinion also that the cost under the present contract, which I may state parenthetically was entered into in a hurry and under great pressure for space in the public asylums, is too large. I know from experience that lunatic patients can be maintained (and are indeed maintained at Gladesville and Parramatta) as well or better, in all essentials as to food, clothing, medical and general attendance, at 12s. per week; this leaves to Mr. Tucker 10s. 6d. per week for each patient, or about £3,200 a year for rent, representing 8 per cent. on £40,000. It cannot be assumed that the buildings for the Government patients at Mr. Tucker's have cost anything like this sum. A contract for better buildings in every respect, a large part being of brick, has recently been taken at Parramatta by the Colonial Architect for 350 patients for £30,000, or less than £90 per patient. The rent per patient for these, at 8 per cent., will be about £7 per year, whereas the rent at Mr. Tucker's is £28 a year each. I consider that no time should be lost by the Government in putting up buildings in which to keep the whole of the Government patients, and that if it is found necessary, owing to the inability of the Works Department to provide the accommodation necessary, as the matter is a very large one, and involves the expenditure of £7,000 a year, tenders for the maintenance of the patients should be called for in the usual course. I have had repeated inquiries from persons wishing to receive patients, and see no reason why Mr. Tucker should be favoured with this profitable monopoly.

I can see no objection to Mr. Tucker leaving the Colony for a year, provided arrangements are made for carrying on his establishment, and there can, I think, be no very great objection to lengthening the term of his contract for one year, so that it may terminate on 31st December, 1880, instead of 1879. This will fully meet all possible claims for consideration which Mr. Tucker can have, and is six months beyond what he asked for in his letter of April, 1876. In the present position of matters it will take a considerable time for the Government to prepare the accommodation which will be required for the 125 patients now under Mr. Tucker's care. I would advise that if the time is lengthened the existing arrangements of giving six months' notice should be adhered to.

As the Board of Visitors to Lunatic Asylums have been charged with the inspection of the Government patients at Cook's River Asylum during the larger part of Mr. Tucker's contract, it may be advisable that Mr. Tucker's request and my report be submitted to them for further consideration.

The Principal Under Secretary.

F.N.M., 9/12/78.

Sir,

Referring to your communication of yesterday, No. 78-10,415, I have the honor to state, that instead of negotiating for an entirely new agreement, involving an expenditure of time which, in the state of my health, is valuable, I prefer accepting the alternative offer of having my present agreement extended for three months.

I have, &c.,  
G. A. TUCKER.

To the Under Secretary, Colonial Secretary Department.

Approved.—M.F., 12/12/78.

Sir,

I have the honor to request that my contract with the Government in connection with the above institution, and which expires on the 1st January, 1881, may be extended for the further term of three years from that date, for the following reasons:—

The mental anxiety and close confinement (without relaxation) of fourteen years superintendence has so seriously affected my health that it is imperative I should at once recruit the same. To enable me to do this I am obliged to place in charge of my establishment a thoroughly qualified physician with a guaranteed term of engagement extending considerably over the period of the contract above referred to. In order that I may complete my arrangements, as early as possible, your immediate attention to this matter is respectfully solicited.

I have, &c.,  
G. A. TUCKER.

To the Honorable the Colonial Secretary, Sydney.

Cabinet.—H.P., 3/3/79.

The Government have considered this application, and in view of the satisfactory manner in which the Bayview House Asylum has been conducted for a number of years, and of the necessity for change and rest, which is admitted in the case of any gentleman who has the charge of such an Institution for a long period, they are disposed, in some measure, to meet Dr. Tucker's wishes to enable Dr. Tucker to make such arrangements as can be accepted as satisfactory for the efficient management of the Asylum during his absence. The Government are willing to extend the existing contract for a further term of two years.

Inform.—H.P.

Sir,

My agreement with the Government for the care of insane patients terminates with this year, and I do myself the honor of expressing my willingness to continue their care for a further period of three years, from the 1st January, 1883. A contract such as the one under consideration cannot be advantageously conducted to either party on an annual basis, but a certain stability would be given to it by the acceptance of my offer.

I have, &c.,  
G. A. TUCKER.

To the Honorable the Colonial Secretary.

This should be dealt with speedily.—JNO. R.  
B.C., 3/2/82.

Referred for report of the Inspector-General of Insane.—C.W.,

Lunacy Department, Inspector General's Office, Gladesville, 8 February, 1882.

The present agreement with Dr. Tucker terminates on 31st December, 1882, and has, therefore, nearly eleven months to run. Six months' notice of renewal or termination of contract is necessary.

The Government is not in a position to take away these patients on the termination of the present agreement as all the public asylums are full, but I cannot advise the renewal of the agreement for so long a period as three years, from 1st January, 1883, as requested by Dr. Tucker, for the following reasons:—

1. Dr. Tucker's license, which expires on 1st May, of this year, can, under the provisions of the Lunacy Act, only be renewed for a period of three years, or to 1st May, 1885, whilst the agreement if extended for three years would only terminate on 31st December, 1885, or nine months beyond the period of the license, so that the Government would be pledged to renew the license.

2. The patients in the public asylums now cost 11s. 6d. a week each, which includes every expense, whilst Dr. Tucker receives 22s. 6d. a week, or 11s. beyond the cost in public asylums, making a charge of £28 12s. per patient per annum for rent. The cost for rent in the public asylums counted at 5 per cent. on the cost of buildings does not average £10 per patient, so that it is clearly to the advantage of the Government to terminate this farming out arrangement at as early a date as possible.
3. From the very numerous inquiries which have been made, I am convinced that if the Government should decide to continue this system of farming out patients for a period of three years, there are persons ready to tender, to prepare buildings, and receive patients at a less cost than that paid to Dr. Tucker, who is at present in the enjoyment of a profitable monopoly.
4. The contract time for the completion of the Asylum at Callan Park is September, 1883, and the work will, in all probability, be completed before the close of 1884. In addition it is not improbable that the boarding out of children may empty the orphan schools, and render some of the buildings available, so that it is clearly unadvisable to extend the agreement with Dr. Tucker to 1885.
5. Dr. Tucker has no claim on the Government, since the agreement originally made for four years will, by 31st December, 1882, have existed for exactly double that period, to his great advantage.

Under all the circumstances, I would advise that the agreement be renewed for not more than two years, from 31st December, 1882, and that Dr. Tucker should receive six months' notice if the Government wish to terminate the contract at the end of this extended term.

F. NORTON MANNING.

Submitted, 13/2/82.

Having ascertained that Dr. Tucker is unwilling to continue his arrangements with the Government unless for a fixed period of three years—instead of two years—as recommended by Dr. Manning, I thought it desirable before any further action be taken to confer personally with Dr. Manning.

Dr. Manning thinks that, under the circumstances, and on consideration that the arrangements between Dr. Tucker and the Government shall be finally closed, and the patients removed at the end of three years, asked by Dr. Tucker, that term of extension may well be approved.

Inform.—Jno. R., 25/2/82.

I beg to recommend that the license may be renewed for a period of one year from May 1st next. This is the first time that an application for renewal of license under the Lunacy Act has come before me (the first renewal in this case having been made before my appointment as Inspector), and I desire to express an opinion that it is not desirable, unless under very exceptional circumstances, that licenses for the reception of insane patients should be granted for more than one year, and that in all cases where a longer term is included in the license, the management should be reported of as thoroughly satisfactory and the buildings as thoroughly suitable.

The general management of Dr. Tucker's establishment is satisfactory, and leaves little to be desired, and the buildings for Government patients are abreast of all requirements; but I do not consider that the accommodation for private patients is altogether what is desirable, and if the license were now sought for these, for the first time I should think it necessary to report against it, unless certain alterations were effected.

Dr. Tucker has shown a commendable desire to make improvements, but such a course might not be followed by any successor of his, and by granting a license for three years the Government mutually surrender control over the institution for that time, and, in the event of it falling into other hands, all improvements may be stayed.

There is no fee for the license, and the annual renewal, therefore, involves no hardship to the proprietor, and a minimum amount of trouble to either the proprietor or the Government.

25th April, 1882.

F.N.M.

Submitted, 1/5/82.

I regret that Dr. Manning is away from town, and that before his going he did not call on me on this matter. As it is, I cannot but look upon the case of Dr. Tucker as an exceptional case. It is one in which the Government have agreed with him for their patients for three years, and have given this concession in consideration of the promise set out in the latter part of my minute of the 25th February last, viz., that at the end of the three years the arrangements between Dr. Tucker and the Government shall be finally closed, and the patients removed. This was communicated to Dr. Tucker before he left the Colony, and certainly it implied that the license should last as long as the term with the Government lasted.—Jno. R., 1/5/82.

The Inspector-General of the Insane.—C.W., B.O., 2/5/82.

Lunacy Department, Hospital for the Insane, Callan Park, 4 April, 1882.

THE Lunacy Act expressly provides that a license shall not be granted for more than three years, and Dr. Tucker's contract has three years and eight months to run from May 1st, 1882; so that under no circumstances can the new license cover the whole contract period.

If the Government patients were alone concerned, I think there might be less objection to renewing the license for three years, as the arrangements for these are satisfactory; but the license includes permission to receive twenty-five private patients in addition, and it is in the arrangements for this class that I consider improvement necessary.

In the event of Mr. Tucker's death, or his inability from any cause to remain as licensee, difficulties might, and I fear would arise, and in renewing the license for three years the Government would give up the most efficient check on the management of the institution, and postpone improvements which are desirable.

The Principal Under Secretary.

F. NORTON MANNING.

Submitted, 6/5/82.

The license may be renewed for three years from the 1st May, 1882.—Jno. R., 11/5/82.

Sir,

Referring to your communication of the 8th ultimo, reporting upon an application of Dr. Tucker for an extension for a further term of three years of his contract with the Government in connection with his Licensed House for the Insane at Cook's River, I am directed to enclose for your information a copy of a letter which was addressed to Dr. Tucker, conveying the decision of the Colonial Secretary in this matter.

The Inspector-General of the Insane, Gladsville.

I have, &c.,

CRITCHETT WALKER.

[Enclosure.]

Sir,

In reply to your letter of the 1st ultimo, requesting for certain reasons stated that your contract with the Government in connection with your Licensed House for the Insane, which expires on the 1st January, 1883, may be extended for a further term of three years, I am directed to inform you that having ascertained that you are unwilling to continue your arrangements with the Government unless for a fixed period of three years, instead of two years as recommended by Dr. Manning, the Colonial Secretary thought it desirable, before any other action was taken in the matter, to confer personally with Dr. Manning on the subject, and has now determined, in accordance with that officer's opinion, that, under the circumstances, and in consideration that the arrangement between yourself and the Government, shall be finally closed, and the patients removed at the end of the three years asked for by you, that term of extension shall be allowed.

I have, &c.,

CRITCHETT WALKER.

G. A. Tucker, Esq., Superintendent of the Licensed House for the Insane.

Sir,

## APPENDIX.

Sir,

Bayview House, Cook's River, 18 April, 1882.

Arthur John  
Vause, M.B.

I have the honor to request that you will grant a renewal of my license under the Lunacy Act of 1878, to keep the Bayview House, Licensed House for the Insane, from the 1st of May next for three years, for 150 patients—140 women and 10 men.

In accordance with clause 34 of the said Act the name in full of the Superintendent is given in the margin. The enclosed is a list of the patients' names now in this Licensed House.

To the Honorable the Colonial Secretary.

I have, &c.,  
G. A. TUCKER,  
Proprietor.

Lunacy Department, Inspector-General's Office, Callan Park, Balmain, 2 May, 1885.

I AM of opinion that the license granted should be for one year only, as under a longer term the Government practically surrender a very necessary control over the institution. An annual renewal of the license is an important check on the management, and, there being no fee, involves no tax on the proprietor. Licenses of this kind are always granted for one year only in England, Scotland, and Ireland.

As the Government has a contract with the proprietor for the maintenance of 125 Government patients, and this contract does not expire until 31st December next, and as the proprietor is now absent in England, I think the license might be renewed for one year under the existing conditions, without alteration in the buildings, or in the number to be included under the license, but I am very decidedly of opinion that before the license is renewed a second time the following alterations should be insisted on:—

1st. A full and satisfactory water supply from the Sydney mains with hydrants as a protection against fire. The present water supply is very unsatisfactory, and in very dry weather it has to be carted some distance. The buildings, which are largely of light dry timber, would burn most rapidly, and in case of an outbreak of fire there would probably be a great loss of life and a serious public scandal.

2nd. Considerable alterations to the present laundry and kitchen, which are quite inadequate to the needs of the institution, and in the former of which it is a hardship for patients to work in summer weather.

3rd. The number of patients of each sex should be inserted in the license instead of this being "for 150 patients of both sexes," as at present. It is very important that the accommodation for each sex should be separate and distinct, and the space in the division for each sufficient for the number to be received.

4th. That the license should not be granted for a larger number than the buildings will accommodate, giving at least 600 cubic feet as dormitory space and an ample day room space for each patient. At present there are dormitories for paying patients with only about 450 cubic feet for each, and this, it must be remembered, for patients in ill-health and requiring special care, whilst the Publicans Act requires a larger space for casual visitors. In former reports, under date 25/4/82 and 4/6/82, I have pointed out the advisability of an annual renewal of this license and the necessity for certain improvements and alterations; and feeling that the matter is one of grave importance, I beg to recommend that this report, together with former papers, may be submitted for the consideration and report of the official visitors to the institution, under whose recommendation the house was originally licensed, before a renewal of the license is granted.

F. NORTON MANNING.

Lunacy Department, Inspector-General's Office, Balmain, 9 June, 1885.

It will not be necessary to continue any of these patients at Cook's River beyond the 31st December next, as there will be room in the Government Asylums to receive all of them.

They can be transferred first to Callan Park and subsequently sent to Parramatta and other institutions in accordance with their mental condition. Nearly all are chronic and incurable cases.

The original agreement with Mr. Tucker was for 100 patients for a term of four years from 1st January, 1875. The first extension was for one year or to 1st January, 1880, on the ground that Mr. Tucker had been at greater expense than he originally contemplated. I desire to invite the Colonial Secretary's attention to my memo. of 9/12/76 when recommending this extension. The next extension was for two years or to January, 1883, and the final extension was for three years to 1st January, 1886. When this last extension was applied for, I strongly recommended, on 8/2/82, that the extension should be for two years only, as the Government would be in a position to receive the patients back on 1st January, 1885; but as Mr. Tucker demurred to this, the Colonial Secretary finally decided to grant the renewal for three years, and, in a letter conveying this decision, Mr. Tucker was informed that "in consideration that the arrangement between yourself and the Government shall be finally closed, and the patients removed at the end of the three years asked for by you, that term of extension shall be allowed."

The patients on 1st January, 1886, will have been eleven years at Cook's River instead of four as originally agreed, and they can now be maintained in the Government Asylums at about half of the present cost.

F.N.M.

To the Principal Under Secretary.

Sir,

Sydney, 21 May, 1885.

As the Attorneys of G. A. Tucker, the proprietor of the Bayview Licensed House for the reception of the insane, we do ourselves the honor of applying for a renewal of the contract now existing for the maintenance of pauper lunatic patients, and which will expire on the 31st December next.

In view of the facts mentioned in the following extract from a letter sent us by Dr. Tucker, under date January, 1885, we would express a hope that either the capitation fee may be increased, or that the contract may be given for a lengthened period.

Extract from letter, 20th January, 1885: "I may assure you as a fact, that the county of Middlesex and other counties are paying for hundreds of their patients 19s. 3d. per week per head in other asylums, so that with the high rate of wages in Sydney (one-half more than here), and other matters equally high, you will see that my present contract with the Government is at a low rate. I would, however, rather than lose it, renew it at the same price, but its duration should be lengthened. Here the contracts are for many years. I can assure you on my word, the accommodation and care received by my patients are very far superior to that given in these old metropolitan licensed houses to their county patients and some of these houses have over 300 of such patients at 19s. 3d. per week."

We have, &c.,  
SAMUEL HENRY TERRY,  
E. GREVILLE.

The Honorable The Colonial Secretary.

Submitted. Other papers herewith.—27/5/85. I would like to have the Inspector-General's report as to whether it is necessary to continue any of these patients beyond the 31st December next.—A.S., 1/6/85. The Inspector-General of the Insane, B.C., 1/6/85.—J. B., for P.U.S.

Sir,

Sydney, 16 June, 1885.

We have the honor to request that you will be good enough to favor us by giving attention to the following reasons and facts, which we earnestly hope will induce you to refrain from withdrawing the Government patients from Dr. Tucker's Licensed House for the Insane.

First, we would with great respect submit that the existence in this Colony of a private asylum ought to be encouraged and liberally supported, not only on public grounds, but also as a matter of private convenience when that private convenience is, as in this case, likely to be a source of monetary relief to the State as well as to promote the chances of recovery in the case of persons who, more than any other, are entitled to humane treatment and the best possible aids to convalescence.

Although insanity exists to a greater extent among the poor than the well-to-do classes, there are cases in which the latter desire to obtain non-official seclusion for unfortunate friends who have lost their reason, and it is well that they should have access to an institution like that which has been provided by the enterprise and special qualifications of Dr. Tucker;

but

but the practical effect of withdrawing Government patients from the Cook's River Asylum will be to close that establishment, and thus to leave the State once more the sole custodian of the mentally afflicted, and to discourage any future attempt to provide a private retreat for the insane. It seems to us that it cannot be to the interest of either the Government or the public of this Colony to take a step which would annihilate an institution created at great expense, which has been conducted with marked efficiency and success, and whose percentage of persons discharged as recovered was, during the past year, greater than that of any other asylum in the Colony, notwithstanding that the patients sent by the Government were not selected as being those most easily managed or presenting phases likely to yield most readily to constant care and skilful medical treatment. During the time that the Cook's River Licensed House for the Insane has been in existence a large number of patients who might fairly have been sent to it have been maintained in Government institutions, which were so overcrowded as to seriously interfere with the chances of their recovery; and you will find by reference to the report of the Inspector-General of the Insane, that during the last year [vide table on page XI] the amount of private money contributed towards the maintenance of patients in Government Asylums was £7,068, a sum nearly equal to that paid out of the public exchequer for the maintenance of Government patients in the Cook's River Asylum, the latter sum being £7,317. It will be seen, therefore, that in maintaining indigent patients at Cook's River, the Government spent only a sum equal to that which might have been reasonably expected to have been contributed towards the maintenance of patients in a private asylum.

To practically abolish the licensed house at Cook's River by withdrawing Government patients would not only strike a blow at private enterprise in this direction, but also be a public misfortune. We would further with respectful earnestness ask your attention to the last paragraph on the 8th page of the Inspector-General's report. Dr. Manning says: "At the close of the current year, the contract under which 125 Government patients are provided for at Cook's River expires, and these patients will be removed to Callan Park, and if, as seems probable, the increase of numbers for the year 1885 be equal to that for 1884, the whole of the surplus accommodation will be occupied, and unless further provision be made, the overcrowding which has for many years embarrassed the management, lessened the comfort, and impeded (and in not a few instances, prevented) recovery of patients will re-commence. The only building now in progress is a cottage for 12 patients at Callan Park, and it is clearly time that some steps should be taken to provide additional accommodation."

It is clear from these remarks that in the opinion of Dr. Manning the additional accommodation which has been recently provided by the Government at enormous cost, is only sufficient to meet existing requirements, without any margin for the future and ever increasing burden of lunacy.

According to Dr. Manning's latest report, under date 4th April, 1885, the number of registered insane persons in the Colony at that time was 2,524. Deducting 241 inmates of the Newcastle Asylum (who form a special class), there were 2,283 persons to be cared for. The accommodation of the Government hospitals is as follows:—

Callan Park .....	766
Gladesville .....	667
Parramatta .....	956
Total .....	2,389

Against these figures must be placed the 2,283 registered insane persons above mentioned, and also a number representing the probable increase during the current year. The increase during the last twelve months was 121. With the increase of population, it may be assumed that the insane will be proportionately augmented. Taking the probable increase for this year at 130, the figures will stand thus:—

Registered patients .....	2,283
Probable increase .....	130
Total .....	2,413

If, therefore, the Government were to withdraw the patients now treated in the Asylum at Cook's River, the State Asylums would soon become again overcrowded. In these circumstances, in the interests of the patients, as well as in the interests of the public, with a due regard for private enterprise, and we may also add, with a suitable recognition of the valuable services rendered by Dr. Tucker, not only in accordance with his obligations to the Government as its licensed agent, but also in connection with his humane and patriotic mission for the purpose of ameliorating the condition of the insane, we think we may appeal to you with confidence not to withdraw the Government patients from the Asylum at Cook's River, but to show your appreciation of his well-directed enterprise and distinguished public services by making a further contract with him for their future care and maintenance.

The Hon. Sir Alexander Stuart, K.C.M.G.,  
Colonial Secretary of New South Wales.

We have, &c.,  
(Sd.) SAMUEL HENRY TERRY.  
(Sd.) EDWD. GREVILLE.

I will be glad to have Dr. Manning's further views on this matter before bringing it before Cabinet, or I will be glad to confer with him on the subject on Monday next at 10.30.—A.S., 25/6/85. The Inspector-General of the Insane, B.C., 26/6/85.—J.B., for P.U.S.

Memo. for the information of the Colonial Secretary.

THE percentage of patients discharged recovered from Cook's River during the year 1884, has no bearing on the question of the Government patients, not one of whom has been discharged for four or five years past. This percentage refers only to private patients, and is higher than the percentage at the Government Institutions, because cases of temporary insanity due to drink and other causes, are admitted to Cook's River, whilst these cases do not reach the Government Asylums, as they are stopped, treated, and discharged from the Reception House. The Government patients at Cook's River are all of a chronic class, and are similar in character to the majority of those maintained at Parramatta.

The maintenance rate at Parramatta, including the criminals, a costly class, is 10s. a head per week, the women costing about 9s., and the men about 11s. This cost includes all charges, food, clothing, medical attendance, stores, &c., except rent. The buildings, for upwards of 800 of the patients at Parramatta, have been erected within the last fifteen years, at a cost ranging from £30 to £120 a bed (I have been at some pains to ascertain the exact amounts from the records of the Colonial Architect's Department, and averaging, including furniture and fittings, about £100 a bed. The rent of these, at the liberal calculation of 8 per cent., is 3s. a week. The buildings at Parramatta are very decidedly better and more substantial than those at Cook's River, so that the total cost of maintaining female patients, is at most 12s. a week, maintenance 9s. and rent 3s.

The patients at Cook's River are all females, and they are in no respect better, and in some respects not so well provided for as at Parramatta, but the amount paid is 22s. 6d. a week. It is clearly very much cheaper for the Government to build and provide for the patients than to farm them out.

The rate paid at Cook's River was at first 25s. a week for 100 patients, and this rate was fixed with the understanding that it would in the four years of the original contract pay the principal as well as the interest on the outlay for the wooden buildings specially erected to receive them. Another year, making five in all, was granted on the representation that the expense had been greater than at first anticipated. The contract, with the variation that the number was increased to 125 (no new buildings were erected), and the rate reduced to 22s. 6d., has been continued for six more years, during all of which time Dr. Tucker has enjoyed a profitable contract, and the Government has been paying 10s. 6d. per week per patient, or about £3,400 in excess of what the patients could have been kept for in a Government Institution, if there had been room. Apart from the question of expense, the farming out of lunatics for the profit of individuals, and under arrangements by which they can be transferred from one person to another, appears to be wrong in principle, and was only adopted owing to the urgent need of accommodation, and the overcrowding of the Public Asylums, and was intended, as I understand, only to last for a short period. It is condemned by almost all authorities on lunacy matters, and the Bill recently introduced by the Lord Chancellor in the Imperial Parliament provides for the abolition of the system in England. I am decidedly of opinion that a well-conducted private asylum for well-to-do patients, able by themselves or their friends to pay for their maintenance, is, especially in the absence of lunatic hospitals managed by trustees, such as those at Cotton Hill, near Stafford; Cheddle, near Manchester; Burnwood House, near Gloucester; and St. Andrew's Hospital, Northampton, a useful part of an asylum system, and I think such an institution, especially when patients are received from other colonies, as is the case now at Cook's River, could

could be managed with profit and success. On the question of directly subsidising such an institution I can offer no opinion, but there appears to be objection to making pauper patients the indirect means of a subsidy, and it can scarcely be necessary that such subsidy should amount to upwards of £3,000 a year. With regard to the collections for the maintenance of patients in the Government Asylums, which amounts to upwards of £7,000 a year, this sum is mostly made up of small payments ranging from 2s. 6d. a week upwards. In some cases the patients are able to pay such sums as would be received at a private asylum, but the friends object to this institution, and so long as they defray the full cost of maintenance, and are in no way a burden on the Government, should, I think, be allowed to exercise their choice.

If Government patients are to be in future sent to Cook's River, it is advisable in the present condition of the public asylum accommodation that men instead of women should be selected.

F. NORTON MANNING.

29 June, 1885.

Lunacy Department, Inspector-General's Office, Balmain, 23 July, 1885.

With all possible respect I venture to think the course adopted open to grave objection and likely to lead to considerable difficulties.

With regard to the condition I much doubt if it is possible for Mr. Tucker to carry out the alteration suggested within a period of six months after his return, and as he has a contract with the Government, which does not expire till December 31st, I think it would be regarded as a hardship that he should be compelled to make alterations before that date.

It is doubtful if the existing buildings will give 600 cubic feet of dormitory space each for 150 patients, and if not, and the institution is licensed for 150, more buildings must under the conditions be erected, and the Government is placed in the position of licensing buildings which have no existence and of the nature of which they have no knowledge. It is quite possible that if the proprietor finds he has not 600 feet for each patient he may prefer the license being issued for a smaller number instead of enlarging his buildings and so increasing additional expense.

It is absolutely necessary that the following additional condition should be made:—

That Mr. Tucker submit a plan of the establishment, showing the measurements of the various rooms, the number of inmates proposed for each room, and the consequent amount of air space; and 2nd, the mode in which he proposes to allot the patients of the different sexes so as to carry out separation and privacy necessary, and ensure the air space required. (See 3rd section of my memo. of May 2nd, and also 3rd section of letter of Official Visitors, dated May 16th). The plan and arrangements to be approved by the Inspector-General.

F. NORTON MANNING.

To the Honorable Sir Alexander Stuart, K.C.M.G., M.P., Premier of New South Wales,—

Sir,

Sydney, 21 July, 1885.

Referring to our previous communication in reference to the renewal of the contract between the Government and Dr. Tucker for the treatment of patients in Bayview Licensed House, and to the subsequent interviews with which you have favoured us concerning the same matter, we now beg to submit the following additional facts and arguments, as showing that the application we have made is in accordance with sound public policy, and that to entertain it favourably would be, not only beneficial to the Colony and especially to the insane, but also an appropriate recognition of the enterprise and devotion to the cause of the mentally afflicted displayed by Dr. Tucker, who came to the assistance of the Government when its asylums were so overcrowded as to be almost a scandal to the country.

We make this further appeal to you with the greater confidence, because of the eminent ability and success which have characterised Dr. Tucker's treatment of the patients committed to his care. His licensed house has been so well conducted as to draw forth many voluntary encomiums from visitors, and numerous letters from grateful patients who, by reason of his tender care and judicious treatment, have been brought to their right mind, and restored to society. It is also a noteworthy fact that the Hon. the Colonial Secretary has never been appealed to in consequence of any difference of opinion between the Inspector-General of the Insane and the Licensee of Bayview House. Dr. Tucker's establishment has also the marked distinction of having, during the past year, discharged as recovered, a larger percentage of patients than that secured by the Government asylums. We understand that an attempt has been made to minimise this distinction by asserting that the proportion of cures refers only to patients, and that, in fact, the percentage is higher at Bayview House than at Government institutions, because at the former establishment, cases of temporary insanity, due to drink, &c., were received, whereas similar cases did not reach Government asylums, because they were stopped, treated, and discharged as recovered from the Reception House.

A glance at the Lunacy Act, as well as at the last report presented by the Inspector-General of the Insane, is sufficient to show that this view of the case is not warranted. The inmates of the Cook's River Licensed House, including both public and private patients, may be regarded as on a par with those of Callan Park, consisting as they do of many chronic cases, and also of persons whose circumstances and condition correspond to those of patients in public asylums. It will scarcely be contended that the Government patients most easily managed, and apparently most likely to be amenable to medical skill, have been selected for treatment by Dr. Tucker. And moreover, the report of the Inspector-General of the Insane for the past year shows that the whole of the patients, including those at Cook's River, were taken into calculation in estimating the general average [*vide* table 2, page 2, of report for 1884]. This in itself, is sufficient proof that Dr. Manning would hardly countenance such a distinction as that which has been sought to be drawn between the patients at Bayview House and inmates of public asylums for the insane. The greater number of recoveries in the former institution is much more probably due to the smaller number of patients and the greater amount of individual attention devoted to each.

If any additional evidence were needed in support of our contention that the distinction attempted to be drawn is fallacious, we might refer you to the provisions of the Lunacy Act, in accordance with which patients discharged from the Reception House as not being suitable for treatment in a public asylum, could not possibly find their way into Bayview House. Patients can be received there only by virtue of a certificate such as will open to them the portals of Callan Park. It is not necessary to obtain an order to place a presumed insane person in a reception house, but every person who is placed for treatment in the Cook's River House must be legally certified to be insane. Dr. Tucker's asylum at Cook's River cannot, therefore, be shorn of whatever credit may be due to it of having shown the largest percentage of patients discharged as cured. Therefore, as it has proved itself to be as well managed, as effective in its mode of treatment, and as successful in its results as any Government establishment, the question of its continuance is narrowed down to considerations of public policy and expediency.

In regard to the policy of closing the establishment at Cook's River (for that unquestionably would be the natural result of the withdrawal of Government patients) we would, with the greatest possible respect, invite your serious attention to the following facts, which we desire to bring, briefly, under your notice.

In passing the Statute 42 Vic., No. 7, entitled "An Act to consolidate and amend the law relating to the insane," the Legislature recognised the policy of establishing licensed houses, and specially encouraged Dr. Tucker in his enterprise by adding to the 34th section of the Act (which requires that "every licensed house, containing more than 100 patients, shall have at all times a medical practitioner resident therein") the following proviso: "That the present licensee of the house known as Bayview House at Cook's River, so long as he shall be licensee of the same, shall for the purposes of this section only be taken to be a medical practitioner." In part I of the Act, the equal status of a licensed house, as compared with that of a public asylum, is fully recognised in regard to the course to be pursued when insane persons, without means of support, are brought before Justices, it being provided that such insane persons may be sent either to a public asylum or to a licensed house. (*vide* Section 6)

A "Licensed House" was thus regarded by the Legislature as part and parcel of the lunacy arrangements of the Colony, and in the discussions which took place at the time, the idea was expressed that such institutions would prove to be a boon to a certain class of patients, a valuable auxiliary to the State, and a saving to the public exchequer. Experience has shown the soundness of these conclusions.

As a matter of policy and expediency, licensed houses have been incorporated into the lunacy system of England, and since those establishments have been under proper supervision, they have been regarded as valuable aids to the general system. They are recognised, not only by existing statutes, but also in the "Lunacy Acts Amendment Bill," as well as in the "Lunacy Acts Consolidation Bill" recently presented by the Lord Chancellor of England. In the former Bill, although it

is proposed to admit paying patients to public asylums, licensed houses are still recognised, and there is a provision for the farming out of pauper lunatics. The first object of the Lord Chancellor's Lunacy Acts Amendment Bill, however, is "To furnish safeguards against the improper confinement of persons as lunatics," and it adopts in the main the recommendations made by the report of the Select Committee on Lunacy Laws in the year 1878, one of which is to give encouragement to the relations of pauper lunatics to take charge of them by allowing the visitors of asylums to pay for the lunatic's maintenance while under the care of their friends. This is provided for in clause 27, which is as follows: "Where application is made to the Committee of an asylum by any relative or friend of a pauper lunatic confined therein that he may be delivered over to the custody of such relative or friend, any two of the visitors may, upon being satisfied that the lunatic will be properly taken care of, order the lunatic to be delivered over accordingly." And they are to pay for the maintenance of such lunatic a sum not exceeding the expenses which would be incurred on his account if he were in the asylum. The farming out of patients, therefore, is directly encouraged by the provisions of this Bill. In the Lunacy Acts Consolidation Bill, which is intended to consolidate all the existing enactments relating to lunacy, Part 10 provides that the Commissioners may grant a license to any person to keep a house for the reception of lunatics, or of any sex or class of lunatics, within places specified by clause 20<sup>th</sup>. In the Lunacy Acts Amendment Bill there is a sub-section (No. 9) to clause 36 which contemplates the gradual withdrawal of pauper lunatics from licensed houses, but it is by no means certain that this provision will be passed into law. While the most advanced idea in English legislation in regard to lunacy is in keeping with the system which prevails in New South Wales, it is necessary to consider the line of demarcation which separates the one from the other. In England the expenditure on asylums is locally assessed. The same influence which jealously checks the incidence of the poor rate, also regulates the pecuniary obligations in regard to lunacy. It must further be borne in mind that in Great Britain there are numerous licensed houses and a large class of paying patients, so that the relations between Dr. Tucker and the Government of New South Wales do not furnish a parallel to the relations between English licensees and the Government of the mother country in regard to the care and treatment of lunatics.

In this Colony the Central Government performs duties which in England devolve upon local bodies, and engages in works which are there left to private enterprise. It is the common carrier as well as the general almoner of the people. It is a maker of roads and bridges, and in its various operations enters into direct competition with persons engaged in mechanical trades. In regard to lunacy it bears nearly the whole burden, whereas, in the mother country the expense of maintaining county asylums for pauper lunatics is borne in equal proportions by the country generally and the respective counties. By this arrangement the State is relieved of payment to the extent of about a million and a quarter sterling per annum. The tendency of public opinion in this Colony is in favour of decentralisation, and the casting of larger responsibility upon local authorities as well as of refraining from unnecessary interference with private enterprise. If this policy were carried out vigorously, Government asylums would be cleared of a large number of patients who would find their proper place in licensed houses. If the Government were to take a course which would have the effect of closing the only private asylum in the Colony, is it likely that in the future there would be found gentlemen possessing the requisite capital, skill, and enterprise, willing to establish asylums necessary, not only on grounds of public policy, but also to provide retreats suitable for the reception of well-to-do patients, who, in their lucid moments, show that they possess feelings which ought to be respected? If the Government determine to compete directly with licensed houses by building cottages, similar to those which are now being erected at Callan Park for the reception of paying patients, the necessary result will be not only to abolish more effectually the licensed house at Cook's River, but also to render hopeless private enterprise in this direction. The immediate effect would be to make the treatment of lunacy a Government monopoly, which, it appears to us, would be impolitic, not only as a matter of economy, but also on scientific grounds. The Government would lose the advantage of having two classes of asylums which, by modes of treatment under different conditions, might stimulate a healthy competition productive of better curative results than could be obtained by the adoption of one uniform system under one head, administered by one staff of officers, and dominated by one idea. We cannot too earnestly impress upon you the importance of this phase of the subject, because we believe that the value of a generous and intelligent rivalry, as tending to produce the best possible results, is of as much importance in connection with the treatment of the insane as it is in regard to science, art, or manufacture. On this ground alone we think we may successfully plead for a continuance of Government support to Bayview Licensed House.

As we pointed out in our previous letter, the Government receives upwards of £7,000 per annum, contributed privately towards the support of patients in public asylums. If patients, whose care and maintenance represented that amount of cost, continued to be placed in the licensed house at Cook's River, it could not be fairly said that that institution was being subsidised indirectly by pauper patients. A more appropriate way of putting it—if this aid were withdrawn—would be to say that the Government asylums were being to that extent subsidised by public patients to the discouragement of private enterprise. At present the Government has greatly profited by placing patients in the licensed house at Cook's River. By the arrangement entered into with Dr. Tucker, it has effected a saving of something like £1,200 a year, besides avoiding the cruelty of more serious overcrowding, and to that extent lessen the chances of recovery. The closing of Bayview House would therefore be a mistake, not only in relation to public economy, but also on the ground of humanity, because before twelve months have elapsed the Government asylums will be again overcrowded, and those who now pay for the care and maintenance of insane persons in a private asylum would not feel bound to contribute equally to the State when they were compelled to place their friends in a Government asylum.

It is a mistake to suppose that at Cook's River any considerable number of private patients are received from other Colonies. During the past year only two such patients were admitted—one from Tasmania and the other from Victoria. At the same time, it should be borne in mind that pauper lunatics from all parts of the world may, without let or hindrance, be landed upon our shores, and there is a general impression that lunacy in New South Wales is largely augmented because of the want of legislation upon this branch of the subject. This important subject was referred to in the following terms by the Inspector-General of the Insane in his report for the year ending December 31st, 1879:—"The influx of strangers into the Institutions for the Insane still continues, and in eight cases which have been brought directly under my notice the patients were brought either from the ship in which they arrived in the Colony, or were found by the police in an insane condition a day or two after arrival. In only one of these cases was any payment made towards maintenance. One patient was a French communist, holding a ticket-of-leave from New Caledonia, but prohibited from going to France. A similar case was admitted in 1878. One was a black fireman from a foreign steamer, and in another case, on which I forwarded to you a special report in November last, an aged and demented man was deliberately sent away from a neighbouring colony by his friends who paid his passage money."

Having endeavoured to show that on grounds of public policy, expediency, and scientific treatment, the Government should encourage, rather than repress, private enterprise in regard to the care and maintenance of lunatics, we now beg to present some facts and arguments in support of our application for a renewal of the contract between the Government and Dr. Tucker for the care and maintenance of pauper patients in the licensed house at Cook's River.

In the first place we submit that Dr. Tucker's licensed house is necessary in order to meet the growing requirements of patients who are not criminals, and that it will be so needed for years to come, unless the Government are prepared to ask the Legislature to vote large sums of money for the erection of additional asylums. This is apparent from figures contained in our previous letter, which showed that according to Dr. Manning's latest report, under date 14th April, 1885, the number of registered insane persons in the Colony at that time was 2,521. Deducting 241 inmates of the Newcastle asylum (who form a special class), there were 2,283 persons being cared for. The accommodation of the Government hospitals as shown in that report is as follows:—

Callan Park .....	766
Gladesville .....	667
Parramatta .....	956
Total .....	2,389

Against these figures must be placed 2,233 registered insane persons before mentioned, and also a number representing the probable increase during the current year. The increase during the previous twelve months was 121. With the increase of population it may be assumed that the number of insane will be proportionately augmented. Thus, taking the probable increase for this year at 130, the figures would stand in the following order:—

Registered patients .....	2,283
Probable increase .....	130
Total .....	2,413

As

As the capacity of existing asylums is equal only to the accommodation of 2,389 patients, it follows that if the Government were to withdraw the patients now treated in the Cook's River Licensed House, the public asylum would be immediately overcrowded. We think it scarcely probable that the Government will submit to the Parliament, now about to expire, a large estimate of expenditure for the erection of additional asylums for the care and maintenance of the insane, or that it will adopt a course (by closing the House at Cook's River), which would again overcrowd existing asylums, and thus imperil the chances of recovery in which the patients therein would otherwise participate. We cannot too strongly emphasize this fact. The obligation it imposes upon all who have responsibilities in relation to the insane is fully admitted by Dr. Manning, who, in his report upon the Gladesville Asylum for 1874, said he was convinced that the overcrowding of the Institution had been in that year in no small degree responsible both for the increase in the number of deaths and the decrease in the number of recoveries. He added: "Without attaching an undue importance to statistics extending over such a short period as six years, or dealing with them in any partial way, I cannot but state that I think the inference I have drawn from them is correct; and, apart from them, it is not difficult to imagine that overcrowding would be especially deleterious in its influence on both the mental and physical health of the patients, as well as destructive of that order and discipline which are so essential to the successful management of an institution of this character. With reference to this subject, Dr. Isaac Ray, the Nestor of Psychological Medicine in America, has, after a lifetime spent in hospitals for the insane, thus expressed himself:—"When a hospital intended for 200 patients is made to receive 300, they excite and disturb one another—dangerous and even murderous collisions become unavoidable; the means of ventilation are deficient; and consequently, the air of the house is loaded with effluvia calculated to produce disease; the officers, who need the utmost strength and serenity of mind in performing their allotted work, are constantly filled with apprehension; and the result of it all is that the hospital fails to accomplish that degree of comfort and restoration which it otherwise would. Let it be distinctly understood, therefore, that to place a patient in a hospital already full is to inflict a positive injury on many for the doubtful chance of benefiting one."

The Inspector-General of the Insane does not favour the Boarding-out System, for on page 6 of his latest report he asks, "Is it likely, with the present rate of wages, that suitable guardians could be found?" And he then continues: "Several years ago when the hospitals of this Colony were more overcrowded than usual, suitable persons to receive and take charge of patients were sought, and indeed advertised for, with a negative result, and there is no reason to believe that conditions and circumstances have in any way altered since then." The Government must have additional accommodation for the insane. It cannot obtain it by a system of boarding-out in the manner suggested by the Victorian Lunacy Commission. In the face of authoritative opinions to the contrary, no one would be warranted in concluding that the Government will allow its asylums to be either too large or overcrowded, for these are evils recognised by all distinguished writers on the treatment of lunatics. In large and overcrowded asylums patients lose their individuality, and the responsibility of supervision is not sufficiently direct. Yet, unless the Government renew its contract with Dr. Tucker, it must either sacrifice the interests of patients, or provide some other asylum.

We submit, secondly, that the maintenance of Dr. Tucker's Licensed House is necessary to complete the system of lunacy treatment in this Colony, and that if it be abolished, the cost of caring for and protecting the insane will be largely increased to the State. This augmented cost will arise from two causes: (1) The patients who now pay Dr. Tucker, and who would be forced into public asylums, would not pay the Government; and (2) The expense maintaining them in a Government asylum would be greater than the *per capita* cost of providing for them in the Bayview Licensed House. That the former statement is not unfounded may be gathered from observation of the general relations of the public to the Government in all cases where money payments are concerned; that the latter is accurate we will prove by actual figures. An attempt to force all insane patients into Government asylums would not be less unfortunate financially than would be an attempt to force all sick people into public hospitals. The idea of making all lunatics public patients is discarded by most men who have a knowledge of the internal working of the present system of lunacy management in England as well as in the Colonies. The editor of the Melbourne *Argus*, in a leading article which appeared on the 15th June last, writes: "The Chief Secretary is not in favour of prohibiting private asylums. \* \* \* The fact is that instead of compelling people by law to send their relatives to Government institutions we ought rather to encourage the principle of self-help." The soundness of this conclusion is supported by reference to Government grants in favour of public hospitals and the balance-sheets of those institutions.

It has been suggested, we are informed, that if Government patients are in future to be sent to Cook's River, men, instead of women, should be selected. This, we venture to say, would be a most undesirable change. Dr. Tucker's establishment has been specially arranged for the accommodation of female patients, and he has now a staff of female attendants specially trained to their work, and in the highest degree efficient. To require him to train an entirely new corps and to disband the present staff would be not only a great discouragement, but also a misfortune to the patients who now reap the benefit of the experience of the attendants at present employed. This is a view of the case which will, no doubt, be fully appreciated by the Inspector-General of the Insane, who, in his report for 1884, says: "It is extremely unfavorable to the interests of patients that the changes among attendants and nurses, who are immediately in charge of them, and in whom experience of their special work gives a daily increasing value to service, should be frequent." The institution at Cook's River, as we have before said, has been specially arranged for the accommodation of female patients, and its attendants and nurses have been carefully trained to look after them. To bring about the change suggested, therefore, would be to adopt a course which, in the opinion of the Inspector-General of the Insane, would not be favorable to the patients and to put the proprietor to an amount of trouble and inconvenience which cannot be readily estimated, but which may be easily avoided. The inmates of the Cook's River Asylum are well housed and well cared for, their attendants are zealous and devoted to their work as any who can be found in similar employments. In these circumstances we hope the Government will allow them to remain undisturbed, subject to an arrangement satisfactory to Dr. Tucker, favorable to the public, and beneficial to the patients themselves.

And here we invite your attention to the equities of the case. It is admitted that Dr. Tucker came to the assistance of the Government when his aid was specially valuable. Since that time he has served the country well. He has shown himself ready, on the shortest notice, to comply with every wise suggestion by visitors, in order to make his institution perfect. And so, from time to time, his license has been renewed and his contract continued. He had no reason to suppose that his patients would be withdrawn. He was warranted in believing that they would remain. Quite recently it was recommended that certain improvements should be made in the premises, and in accordance therewith plans are being prepared for new laundries and other buildings involving an expenditure of about £2,000. In view of this state of things, it could not have been imagined that it was contemplated to recommend the closing of the establishment at the end of the year. We have been reminded that the original contract, entered into about ten years ago, was made on the understanding that it should terminate at the end of four years. But since that time the condition of things has greatly changed, and up to the period of the recent official notice, instructions had been given which led to the supposition that it would be continued as it had been on previous occasions. This view of the matter was strengthened by the evident fact that the provision which was being made by the Government for the care and maintenance of public patients was unequal to the prospective demand upon the accommodation which would be afforded by buildings in course of erection. The contract entered into by Dr. Tucker has many analogies. All the licenses issued by the Government are for specified periods, but, practically, they are renewed as a matter of usage from term to term, and extinguished only in consequence of special circumstances with regard to which no parallel is presented in this case.

Having shown how important it is that the Government should not crush out of existence the licensed house at Cook's River, and having indicated how great are the services it may render as an adjunct to the lunacy arrangements of the Colony, we now come to the question of cost, which, although not of primary importance in a matter of this kind, is, nevertheless, of considerable consequence in connection with the economical administration of public affairs. We might reasonably argue that if the price paid for the care and maintenance of patients in Dr. Tucker's Asylum were somewhat greater than the average cost of pauper lunatics in public asylums, still the Government would be justified in sanctioning it, not only in the interests of the patients themselves, but also because private enterprise in this direction deserves liberal recognition. But as a matter of fact, the *per capita* payment by the Government for patients in Dr. Tucker's licensed house is proportionately less than that made in England for similar services, and considerably under the actual cost of patients in Callan Park, which may be regarded as furnishing a fair standard of value and accommodation. The weekly cost of each patient at Callan Park is set down at 18s. 8½d., irrespective of the interest on the value of the freehold, which, including improvements, is about £300,000. The buildings alone cost £235,539; the land is worth £30,000; and the furniture and fittings make up the balance. In round numbers, therefore, adding the interest on the land and improvements, the *per capita* cost of patients at Callan Park is 25s. per week.

It would be fallacious to take the average cost of patients at Parramatta as a fair estimate of comparison for the purpose of ascertaining what ought to be paid for patients at Cook's River; if, indeed, the average cost could be arrived at. Some of the inmates of the Parramatta Asylum are criminal patients, and some civil. It will hardly be contended that both should be put on a similar footing. But apart from this, it is impossible to obtain precise figures to make the necessary calculation. And if it were possible, they would not furnish an equitable standard of comparison, for two reasons:—(1.) The number of patients confined in the Parramatta establishment is, according to modern ideas, too large to be most effectively treated in one asylum; and (2.) The patients now in the Cook's River licensed house could not be received into that establishment without still further overcrowding it. In the report of the Inspector-General for 1884, the weekly cost of each patient in the Parramatta Asylum (numbering at that time 1,130, or more than 120 in excess of the accommodation afforded) is set down at 9s. 11½d. But this is exclusive of interest on the capital value of 30 acres of land on which the hospital is built, and also irrespective of the interest on the capital value of a 40-acre farm, worked partly by the patients in support of the Institution. This unusually large hospital, in an overcrowded condition, cannot fairly be taken as a standard of comparison, although if it were so used, we believe it would be found that the actual cost would approach very nearly the amount paid by the Government for patients in Dr. Tucker's Asylum. As a matter of fact, however, it is impossible to obtain exact figures, extending over a series of years, and distinguishing between the cost of maintenance, the cost of management, and the sums spent on buildings and improvements, to either confirm or disprove this belief. If we were to take another Asylum, viz., that at Cooma, we might point out that the cost of maintenance alone was, in that institution (according to the last report of the Inspector-General), larger than the cost incurred for patients at Callan Park, being no less than £48 16s. 6d. per head per annum, without regard to interest on outlay for land and buildings. Although the weekly cost for patients in the establishment in 1884 was 17s. 9½d., in 1882 and 1883 it was 19s. 4d. In 1880 it was £1 0s. 5½d. In 1879, £1 2s. 2d. In 1878, £1 2s. 7d.; and in 1877—its first year—including cost of stores and outfit, £1 17s. 8½d. The average weekly cost during eight years is £1 2s. 2½d., irrespective of interest on the capital value of the land and improvements.

But there is another reason why it is fallacious to compare the cost of patients at Parramatta with the cost of patients at Cook's River. It is an established fact that the expense of maintenance and rent *per capita* decreases proportionately with the increase of numbers under care. It must also be remembered that the recoveries are less in proportion to the augmentation of numbers. This is set forth clearly by Dr. Tucker in the "Introduction" to his report on "Lunacy in Many Lands," on pages 15 and 16, of which some recognised authorities are quoted to show the superiority of small asylums over large ones in regard to their curative results. He says: "It appears from the written opinions furnished to me by the various superintendents (see reports) that about 300 is the maximum number of patients which should be contained in one asylum for individual care and treatment by the superintendent, and that a less number would give still better results and secure a higher percentage of recoveries. This consensus of opinion is borne out by the fact that in all cases the percentage of recoveries will, on reference to the tables (see reports), be found much higher where there are greater facilities for individual treatment and observation by the superintendent."

And again—"The Select Committee of the English House of Commons, which in 1806 inquired into the state of pauper lunatics, recommended that no asylums should be erected to contain more than 300 patients. In 1844 the Commissioners in Lunacy, in a special report to the Lord Chancellor, strongly insisted upon the advantages of asylums for small numbers of patients. Lord Ashley, now Earl Shaftesbury, in supporting the Commissioners' report, maintained that no asylum for curable lunatics should contain more than 250 patients, if, indeed, 200 were not the full number that could be managed in one asylum with best advantage to the general public and best results to the patients. In the same speech Lord Ashley quoted Dr. Connolly's statement, that 100 patients was the maximum number for one asylum, where the best attainable results of individual care and treatment were sought."

The *per capita* rate for Government patients in Dr. Tucker's Asylum is low as compared with that which is paid in England, having regard to the difference in the price of provisions and the rates of wages. This is clearly stated in a private letter which we received from Dr. Tucker, under date 20th January, 1885, during the latter part of his philanthropic mission, and which contains the following words:—"I may assure you as a fact that the county of Middlesex and other counties are paying for hundreds of their patients 19s. 3d. per week per head in other asylums; so that with the high rate of wages in Sydney, one-half more than here, and other matters equally high, you will see that my present contract with the Government is at a low rate. I would, however, rather than lose it, renew it at the same price, but its duration should be lengthened. Here the contracts are for many years. I can assure you that the accommodation and care received by my patients are very far superior to the accommodation and care given in these old Metropolitan Licensed Houses to their country patients, and some of those houses have over 300 of such patients at 19s. 3d. per week."

We regret that circumstances should have made it necessary for us to trespass so greatly upon your patience; but we base our plea of justification on the importance of the question at issue, which involves not only the fate of Dr. Tucker's Asylum, but also the welfare of the insane, as well as the economical expenditure of public money. In entering upon this work, Dr. Tucker, of course, expected to obtain a fair return for his large outlay, perpetual anxiety, and special knowledge. But that he was actuated by a still higher motive is proved by his self-imposed mission, which must be regarded as unique in the history of scientific research for the purpose of ameliorating the condition of the insane. The very moderate profits obtained from his arrangement with the Government, for the purpose of relieving the overcrowded public asylums, would not have enabled him to give some of the best years of his life, and to expend thousands of pounds, in the prosecution of his long-cherished desire to ransack the world in order to glean and collate facts and arrive at conclusions to benefit the mentally afflicted. In connection with this we feel constrained to say it is within our knowledge that the large sums of money Dr. Tucker has spent for the successful accomplishment of the grand object he has in view were no part of profits made out of any Government contract, but were, in a spirit of laudable philanthropy, taken from a private fortune gained by the exercise of judgment and foresight in land speculation.

We think we need not say more to show that there may exist in the mind and heart of the proprietor of a licensed house for the insane as much generous interest in the welfare of his patients and as much self-sacrifice as can be found in any official circle. In these circumstances we hope you will feel justified in coming to the conclusion that neither the interests of the public nor the welfare of patients would be promoted by closing the Asylum at Cook's River; that, for the reasons we have given, it would be a mistake to substitute in it male for female patients, and that as a matter of economy, private enterprise ought to be encouraged, either by allowing the patients now at Cook's River to remain at a larger sum per head than that now paid, or by arranging for their care and maintenance at the existing charge, but for a longer term than that stipulated in the present contract.

We are, &c.,  
SAMUEL H. TERRY,  
EDWARD GREVILLE,  
Attorneys for Dr. Tucker.

11th August, 1885.

THE Colonial Secretary is probably not desirous of any lengthy report on this communication. The reasons adduced for a continuance of the arrangement under which Government patients are maintained at Cook's River appear to be—

1st. That the percentage of recoveries in this institution in 1884 was larger than in the Government Asylums. Those recoveries, as I have already pointed out, occurred entirely among the private patients, who are drawn from a different class from the patients in Government Asylums, and include a considerable proportion of patients whose malady was transient and due to drink. Dr. Tucker has had Government patients under his care since January, 1869, when the first 25 were sent, and from that time to the present—upwards of 15 years—only four Government patients have recovered, the last being in 1880, five years ago. The patients are, as I have pointed out, mainly chronic cases, but the recoveries could hardly have been fewer if they had been in the "unusually large hospital" at Parramatta, and maintained at 10s. instead of 22s. 6d. a week. The recoveries clearly may be passed over as having little or no bearing on the question.

2nd. That the patients at Cook's River do not cost more, or at all events much more, than in the Government establishments. In support of this the exceptional maintenance rate at Callan Park for the year 1884, which included all the cost of outfit, and the high maintenance rate at Cooma are adduced. The average maintenance rate for patients of all classes in Government Asylums for five years past has been 12s. 3d. a week, or, after deducting collections, 11s. a week, and this has included the cost of criminals, a very costly class, acute cases, which necessarily involve much more expense than those which have passed into a chronic stage, and patients in out of the way places like Cooma. Now that Cooma has been vacated, and the extra and preliminary expenses attending the opening of Callan Park have been met, the average maintenance rate will almost

almost certainly diminish. The addition of any reasonable rate of interest on the cost of buildings will still leave the maintenance much below the rate (22s. 6d. per week) paid at Cook's River. I have already pointed out that women can be maintained at a cheaper rate than men, and chronic cases like those at Cook's River at considerably less than the average maintenance rate.

3rd. That if the patients were withdrawn and placed in the Government Asylums these would immediately be overcrowded. The spare accommodation for women is somewhat greater than that for men, and the annual increase in the number of women is somewhat less. At the close of 1884 there were 179 vacant beds for women and these will serve to receive the patients now at Cook's River, and the probable increase up to the close of 1886. In addition the Government will soon have the Orphan School buildings at their disposal, and if no time is lost further buildings could be erected by the time they are required. The continuance of the present arrangement at Cook's River can only postpone the question of new buildings for a short time, and it will certainly be necessary at no distant date to provide further Asylum accommodation unless a very great extension of the farming-out system in private asylums is resorted to.

4th. That unless the Cook's River Asylum is subsidised in some way it will be closed. On this point, as I have no knowledge of the amount of profit derived from paying patients, I am not in a position to speak with authority. I may remark, however, that the institution was opened without Government patients, and from 1869 to 1874 received only from 25 to 32 of this class. It was maintained during these years, and it has now a larger number of private patients than it had then. There can be little doubt that the number of private patients would be still larger if more suitable accommodation than at present exists was provided for them; and I am very decidedly of opinion that with more liberal provision in the shape of private accommodation, and possibly some alteration in the lunacy laws which would admit of the reception of inebriate cases as voluntary or committed patients, there would be no difficulty in maintaining a private establishment without Government patients. I have reason to know that the presence of Government patients, though in separate buildings, has deterred some persons from sending private patients to this establishment, and I think it is open to question whether it is not possible to subsidise a private establishment too highly and take away all incentive to improvement, since a proprietor deriving a large and sufficient income from Government patients has but little motive to cater for the requirements of the private patients, for whose benefit the institution should really exist. I have already expressed an opinion that a private asylum for the well-to-do classes has a useful place in an asylum system, but I am in agreement with the highest authorities in Great Britain in believing that the farming out of pauper patients in such institutions is thoroughly wrong in principle, and altogether contrary to public policy, and, further, that it should only be adopted as a matter of necessity, and to as small an extent as possible.

A number of statements and inferences in this letter appear to me to be open to question, but I hardly think it necessary to report on it at any greater length, except to point out that the statement on page 7 that the proprietor "had no reason to suppose that the patients would be withdrawn, and was warranted in believing that they would remain" is scarcely consistent with the wording of the Principal Under Secretary's letter, dated 1st March, 1882, and addressed to Dr. Tucker, which closes with the words, "The Colonial Secretary has determined that under the circumstances, and in consideration that the arrangement between yourself and the Government shall be finally closed and the patients removed at the end of three years asked for by you, that term of extension shall be allowed."

F. NORTON MANNING.

Sir,

Colonial Secretary's Office, Sydney, 10 August, 1885.  
With reference to your communication of the 23rd July last, relative to the renewing of a license to Dr. G. A. Tucker's House for the reception of the insane, I am directed by the Colonial Secretary to enclose, for your information, a copy of a letter which has been addressed to Dr. Tucker, forwarding the license which His Excellency the Governor-in-Council has been pleased to grant to him upon the conditions suggested by you.

I have, &c.,

CRITCHETT WALKER,  
Principal Under Secretary.

The Inspector-General of the Insane.

Sir,

Colonial Secretary's Office, Sydney, 10 August, 1885.  
In reply to your letter of the 29th April last, I am directed by the Colonial Secretary to transmit to you herewith the license which, in compliance with your application, His Excellency the Governor, with the advice of the Executive Council, has been pleased to grant you (upon certain conditions thereon endorsed) under section 24 of the Lunacy Act of 1878, for the keeping of your house, known as Bayview House, on the Cook's River Road, for the reception of 150 insane persons for a term of three years from 1st May last.

I have, &c.,

CRITCHETT WALKER,  
Principal Under Secretary.

George Alfred Josephus Tucker, Esq., Superintendent of the Licensed House, Cook's River Road.

#### LICENSE TO KEEP A LICENSED HOUSE FOR THE RECEPTION OF THE INSANE.

I do hereby, in pursuance of the Lunacy Act of 1878, grant to Dr. George Alfred Josephus Tucker, of Bayview House, Cook's River, a License to be in force for three years from the date hereof, but subject to the conditions hereon endorsed, to keep, for the reception of not more than One Hundred and Fifty Insane Persons of both sexes, the house the particulars of which appear in the Notice given on the 20th day of April to the Colonial Secretary.

Witness my hand this 1st day of May, 1885.

AUGUSTUS LOFTUS,  
Governor.

ALEX. STUART.

#### CONDITIONS upon which the foregoing License is granted.

1st.—A full water supply from the Sydney mains, with hydrants, as a protection against fire, to be provided to the satisfaction of the Inspector-General of the Insane.

2nd.—Alterations to the satisfaction of the Inspector-General of the Insane to be made to the laundry and kitchen.

3rd.—Accommodation equal to at least 600 cubic feet as dormitory space, with day-room space to the satisfaction of the Inspector-General of the Insane to be maintained for each patient.

4th.—Dr. Tucker to submit a plan of the establishment, showing (1st) the measurement of the various rooms, the number of inmates proposed for each room, and the consequent amount of air-space; and (2nd) the mode in which he proposes to allot the patients of the different sexes so as to carry out separation and privacy necessary and ensure the air-space required. The plan and arrangements to be approved by the Inspector-General.

5th.—In the event of the conditions above stated not being fulfilled on the part of Dr. Tucker within six months after the 31st of December, 1885, the Government shall have the right of cancelling the license now granted at the end of twelve months from the date thereof.

Sir,

Colonial Secretary's Office, Sydney, 4 December, 1885.  
I am directed by the Colonial Secretary to state for your information and guidance, that the Colonial Secretary approves of the renewal for a further period of three years from the 1st January next—but only for fifty patients—of the agreement with Mr. George Alfred Josephus Tucker, superintendent of the licensed house for lunatics, Cook's River Road, under which insane patients are placed by the Government with Mr. Tucker for treatment.

I have, &c.,

CRITCHETT WALKER,  
Principal Under Secretary.

The Inspector-General of the Insane.

The

The Hon. The Colonial Secretary,

Bayview House, Sydney, 7 January, 1886.

I do myself the honor of requesting that the license and contract held by Dr. G. A. Tucker, of Bayview licensed house, may be transferred to me, and I undertake to comply with all the conditions thereof.

I have, &c.,

ARTHUR J. VAUSE.

Submitted, 18/1/86. Refer to Dr. Manning.—JOHN ROBERTSON, 18/1/86. The Inspector-General of the Insane.—B.C., 18th January, 1886. C.W.

Dr. Vause has been the Medical Superintendent of this licensed house for nearly four years, and I can see no objection to the transfer of the license and contract to him. I am of opinion, however, that his attention should be specially called to the conditions under which the license was granted, and that he should be furnished with a copy of them.—F.N.M., 23/1/86. The Principal Under Secretary.

Sir,

Bayview House, Sydney, 7 January, 1886.

I do myself the honor of requesting that the license held by me for the Bayview Lunatic Asylum, and my contract with the Government for the care of patients may be transferred to Dr. A. J. Vause, M.B. and O.M., University of Edinburgh.

Dr. Vause has had charge of the Asylum for the past three years and nine months during my absence from the Colony.

I have, &c.,

G. A. TUCKER.

The Hon. The Colonial Secretary.

Sir,

Colonial Secretary's Office, Sydney, 16 February, 1886.

Referring to your blank cover communication of the 23rd ultimo, I am directed by the Colonial Secretary to inform you that His Excellency the Governor, with the advice of the Executive Council, has been pleased to give authority for the transfer to Arthur J. Vause, Esq., M.B., O.M., of the license granted on the 5th May last to Dr. George Alfred Josephus Tucker, for the keeping for a period of three years of a house for the reception of 150 insane persons, and to state that Dr. Vause's special attention has been called to a copy of the conditions under which the license in question was granted.

I have, &c.,

CRITCHETT WALKER,

Principal Under Secretary.

The Inspector-General of the Insane.

To the Honorable the Colonial Secretary,

Sir,

Bayview House, Cook's River Road, Tempe, 28 May, 1886.

Herewith enclosed I beg to forward plans of kitchen, laundry, and other domestic offices which it is proposed to erect at the Bayview Asylum, Cook's River, subject to your approval, according to section 27 and 76 of the Lunacy Act of 1878.

I have, &c.,

A. J. VAUSE.

The 27th section of the Lunacy Act requires that notice of all additions and alterations to licensed houses be given to the Colonial Secretary, whose consent in writing is required before the alterations are carried out.—1/6/86.

The Inspector-General of the Insane, who will perhaps be kind enough to favour me with any suggestions he may desire to offer.—B.C., 1/6/86. C.W.

Sir,

Lunacy Department, Inspector-General's Office, Callan Park, Balmain, 3 June, 1886.

In response to your memo. of the 1st instant, and in accordance with the provisions of Section 76 of the Lunacy Act, I do myself the honor to report that I have carefully examined plans for new kitchens, laundry, and other offices at the licensed house for the insane, Cook's River, submitted by Dr. Vause, with letter dated May 28th, 1886. It is understood that the buildings are to be of brick, and the plans appear to me suitable for the purpose, and not open to any objection as regards the site on which it is intended to place them, or in reference to existing buildings.

I have, &c.,

F. NORTON MANNING.

The Principal Under Secretary.

Sir,

Colonial Secretary's Office, Sydney, 8 June, 1886.

In acknowledging the receipt of your letter of the 3rd instant, reporting, in accordance with section 76 of the Lunacy Act of 1878, upon the plans of kitchens, laundry, and other offices proposed to be erected at the licensed house for the insane at Cook's River, I am directed to inform you that the plans in question have been approved of by the Colonial Secretary, under section 27 of the above cited Act.

I have, &c.,

CRITCHETT WALKER,

Principal Under Secretary.

The Inspector-General of the Insane.

To the Honorable the Colonial Secretary,—

Sir,

Bayview House, Tempe, 30 June, 1886.

I have the honor to forward for your approval, herewith enclosed, plans of stable and buggy shed which it is proposed to erect on the northern boundary of this property, and at the eastern extremity of a galvanised-iron shed or store recently constructed there.

I am, &c.,

A. J. VAUSE.

In accordance with section 76 of the Lunacy Act, I beg to report that the removal of the old stables and coach-house is necessary, and that there is no objection to the erection of new stables and coach-house, according to the plan proposed, on the site mentioned. I recommend that the consent of the Colonial Secretary may be given to the alterations proposed in accordance with section 27 of the Lunacy Act.

F. NORTON MANNING,

Inspector-General.

The Principal Under Secretary.—1/7/86.

Sir,

Colonial Secretary's Office, Sydney, 6 July, 1886.

In acknowledging the receipt of your blank cover report of the 1st instant, in accordance with section 76 of the Lunacy Act of 1878, upon the plans of stable and buggy shed, proposed to be erected at the licensed house for the insane at Cook's River, I am directed to inform you that the plans in question have been approved of by the Colonial Secretary, under section 27 of the above recited Act.

I have, &c.,

CRITCHETT WALKER,

Principal Under Secretary.

The Inspector-General of the Insane.

Sir,

Lunacy Department, Inspector-General's Office, Callan Park, Balmain, 19 July, 1886.

With reference to the conditions under which the license for Bayview House was renewed, under date January 1st, for a period of three years, a copy of which is enclosed, I think it necessary to report, as the six months from December 31st have elapsed, that so far as I am aware none of the conditions except No. 3 have been complied with, and I beg to recommend that a copy of the conditions may be forwarded to Dr. Vause, to whom the license has been transferred, for his report and explanation.

I have, &c.,

F. NORTON MANNING,

Inspector-General.

The Principal Under Secretary.

Sir,

Sir,

Colonial Secretary's Office, Sydney, 9 August, 1886.

In reply to your letter of the 19th ultimo, I am directed by the Colonial Secretary to inform you that the Medical Superintendent of the licensed house for the insane at Cook's River has been requested to furnish me with his report and explanation as to the reason why the conditions, upon which the license for that house was granted, were not all carried out within the time specified.

I have, &amp;c.,

CRITCHETT WALKER,

Principal Under Secretary.

The Inspector-General of the Insane, Callan Park.

Sir,

Bayview House, Tempe, 14 August, 1886.

I have the honor to acknowledge receipt of your letter of the 9th instant, and in reply thereto to inform you that I have not been able to comply with all the conditions referred to therein under the circumstances mentioned below.

As to the first condition, the Sydney water supply has not yet been extended to Tempe, or even sufficiently near thereto, to enable me to obtain a supply of water from it, but in the meantime the best possible protection from fire is provided by hydrants from an elevated tank, a movable fire engine, forc pumps, with all the appliances, hose, &c., and there is an abundant supply of water.

As soon as the Sydney water supply is brought to Tempe I will, of course, have it laid on to the establishment.

(2.) This work is being proceeded with.

The approval of the plans was obtained only on the 8th of June, since which time there has been some little delay in consequence of the brickmakers' strike and the consequent difficulty in obtaining a supply of bricks. The work is, however, being hastened on with all possible despatch.

(3.) This is complied with.

(4.) This is now being prepared. The information could not have been afforded until the approval of the plans, which, as mentioned above, was obtained on the 8th of June.

I have, &amp;c.,

J. A. VAUSE.

Critchett Walker, Esq.

Lunacy Department, Inspector-General's Office, Callan Park, Balmain, 4 September, 1886.

DR. VAUSE'S explanation as to the two and four conditions appear to me satisfactory.

With regard to the first condition, it is clear that Dr. Vause cannot lay on the Sydney water until the mains are extended to Tempe, and as far as I can learn this is not likely to take place for some time. In the meantime, as the Government issues a license to this house, and as the public, under the assurance of the license, send their friends to the institution as a safe and proper place for them, I think that the Government should satisfy themselves that all possible precautions are taken to ensure safety from fire. Considering the character of the buildings, I am not satisfied with the existing condition of things in the case of an institution for the care of insane persons, and I very strongly recommend that Mr. Bear, the Superintendent of Metropolitan Fire Brigades, may be instructed to visit the institution, and report on present arrangements as a precaution and protection against fire.

I presume that, should this recommendation be approved, Dr. Vause will be informed of Mr. Bear's proposed visit and invited to supply all necessary information.

F. NORTON MANNING.

P.S.—It will be remembered that Mr. Bear has already visited Gladesville, Parramatta, and Callan Park, and reported on the fire appliances, &c.—F.N.M.

The Principal Under Secretary.

Sir,

Colonial Secretary's Office, Sydney, 4 September, 1886.

Referring to your communication of the 4th instant, I am directed by the Colonial Secretary to inform you that the Superintendent of the Metropolitan Fire Brigades has been requested to visit the licensed house for the insane at Cook's River, and report upon the present arrangements there as a precaution and protection against fire, and to state that the medical superintendent of that institution has been invited to supply Mr. Bear with all necessary information to enable him to make such report.

I have, &amp;c.,

CRITCHETT WALKER,

Principal Under Secretary.

The Inspector-General of the Insane, Callan Park.

MEMO,—

Lunacy Department, Inspector-General's Office, Callan Park, Balmain, 26 October, 1886.

The arrangement as to boarding out pauper lunatic patients was first made in 1869, when Mr. Tucker took 32 of them. This lasted for six years, when the public asylums, being much overcrowded, and the Government short of funds for building purposes, a contract was made with Mr. Tucker for 100 patients for four years. The term was subsequently extended for one year, and 25 more patients were sent. In 1879, 1881, and 1882 the contract was still further extended, each time against my advice, and in 1882 the arrangement was finally extended for three years, on consideration that the arrangement between Dr. Tucker and the Government shall be finally closed and the patients removed at the end of three years. This decision of Sir John Robertson's was communicated to Mr. Tucker. At the end of the three years further agitation was made, and influence brought to bear, and on 4th December, 1885, contrary to my advice, a further arrangement was made with Mr. Tucker by Sir Patrick Jennings for 50 patients for three years. In January, 1886, Mr. Tucker, without consulting the Government, sold these 50 patients to Dr. Vause for the remainder of his term, which ends in December, 1888. Dr. Vause knew that he was buying 50 patients only, and that the sum he would receive was nearly £3,000 a year (£2,925). I am entirely in favour of private asylums for better-class patients, where such patients, in accordance with fees paid by their friends, can obtain such extra comforts and luxuries as cannot be expected in Government asylums, but any arrangement by which pauper patients are handed over to a private speculator, to be bought and sold seems indefensible. It is, so far as the Government is concerned, a most extravagant arrangement. Mr. Tucker received upwards of £87,000, and the patients could have been maintained in the Government asylums, including all charges for interest on money spent in buildings, for something like half the sum.

The patients are all chronic, and for the most part incurable cases (only 4 having been discharged cured in 1869), and this class of women are kept by the Government at Parramatta for 9s. a week in buildings which cost from £70 to £80 a head to build, reckoning interest on this and maintenance at 10 per cent. The rental of these is £7 to £8 per year, or, say, 3s. a week, so that the total cost is 12s., whilst the Government pay £1 2s. 6d. a week at Cook's River. The arrangement is, in my opinion, objectionable even from the point of view of the success of the private asylum, since the friends of patients sometimes object to send them to a place where Government patients are received, and the proprietor is tempted to rely on the income from the Government instead of improving the accommodation for private patients, and catering in this way for the public.

The Principal Under Secretary.

F. NORTON MANNING.

I concur in Dr. Manning's views herein expressed.—G.R.D., 6/12/86.

Sir,

Colonial Secretary's Office, Sydney, 13 November, 1886.

Referring to my letter of the 21st September last, I am directed by the Colonial Secretary to transmit herewith a copy of a report by the Superintendent of the Metropolitan Fire Brigades upon the present arrangements at the Licensed House for the Insane at Cook's River as a precaution and protection against fire.

I have, &amp;c.,

CRITCHETT WALKER,

Principal Under Secretary.

The Inspector-General of the Insane, Callan Park.

[Enclosure.]

[Enclosure.]

Licensed House for the Insane, Cook's River Road.

Sir,

Metropolitan Fire Brigade, Sydney, 29 October, 1886.

I do myself the honor to state that in accordance with instructions contained in your communication No. 86-9,003, of the 21st September, having reference to the present arrangements in case of fire at the Licensed House for the Insane, at Cook's River Road, and to inform you that I visited that institution on the 19th inst., and report as follows:—

In the first place, I may be allowed to state that most of these buildings are constructed of weatherboard, clustered together, some with tiled roofs, and three of them are of shingle, the latter I need hardly state are highly dangerous for such buildings, especially so in this instance, when the distance between each building is not sufficient to break the communication from each other in case of fire.

The dormitories are for the accommodation of 105 persons, the largest of them holding 15 beds; outside this number there are a few single-bed dormitories; but taking them on the whole the exits are sufficient, if proper watching and care is taken, to release the patients at the time of an outbreak of fire.

The laundry and kitchen is situated in the midst of the other buildings, which should not have been when we take into consideration the inflammable nature of such buildings, and the probability of a mere spark from one of these chimneys setting the whole on fire. However, I am informed by the Medical Superintendent, that they are about to carry on the laundry and kitchen work in the new brick buildings now being erected; if so, the greater danger will then be removed.

The precautions taken for the protection of these buildings against fire are very inadequate, considering their inflammability. In the one case there is a force-pump fixed on the outside of one of the buildings with hose, branch, &c.; in another part of the premises there is a portable engine, with suction pipe to a large underground well; the couplings of the hose are defective, so much so, that they are of different threads, and are very much worn; this alone would be the means of causing a confusion in the dark if a fire was to happen during the night; besides these arrangements there are one or two smaller india-rubber pipes to be used from some of the taps used for domestic purposes, but the head of water is not sufficient for the purpose of extinguishing a fire in such buildings; there is also a portable hand-pump.

My opinion is that it is a great question whether any of these appliances would be effective in case of fire, as the heat from such inflammable buildings would probably be too intense to allow any person getting close enough to put the water on.

For the better protection of these buildings in the future, I should recommend a water main of 2½ inches in diameter, to be taken from the tank which is about to be erected on the new buildings, and to be distributed throughout the premises, mounting water valves with hose and branches attached in convenient places, and, if possible, protected in case of fire from the heat, to enable any person to use them. I should also recommend that when the new water mains are being extended along the Cook's River Road by the Corporation at the commencement of next year that a 3-inch water main be taken from it to the 2½-inch water main before spoken of at the intersection of the connection to the tank. This water main would then give sufficient pressure to command the whole of the buildings; at the same time they would have the tank pressure to fall back upon in case of an accident to the local water mains.

I would further recommend that a better communication be substituted from the various buildings, by electricity or otherwise, to the Medical Superintendent's residence, to enable him to be more quickly called in case of fire.

The three shingle roofs should be done away with.

All hose couplings, branches, &c., should be universal in their threads.

Care should be taken in the trimming and looking after the kerosene lamps which the several buildings are lighted up with.

In conclusion, if these small matters are attended to, and a diligent watch maintained throughout the night, I should say these buildings should be fairly protected against fire; at the same time, if a fire did get a good hold before the water mains are laid on from the street, the probability is that the whole of them would be lost.

I have, &amp;c.,

WILLIAM D. BEAR,

Superintendent of Fire Brigades.

The Principal Under Secretary.

Sir,

Lunacy Department, Inspector-General's Office, Callan Park, Balmain, 11 January, 1887.

With reference to your letter of the 13th November last, forwarding for my information a copy of a report by Mr. Bear, the Superintendent of Metropolitan Fire Brigades, on the present arrangement at the Licensed House for the Insane at Cook's River, I do myself the honor to recommend that the Medical Superintendent of the licensed house may be pressed to carry out the alterations suggested by Mr. Bear, as Mr. Bear states that the existing arrangements are very inadequate.

I have, &amp;c.,

F. NORTON MANNING,

Inspector-General.

The Principal Under Secretary, Sydney.

Sir,

Colonial Secretary's Office, Sydney, 15 February, 1887.

Referring to the letter from the Inspector-General of the Insane, dated the 11th ultimo, recommending that the Medical Superintendent of the Licensed House for the Insane at Cook's River may be pressed to carry out the alterations suggested by the Superintendent of the Metropolitan Fire Brigades in connection with that institution, I am directed by the Colonial Secretary to transmit herewith, for your information, a copy of a communication that has been received from Dr. Vause on the subject.

I have, &amp;c.,

CRITCHETT WALKER,

Principal Under Secretary.

The Acting Inspector-General of the Insane.

Sir,

Licensed House for the Insane, Tempe, 29 January, 1887.

In reply to your letter of the 19th instant, No. 87-379, referring to the report of the Superintendent of the Metropolitan Fire Brigades, I have no objections, as I have already stated in a previous report, to connect with the pipes of the Municipal water supply, as soon as they are brought to the road fronting this establishment. I shall also be glad to have the 2½-inch gauge supply pipes fixed to the tanks in the roof of the new kitchen and laundry, and also to replace hydrants in convenient situations about the buildings, but in this latter matter I would suggest that the Superintendent of the Metropolitan Fire Brigades point out the localities he considers convenient.

I have, &amp;c.,

ARTHUR J. VAUSE,

Medical Superintendent.

O. Walker, Esq., Principal Under Secretary.

My dear Dr. Vause,

Lunacy Department, Inspector-General's Office, Gladsville, 7 March, 1888.

I have gone carefully over plans and memo., and cannot get your accommodation to anything like what you propose. At 600 cubic feet per patient for dormitories (I think it should be 800 for private patients, as 600 is the minimum settled by Poor Law Board for paupers), the total (excluding rooms for attendants and nurses, for which I have calculated 14) is for 25 ladies, 28 gentlemen, and 67 Government patients, total 120; whilst the day space, calculating 30 superficial feet for Government patients and 40 for private patients, is sufficient for 21 ladies, 27 gentlemen, and 84 Government patients. I see there are differences on one or two minor parts; for instance, by calculating three rooms as one, you get in one additional patient, and you make your entrance hall both day and dormitory space, whereas I have calculated it as day space only, as it is wanted to make up the quantity of the latter; but the great difference is in the attendants. I do not see how you provide for them at all. You will see how I have divided them (as far as possible one to each room) in the return herewith. When you have had time to go over the matter again will you send the papers direct to the Colonial Secretary.

I have, &amp;c.,

F. NORTON MANNING.

P.S.—I should very much like to see 800 cub. feet per patient in the dormitory No. 7, for gentlemen, which is not well ventilated, and used for patients of faulty habits.

Dear

Dear Sir,

Metropolitan Fire Brigade, Sydney, 2 April, 1888.

In answer to yours of the 26th ultimo, I have the honor to inform you that I visited the asylum at Cook's River Road, on the 30th ultimo, and found the fire arrangements not yet completed. The contractor informs me that they will be completed in about seven days, when I will again visit and let you know.

I enclose a copy of my letter to Dr. Vause on the subject.  
F. N. Manning, Esq., M.D., Inspector-General of the Insane, &c.

I have, &c.,  
WILLIAM D. BEAR.

[Enclosure.]

Sir,

Metropolitan Fire Brigade, Sydney, 19 March, 1888.

I have the honor to inform you that I took the pressure of the street main this morning in front of your premises, and find it to be 38 lb. to the square inch, therefore very good for the protection of your building.

I would suggest that the main now being laid be broken at the first joint alongside of the fence, an upright piece of 3-inch wrought galvanised iron piping be inserted, with elbow about 3 feet to 3 ft. 6 in. above the ground, and a similar valve-mounted as already fitted to the other part of the building. This valve to be supplied with 100 feet length of best hand-woven hose, branch, and a  $\frac{3}{4}$ -inch nozzle. The whole to be cased in with a water-tight cover, with door and button.

The hose, branch, and nozzle to be always attached.

I hear that a water meter is to be fitted up; if so, it will reduce the flow. I would advise you to ask the City Engineer to allow you to put the water meter on the other side of the fire appliances, for your domestic supply.

If these arrangements are carried out, with a better electric bell communication for yourself from the different buildings in case of accident, I believe the premises might be saved in the event of a fire.

I have, &c.,  
WILLIAM D. BEAR,  
Superintendent of Fire Brigades.

Dr. Vause, Cook's River Asylum.

Sir,

Inspector-General's Office, Gladsville, 23 April, 1888.

In accordance with your B.C. minute of the 20th ultimo, with reference to the renewal of the license at Bayview House, Tempe, I do myself the honor to report that the conditions (copy enclosed) on which the license was renewed in 1885 have been carried out with the exception of the water supply, which is, as the enclosed letter from Mr. Bear, the Superintendent of Metropolitan Fire Brigades, shows, in progress, and will be completed shortly. A copy of the plan of the establishment, together with the schedule of accommodation, is furnished herewith, and I now beg to recommend that the license be renewed for a further period of three years from 1st May, 1888, on the following conditions:—

1. That the place and schedule showing the number of inmates for each room, and the allotment of the patients of the different sexes, so as to carry out the separation and privacy necessary, be adhered to, and no alteration made except with the written consent of the Inspector-General.

That within six months from the renewal of the license, the dormitories of male private patients, shown as No. 7 on the plan and coloured green, be better lighted and ventilated to the satisfaction of the Inspector-General, and only so many inmates apportioned to it as will give 800 cubic feet per patient instead of 600 as at present.

In explanation of the latter condition, I may state that this dormitory is devoted to patients who are paralysed and of faulty habits, and that 600 cubic feet is not a sufficient space for this class even when the room is well ventilated, which the room in question is, very decidedly, not at present.

I am of opinion that in future renewals of this license, 800 cubic feet should be insisted on for all private patients, but Dr. Vause has already done so much to meet the views of the Government and the recommended course made by myself and the official visitors, that I do not think it advisable to insist on this for the renewal now applied for.

I have, &c.,

The Principal Under Secretary.

Dear Sir,

Tempe, 2 April, 1888.

In accordance with the wish expressed in yours of the 29th March, I forward, as an enclosure to my application for a renewal of the license, the coloured plan with which you kindly favoured me. I was not aware that it was necessary.

F. Norton Manning, Esq., M.D.

Yours, &c.,  
A. J. VAUSE.

My Dear Sir,

Private Hospital for the Insane, Tempe, 16 March, 1888.

In compliance with the wish expressed in your note of the 17th instant, returning my application made (under cover to you) to the Colonial Secretary for a renewal of the license held by this establishment, I have sent it direct to the Colonial Secretary, but, in accordance with your suggestion, altered the figures from 137 to 121.

In the calculation with which you kindly favoured me, as to the cubic feet allowed each patient, although ladies' dormitory, No. 3, contains 2,106 feet, only two beds have been allowed, and this I have altered to three.

I propose that for the purpose of increasing the accommodation provided for the ladies to appropriate to their use Government Room, No. 7.

F. Norton Manning, Esq., M.D.

I remain, &c.,  
A. J. VAUSE.

Dear Sir,

Metropolitan Fire Brigade, Sydney, 2 April, 1888.

In answer to yours of the 26th ultimo, I have the honor to inform you that I visited the asylum at Cook's River Road, on the 31st ultimo, and found the fire arrangements not yet completed. The contractor informs me that they will be completed in about seven days, when I will again visit, and let you know.

I enclose a copy of my letter to Dr. Vause on the subject.

F. N. Manning, Esq., M.D., Inspector-General of the Insane, &amp;c.

I am, &c.,  
WILLIAM D. BEAR.

Dr. Vause, Cook's River Asylum,—

Sir,

Metropolitan Fire Brigade, Sydney, 19 March, 1888.

I have the honor to inform you that I took the pressure of the street main this morning in front of your premises, and find it to be 38 lb. on the square inch; therefore very good for the protection of your buildings.

I would suggest that the main now being laid be broken at the first joint alongside of the fence, an upright piece of 3-inch wrought galvanised iron piping be inserted, with elbow about 3 feet to 3 ft. 6 in. above the ground, and a similar valve mounted as already fitted to the other part of the buildings.

This valve to be supplied with 100 feet length of best hand woven hose, branch, and a  $\frac{3}{4}$ -inch nozzle. The whole to be cased in with a water-tight cover, with door and button. The hose, branch, and nozzle to be always attached.

I hear that a water-meter is to be fitted up, if so, it will reduce the flow. I would advise you to ask the City Engineer to allow you to put the water-meter on the other side of the fire appliances, for your domestic supply.

If these arrangements are carried out with a better electric-bell communication for yourself from the different buildings in case of accident, I believe the premises might be saved in the event of a fire.

I have, &c.,  
WILLIAM D. BEAR,  
Superintendent of Fire Brigades.

CONDITIONS upon which the foregoing license is granted.

1st. A full water supply from the Sydney mains with hydrants, as a protection against fire, to be provided to the satisfaction of the Inspector-General of the Insane.

2nd. Alterations, to the satisfaction of the Inspector-General of the Insane, to be made to the laundry and kitchen.

3rd. Accommodation equal to at least 600 cubic feet as dormitory space, with day-room space, to the satisfaction of the Inspector-General of the Insane, to be maintained for each patient.

4th

4th. Dr. Tucker to submit a plan of the establishment, showing—(1st) the measurement of the various rooms, the number of inmates proposed for each room, and the consequent amount of air space; and (2nd) the mode in which he proposes to allot the patients of the different sexes, so as to carry out separation and privacy necessary, and ensure the air space required. The plan and arrangements to be arranged by the Inspector-General.

5th. In the event of the conditions above stated not being fulfilled on the part of Dr. Tucker within six months after the 31st December, 1885, the Government shall have the right of cancelling the license now granted at the end of twelve months from the date thereof.

Sir, Metropolitan Fire Brigade, Sydney, 28 May, 1888.  
I have the honor to report that I visited the Cook's River Lunatic Asylum this morning, and beg to inform you that the fire-extinguishing appliances are to my entire satisfaction.

I may also state that Dr. Vause is connecting up the different blocks with his own house by means of telephone communication.

F. N. Manning, Esq., M.D.

I have, &c.,  
WILLIAM D. BEAR,  
Superintendent, M.F.B.

Sir, Colonial Secretary's Office, Sydney, 30 May, 1888.  
With reference to your letter of the 23rd ultimo, relative to the renewal of a license for Dr. Arthur John Vause's house for the reception of the insane, I am directed by the Colonial Secretary to enclose for your information a copy of a letter which has been addressed to Dr. Vause, forwarding the license which His Excellency the Governor in Council has been pleased to grant to him upon the conditions suggested by you.

The Inspector-General of Insane.

I have, &c.,  
CRITCHETT WALKER,  
Principal Under Secretary.

[Enclosure.]

Sir, Colonial Secretary's Office, Sydney, 30 May, 1888.  
In reply to your letters of the 15th March last and 5th instant, I am directed by the Colonial Secretary to transmit herewith the license which, in compliance with your application, His Excellency the Governor with the advice of the Executive Council has been pleased to grant, upon certain conditions thereon endorsed, under section 24 of the Lunacy Act of 1878, for the keeping of your house, known as Bayview House, on the Cook's River Road, for the reception of 121 insane persons for a term of three years from the 1st instant.

Arthur John Vause, Esq., M.B., Medical Superintendent  
of the Licensed House for the Insane, Cook's River Road.

I have, &c.,  
CRITCHETT WALKER,  
Principal Under Secretary.

LICENSE to keep a Licensed House for the reception of the Insane.

I do hereby in pursuance of the Lunacy Act of 1878 grant to Arthur John Vause, Esquire, M.B., of Bayview House, Cook's River, a license to be in force for three years from the date hereof, but subject to the conditions hereon endorsed, to keep for the reception of not more than 121 insane persons of both sexes, the house, the particulars of which appear in the notice given on the 15th day of March, 1888, to the Colonial Secretary.

Witness my hand this 1st day of May, 1888,—

GOVERNOR.

CONDITIONS upon which the foregoing License is granted.

1st. That the plan and schedule showing the number of inmates for each room and the allotment of the patients of the different sexes, so as to carry out the separation and privacy necessary, be adhered to, and no alteration made except with the written consent of the Inspector-General of the Insane.

2nd. That within six months of the renewal of the license the dormitory for male private patients shown as No. 7 on the plan and coloured green, be better lighted and ventilated to the satisfaction of the Inspector-General, and only so many inmates apportioned to it as will give 800 cubic feet per patient, instead of 600 as at present.

3rd. In the event of the conditions above stated not being fulfilled on the part of Dr. Vause within six months after the 31st day of December, 1888, the Government shall have the right of cancelling the license now granted at the end of twelve months from the date thereof.

Sir, Licensed House for the Insane, Tempe, 21 May, 1888.  
I do myself the honor of applying for a renewal of my contract with the Government, expiring on the 31st December next, for the care of insane patients. The Inspector-General of Insane has been pleased to express himself as satisfied with my conduct of the institution. I have given effect to all suggestions of improvement made by him, and I am engaged in extensive and valuable additions to the buildings.

The Honorable the Colonial Secretary.

I have, &c.,  
A. J. VAUSE, M.B.

Referred to Dr. Manning for report. B.C., 30/5/88.—C.W.

Sir, Lunacy Department, Inspector-General's Office, Gladsville, 28 June, 1888.  
In accordance with your B.C. minute of the 30th ultimo, I do myself the honor to report that the general management of the licensed house at Cook's River is satisfactory, and that Dr. Vause has made very extensive alterations and improvements in the institution—building new kitchen and laundry, laying on water from the Sydney main, and providing fire plugs, telephone communication, &c., &c., during the last two years. Under all the circumstances I beg to recommend that the contract be renewed for fifty patients at the present rate for a further period of three years from 31st December next.

At the same time I have to point out that this is an extravagant mode of providing for insane patients, and is in other respects objectionable.

I have in former communications on this subject (see my reports 29th June, 1885, and 11th August, 1885) shown that the cost to the Government of female patients in Government asylums is not more than 9s. or 10s. per week for all charges, except rental, and that this amounts to at most 4s. a week each for chronic cases, a total of 13s. or 14s. a week; whilst the contract rate at Cook's River is 22s. 6d. I have pointed out the objections to farming-out these helpless patients to be bought and sold and made a profit out of as a mere commercial speculation, and I have shown that there is no real reason for thus indirectly subsidising a licensed house for the insane.

The contract for fifty patients was renewed in 1885 against my recommendations, and I would now beg to urge that there be some final settlement of the matter, and that in granting a renewal of the contract for three years Dr. Vause may be informed that the patients will be removed at the termination of the term for which renewal is now sought, 31st December, 1891.

I would beg to point out that the farming-out of patients has already existed since the year 1874, and that it is time that there should be some finality to an arrangement which was assented to as a temporary expedient only, and which is totally different from ordinary contracts, as it is impossible, or at all events undesirable, to obtain tenders from other persons, which must be very profitable to the contractor, as evidenced by the desire to obtain its continuance.

The Principal Under Secretary.

I have, &c.,  
F. NORTON MANNING,  
Inspector-General.

Approved.—H.P., 5/7/88. Dr. Vause.—I.G. Insane, 6 July, 1888, 89-14,756.

Sir,

Sir, Colonial Secretary's Office, Sydney, 6 July, 1888.  
In reply to your letter of the 29th ultimo, I am directed by the Colonial Secretary to transmit herewith a copy of a letter addressed to Arthur John Vause, Esquire, M.B., Medical Superintendent of the Licensed House for the Insane, Cook's River Road, granting him a renewal, for a further period of three years from the 31st December next, of the agreement entered into between Mr. G. A. J. Tucker and this Government for the care of fifty insane patients.

I have, &c.,  
CRITCHETT WALKER,  
Principal Under Secretary.

The Inspector-General of the Insane.

[Enclosure.]

Sir, Colonial Secretary's Office, Sydney, 6 July, 1888.  
In reply to your letter of the 21st May last, I am directed to inform you that the Colonial Secretary approves of the renewal to you, for a further period of three years from the 31st December next, of the agreement entered into between Mr. G. A. J. Tucker and this Government for the care of fifty insane patients in the licensed house for the insane, known as Bayview House, Cook's River Road, and to state that the patients will be removed from your licensed house at the termination of the period for which this renewal of contract is now granted, viz., the 31st December, 1891.

I have, &c.,  
CRITCHETT WALKER,  
Principal Under Secretary.

Arthur John Vause, Esq., M.B., Medical Superintendent,  
Licensed House for the Insane, Bayview House, Cook's River Road.

Sir, Colonial Secretary's Office, Sydney, 14 August, 1889.  
In reply to your blank cover communication of the 31st ultimo, I am directed to inform you that, in accordance with section 27 of the Lunacy Act of 1878, the Colonial Secretary has approved of the plans therein submitted for the erection of a billiard-room and a summer-house at the Licensed House for the Insane, Cook's River Road, and that the Medical Superintendent thereof has been apprised accordingly.

I have, &c.,  
CRITCHETT WALKER,  
Principal Under Secretary.

The Inspector-General of the Insane.

To the Hon. the Col. Secretary, N. S. Wales,—

Sir, Bayview House, Tempe, 17 December, 1889.  
I have the honor to request that you will take into favourable consideration my application for an additional number of Government female insane patients, under similar arrangements to those in my asylum. I would ask that the number fixed upon may not be less than 100, making, with those at present in my charge, 150, and being only twenty increase of the number of Government patients allowed to my predecessor.

If my request is granted I can, in the course of a few months, have the necessary accommodation (which will be of the most modern style), made, subject, of course, to any alterations or suggestions that may be pointed out by the Inspector-General of the Insane. The plans are already prepared, and can be inspected at any time.

I need scarcely say that I have had a large experience in the care of the insane, and feel sure that any patients sent to me will be cared for in a proper manner, and will be much benefited by the change.

I have, &c.,  
A. J. VAUSE.

This should be referred for report of Dr. Manning in the first instance.—C.W., 10/12/89. Refer, as suggested.—H.P., 23/12/89. The Inspector-General of the Insane.—C.W., P.U.S., 23/12/89.

Lunacy Department, Inspector-General's Office, Gladsville, 3 January, 1890.  
I CANNOT recommend that Dr. Vause's request should be granted. Dr. Vause has been informed that the present arrangement, under which he has the care of fifty Government patients, will cease on 31st December, 1891; and it appears very undesirable that the Government should enter into any new arrangement of a similar character. I have conclusively shown in former reports that insane patients of the class maintained in Dr. Vause's establishment can be maintained at from 13s. to 14s. a week in Government institutions, where they will be better housed, better dressed, and in all other respects as well cared for as under Dr. Vause's care; and in this calculation is included the charge for rent, calculated at 6 or 7 per cent. on the cost of the buildings they occupy. I can see no reason why the Government should pay Dr. Vause 22s. 6d. a week for what they can do even better at 13s. or 14s.

I would beg to point out that Dr. Vause has no claim on the Government to entitle him to any special consideration. The fifty patients now under his care were left there at the urgent request of his predecessor, though the Government were prepared to receive them back into the Government institutions; and Dr. Vause has been well remunerated for the work he has undertaken.

The general management of the licensed house at Tempe has been satisfactory, and Dr. Vause has shown a commendable desire to improve and render more satisfactory the accommodation provided, but I am quite unable to see the bearing of his statement that patients sent to him "will be much benefited by the change," since, so far as I am aware, no Government patient has been discharged as recovered or relieved from Cook's River during the time Dr. Vause has been Medical Superintendent of that institution. It is, perhaps, unnecessary for me to strengthen my position in advocating that the indigent insane, being wards of the State, should not be farmed out for the profit of individuals, by quoting the expression of opinion by authorities on this subject; but I may refer to a report by D. Hack Tuke, an acknowledged authority on the asylums in the province of Quebec, in which he speaks of "the injurious practice of the State contracting with private individuals for the maintenance of its insane poor"; and also to resolutions passed by the Medico-Chirurgical Society of Montreal, which are as follows:—

"That the 'farming' or 'contract' system, either by private individuals or by private corporations, has been everywhere practically abandoned, as being prejudicial to the best interests of the insane, and producing the minimum of cures. That, in the opinion of this Society, all establishments for the treatment of the insane should be owned, controlled, and directed by the Government itself, without the intervention of any intermediate party."

F. NORTON MANNING.

Submitted.—14/1/90. Inform that the officer responsible for the care and management of the insane has reported directly against compliance with Dr. Vause's application, on the grounds of both economy and public policy. Under this report the Government has no course open but to decline.—H.P., 24/2/90. Dr. Vause, 26/2/90.—91—3,263.

Dear Dr. Vause, Lunacy Department, Inspector-General's Office, Gladsville, 29 November, 1890.  
The arrangements you have made for the management of Bayview House during your absence, as detailed in your note of the 22nd instant, seem to me satisfactory, and calculated to work well.

I need not, I think, assure you that anything I can do officially or privately to remove any minor difficulties which may arise will be done, and wishing you a pleasant and in every way satisfactory trip.

I am, &c.,  
F. NORTON MANNING.

Dr. A. J. Vause.

P.S.—If you are near Gloucester you will find Barnwood House, over which Dr. Needham presides, worth a visit. In the north The Retreat is at York is good, and if at Edinburgh you should by all means see Dr. Clouston at Morningside. I will send you any introductions you may wish.

F.N.M.

Dear

Dear Dr. Manning,

In accordance with your suggestion, I am writing to inform you that I propose leaving for England about the 1st of December. I shall probably be away six months, and during my absence Dr. N. P. Elliott, M.R.C.S., Eng., 1880, and L.R.C.P., Edin., 1883, will take medical charge and act as resident superintendent, Mrs. Chas. Bayley will be house-keeper, Mr. H. N. P. Bayley will continue to act as house steward, and Mrs. Hankey matron.

I sincerely trust that all will go on well and satisfactory during my absence. I have done all in my power to make the most satisfactory arrangements, but in the event of any difficulty arising, Mr. Edward Greville, J.P., of 374, George-street, Sydney, will hold a power of attorney from me, and will be able to act in my place.

I feel sure you will extend that kindness and consideration towards the establishment during my absence, that I have great pleasure in saying, you have always shown towards myself.

I will not enter into details relative to the serious nature of my position, but it must be a self-evident fact in the face of the step I am about to take.

I cannot conclude without thanking you very sincerely for the courtesy, sympathy, and unvarying kindness you have invariably shown towards me during the past eight years, and I subscribe myself.

F. N. Manning, Esq., M.D.

Tempe, 22 November, 1890.

Yours, &c.,  
A. J. VAUSE.

Forwarded for the information of the Colonial Secretary. I was unable to visit the institution after Dr. Vause left until the 17th instant. I then carefully inquired into the arrangements made. These arrangements appear to me to be satisfactory. Since they were made, Mr. Bayley has been replaced by Mr. Smart in the office of house steward. I saw Dr. Elliott, who is a qualified medical practitioner, and whose manner impressed me very favourably. I have every reason to think that the institution will be conducted in a satisfactory manner during Dr. Vause's absence, and the patients kindly and properly treated.—F.N.M., B.C., 20/12/90. The Principal Under Secretary.

Submitted, 21/1/91. Approved.—I.P., 21/1/91. The Inspector-General of the Insane.—C.W., P.U.S., B.C., 20/2/91.

Dear Dr. Manning,

I fear I shall not be able to find a suitable medical man to reside at the establishment. Dr. Service, of Newtown, however, has been familiar with the place for some time, is acquainted with the patients, understands the official duties connected with the house, and would undertake the medical part of the work so far as day work goes, but he could not sleep here at night. Under section 34 of the Lunacy Act it appears that a daily visit by a medical man is sufficient for licensed houses containing under 100 patients, and as our numbers are only about ninety I should be glad to know if you would consider Dr. Service's appointment under the above-named circumstances a satisfactory one.

I remain, &c.,  
A. J. VAUSE.

My Dear Dr. Vause,

I shall be glad to do anything I can to meet your views and wishes. It seems to me better to submit the arrangements you propose to Colonial Secretary and ask for his approval. I should not ask for leave of absence, but should write as the proprietor and superintendent state you wish to be absent and submit the name of some medical practitioner to be acting superintendent during your absence.

Yours, &c.,  
F. NORTON MANNING.

Dear Dr. Manning,

Recent communications from England on family matters have rendered it imperative for my interest that I should, as early as possible, return home, and any long delay in doing so might affect me pecuniarily to a very considerable extent. Moreover, my mother is in a critical state of health, and is very desirous of seeing me.

Under these circumstances I should feel obliged by your informing me whether you would recommend, provided arrangements were made to your satisfaction, a leave of absence being granted to me, extending from six to nine months.

Dr. Manning.

Yours, &c.,  
A. J. VAUSE.

Sir,

I have the honor to inform you that Dr. Elliott, the acting Medical Superintendent of this institution, has been suddenly recalled to England on urgent private business, and that I have replaced him by Dr. Henry Budd Hetherington, M.D., C.M., Edinburgh.

I have, &c.,  
EDWD. GREVILLE (Attorney for A. J. Vause, M.B.)

Refer to Dr. Manning.—C.W., 28/4/91. The Inspector-General of the Insane.—C.W., B.C., 28/4/91.

I have seen Dr. H. B. Hetherington, who is a gentleman with excellent medical qualifications, and seems in every way qualified for the position of Medical Superintendent of the licensed house at Cook's River during Dr. Vause's absence.—F.N.M., 1/5/91. The Principal Under Secretary.

Sir,

In reply to your blank cover communication of the 1st May last, I am directed to inform you that the Colonial Secretary approves of Dr. Henry Budd Hetherington acting as Medical Superintendent of the Licensed House for the Insane at Cook's River, during Dr. Vause's absence.

I have, &c.,  
CRITCHETT WALKER,  
Principal Under Secretary.

The Inspector-General of the Insane, Gladesville.

Sir,

I do myself the honor of applying for a three years' renewal of the license granted to the private Hospital for the Insane at Tempe, known as "Bayview House."

The present license expired on the 30th April, and the application is for the accommodation of 137 patients, 102 females and 35 males.

The name in full of the Superintendent (Arthur John Vause) is given in the margin, according to the requirements of section 34 of the Lunacy Act of 1878, and the enclosed statement is in accordance with the requirements of section 28 of the said Act.

To the Honorable the Colonial Secretary.

I have, &c.,  
ARTHUR JOHN VAUSE.

Refer to Dr. Manning.—C.W., 4/3/91. The Inspector-General of the Insane.

The present license is for 121 patients only (see copy with papers), and Dr. Vause's application was for the number particularised as 93 females and 28 males (see his letter of March 15th). The accommodation is certainly not sufficient for a larger number than 120 patients—93 females and 27 males—and I most strongly recommend that the license should not be granted for more than this number, and should bear on the face of it the number of each sex as above given. There has been no additional dormitory accommodation provided since the last renewal of the license, and the buildings will not hold 137 without very improper crowding.—F.N.M., 6/3/91. The Principal Under Secretary.

Sir,

With reference to your blank cover communication of the 6th March last, relative to the renewal of the license for Dr. Arthur John Vause's house for the reception of the insane, I am directed by the Colonial Secretary to enclose, for your information, a copy of a letter which has been addressed to Dr. Vause forwarding the license which His Excellency the Governor-in-Council has been pleased to grant to him.

I have, &c.,  
CRITCHETT WALKER,  
Principal Under Secretary.

The Inspector-General of the Insane.

[Enclosure.]

[Enclosure.]

Sir,

In reply to your letters of the 1st and 24th March last, I am directed by the Colonial Secretary to transmit herewith the license which, in compliance with your application, His Excellency the Governor, with the advice of the Executive Council, has been pleased to grant you, under section 24 of the Lunacy Act of 1878, for the keeping of your house, known as Bayview House, Cook's River, for the reception of 120 insane persons, viz., ninety-three females and twenty-seven males, for a term of three years from the 1st instant.

Colonial Secretary's Office, 2 May, 1891.  
I have, &c.,  
CRITCHETT WALKER,  
Principal Under Secretary.

Arthur John Vause, Esq., M.B., Medical Superintendent,  
Licensed House for the Insane, Cook's River.

LICENSE to keep a Licensed House for the Reception of the Insane.

I do hereby, in pursuance of the Lunacy Act of 1878, grant to Arthur John Vause, Esq., M.B., C.M., of Bayview House, Cook's River, a license, to be in force for three years from the date hereof, to keep, for the reception of not more than 120 insane persons of both sexes (the number of females not to exceed ninety-three, and of males twenty-seven), the house, the particulars of which appear in the notice given on the 1st day of March, 1891, to the Colonial Secretary.

Witness my hand this 1st day of May, 1891,—

JERSEY, GOVERNOR.

Sir,

I do myself the honor of applying for a renewal of my contract with the Government, expiring on the 31st December next for the care of insane patients.

Neither expense nor trouble have been spared to alleviate the sufferings of those under my charge, and my conduct of the institution has met with the approval of the Inspector-General of the Insane.

The Hon. The Colonial Secretary.

The Inspector-General of the Insane for report.—C.W., B.O., 25/6/91.

A. J. VAUSE,  
(Per his Attorney, EDWD. GREVILLE.)

Sir,

In accordance with your B.C. minute of the 25th instant, on a communication from the Medical Superintendent and Licensee of the Licensed House for the Insane at Cook's River, requesting a renewal of his contract with the Government for the care of 50 insane patients, I do myself the honor to recommend that the contract be renewed for 50 patients at the rate of 22s. 6d. a week, for a further period of three years from the 31st December, 1891. I am, however, of opinion, that in renewing the contract it should be distinctly stated to Dr. Vause that *this renewal is granted under exceptional circumstances, and that the Government will remove the patients on 31st December, 1894.* In granting a renewal of the contract for the period of three years from 31st December, 1888, to 31st December, 1891, Dr. Vause was informed by letter of the 6th July, 1888, from your office, that the patients would be removed at the termination of the period for which the renewal was then granted, December 31st, 1891, and the objections to the continuance of the system of farming out these insane people, as set forth in my letters of June 29th and August 11th, 1885, June 28th, 1888, and January 3rd, 1890, remain as strong as ever. There can be no doubt but that, on grounds of economy and public policy, this system should cease and the patients be removed as soon as possible, but there has been such delay in providing accommodation in public asylums to meet the need of insane patients, that at this time the 50 patients now at Cook's River, cannot be provided for therein.

It is hoped that when next the contract expires the Government will be in a better position, and the accommodation in the public asylums less severely taxed than at this time.

The Principal Under Secretary, Sydney.

I have, &c.,  
F. NORTON MANNING,  
Inspector-General.

Sir,

In reply to your letter of the 26th ultimo, I am directed by the Colonial Secretary to transmit herewith a copy of a letter addressed to A. J. Vause, Esq., M.B., Medical Superintendent of the Licensed House for the Insane, Cook's River Road, granting him a renewal for a further period of three years from the 31st December next, of the agreement for the care of 50 insane patients.

The Inspector-General of the Insane, Gladesville.

I have, &c.,  
CRITCHETT WALKER,  
Principal Under Secretary.

[Enclosure.]

Sir,

In reply to your letter of the 23rd ultimo, I am directed to inform you that the Colonial Secretary approves of the renewal to you for a further period of three years from the 31st December next, of the agreement entered into between you and this Government for the care of 50 insane patients in the Licensed House for the Insane, known as Bayview House, Cook's River Road, at the present rate of £1 2s. 6d. each per week, and at the same time to state that this renewal is granted under exceptional circumstances, and that the Government patients will be removed on the 31st December, 1894.

A. J. Vause, Esq., M.B., Medical Superintendent of the  
Licensed House for the Insane, Cook's River.I have, &c.,  
CRITCHETT WALKER,  
Principal Under Secretary.

Dear Sir,

I shall be glad if you can inform me when Dr. Vause is likely to return and resume his position as Medical Superintendent of the licensed house at Cook's River. In intimating that he was going to England, he mentioned in a letter, submitted for the Colonial Secretary's information, that he would probably be absent for six months only.

Edward Greville, Esq., J.P., &amp;c., 8, Park Road, Moore Park, Sydney.

I am, &c.,  
F. NORTON MANNING.

Dear Sir,

Writing from Milan, under date 1st May, Dr. Vause wrote me that his health gave way in England, where he suffered from intense headache and neuralgic pains, and that he had removed to Milan. In his last letter he says that he is still detained within doors. The next will, I hope, contain a more favourable account and also information relative to his return.

Dr. Norton Manning, M.D.

I am, &c.,  
EDWD. GREVILLE.

My dear Sir,

A letter received by me yesterday from Dr. Vause explains his silence. He writes "I have not been able to hold a pen from pain in my right hand. I have been at a hydropathic establishment near here, and feel somewhat better just now. The pains move about, sometimes I have them in the elbow and at others in the hip, and they are very troublesome." He speaks regretfully of his "enforced absence" as "inevitable," his anxiety to return, and solicits a continuance of my supervision.

Dr. Norton Manning.

I am, &c.,  
EDWD. GREVILLE.

My

My dear Sir,  
A cablegram from Dr. Vauso informs me that he is returning. Negotiations with Dr. Hetherington will, therefore for the present be suspended.  
Dr. Norton Manning, &c., &c.

14 December, 1891.

Yours, &c.,  
EDW. GREVILLE.

Sir,  
In reply to your blank cover communication of the 14th instant, I am directed to inform you that in accordance with section 27 of the "Lunacy Act of 1878," the Colonial Secretary has approved of the plans therein submitted for the erection of a fence at the Licensed House for the Insane, Cook's River Road, and that the Medical Superintendent thereof has been apprised accordingly.  
I have, &c.,  
CRITCHETT WALKER,  
Principal Under Secretary.

Colonial Secretary's Office, Sydney, 18 July, 1892.

The Inspector-General of the Insane.

Dear Sir,  
Under separate cover, I am forwarding a tracing of some of the buildings at Bayview. The red line, E.H.G., indicates the position of a proposed fence to be constructed of weatherboards slightly overlapping each other, rounded off at the top, and 7 feet high. A drawing of the fence to a scale of  $\frac{1}{2}$ -inch will be found upon the tracing mentioned. The ground enclosed will be sufficient for recreation purposes, and corresponds to a suggestion made by yourself some time ago.  
I am forwarding the plan of the fence for your approval, under section 27 of the Lunacy Act.

Bayview, Tempe, 6 July, 1892.

Faithfully yours,  
A. J. VAUSE.

P.S.—Anything else upon the tracing besides the red ink line E.H.G. does not come under the present request, but is for future reference.

A.J.V.

Dr. Manning.

Forwarded for the approval of the Colonial Secretary, under the provisions of section 27 of the Lunacy Act.—F.N.M.,  
14/7/92. The Principal Under Secretary.

Dear Sir,  
Under separate cover, I am sending for your approval plans of proposed addition to Government buildings at Bayview, under section 27 of the Lunacy Act. The additions consist of a glazed-in verandah 12 feet wide, with two rooms—one at each end. One room is intended as a matron's sitting-room, and the other is an ante-room or vestibule, entered from the garden by stone steps.

Tempe, 28 September, 1892.

Trusting the plans will meet with your approval.  
F. Norton Manning, Esq., M.D., &c., &c.

I remain, &c.,  
A. J. VAUSE.

Forwarded for the approval of the Colonial Secretary, under the provisions of section 27 of the Lunacy Act.—F.N.M.,  
18/10/92. The Principal Under Secretary.

Sir,  
In reply to your blank cover communication of the 18th instant, I am directed to inform you that, in accordance with section 27 of the Lunacy Act of 1878, the Colonial Secretary has approved of the plans therein submitted, for additions to the Licensed House for the Insane, Cook's River, and that the Medical Superintendent thereof has been apprised accordingly.  
I have, &c.,  
CRITCHETT WALKER,  
Principal Under Secretary.

Colonial Secretary's Office, Sydney, 31 October, 1892.

The Inspector-General of the Insane.

Sir,  
In reply to your letter of the 11th instant, requesting me to favour the Chief Secretary with an expression of my views on an offer made by the Medical Superintendent for the Licensed House for the Insane at Cook's River to provide accommodation for 300 patients at 20s. per week each for a term of ten years, I do myself the honor to advise that on grounds of economy and public policy this offer should not be accepted. The maintenance rate last year for all cases in the Government Hospitals for the Insane was under 12s. a week per patient, and this included the cases who were paid for at liberal rates by friends to the amount of £13,000 a year, and for whom special provision was made to meet such extra payments, as well as criminal patients, who are an expensive class, because they require an extra number of attendants and special care.

Lunacy Department, Inspector-General's Office, Gladsville, 25 July, 1893.

For chronic cases, such as would be sent to Cook's River, the maintenance is about 9s. a week. This was the rate at the Hospital for the Insane, Parramatta, last year, and will not be exceeded either at this Hospital or the Hospital for the Insane, Rydalmere, during the current year.

This maintenance includes all charges except the first cost of buildings. It includes, for instance, all ordinary repairs, painting, &c., to existing buildings.

The cost of buildings may be fairly calculated for chronic cases at about 3s. per week. This being, indeed, a liberal estimate.

From a return which I enclose it will be seen that the buildings erected in connection with the Hospitals for the Insane during the last four years have cost less than £100 per bed—6 per cent. on £100—a liberal allowance—gives a cost of less than 2s. 6d. per bed per week, so that all charges for chronic cases are met by less than 12s. per week, instead of 20s. asked for by Dr. Vauso. I have no hesitation in saying that for this 12s. a week the patients in Government Asylums are as well lodged, as well housed, as well fed, and as well, or better, provided for in every respect as they are likely to be under Dr. Vauso's care, and under these circumstances there appears to be no reason why the Government should pay 20s. for what they do even better at 12s. It is, perhaps, unnecessary for me to go at any length into the question of the public policy of farming out indigent insane people for the profit of individuals, and to be bought and sold as they suit the convenience of these individuals. All experience has been against dealing with the insane, who are wards of the State, in this manner, and the following are resolutions passed by the Medical Chirur. Society of Montreal, where this system was largely tried:—

1st. "That the 'farming' or 'contract' system of providing for the insane, either by private individuals or by corporations, has been everywhere practically abandoned as being prejudicial to the best interests of the insane, and producing a minimum of cures."

2nd. "That, in the opinion of this Society, all establishments for the treatment of the insane should be owned, controlled, and directed by the Government without the intervention of any intermediate party."

The insane in the province of Quebec were until recently farmed out to a corporation called the Sisters of Providence, and Dr. Hack Tuke, an acknowledged authority, reports most unfavourably on the condition of these patients, and concludes his report by stating that "it is amazing that a colony of England so remarkable for its progress and intelligence as Canada can present such a spectacle as that I have so inadequately described as existing. It is the farming out of human beings by the Province to these or any other proprietors against which I venture to protest. It is a radical defect—a fundamental mistake for the Province to contract with private parties or Sisters of Charity for the maintenance of lunatics.

"This, it cannot be too often repeated, is the essential root of the evil, and unless it be removed the evil will remain, and bear bitter fruit. If any steps are to be taken to remove the deplorable condition of the insane it must be by the Province taking the actual responsibility of these institutions into its own hands.

The system has been equally a failure in other countries.

Some years ago the three Messieurs Labitte undertook, under exceptional advantages, to provide for the insane of three or four of the Departments in France at Clermont Saix L'oise. One brother was a physician, one undertook the general and financial management, and the third directed the large farming operations which were carried out. After a time the system was found so unsatisfactory that after much public outcry it was abandoned, and the Government of the Departments undertook to build and provide for their insane under officers of their own.

The

The experience in this Colony of boarding out insane patients has not been altogether satisfactory. It was only after much resistance that the Government recovered possession of seventy-five of the patients boarded out with Mr. Tucker, and the patients were handed over to Dr. Vause with the buildings by process of sale. Since the year 1869 only four Government patients have been discharged as recovered or relieved.

The Principal Under Secretary, Sydney.

I have, &c.,  
F. NORTON MANNING,  
Inspector-General.

RETURN showing cost of Buildings erected in connection with Lunacy Department during 1890-91-92-93.

Institution.	Description of Building.	Date of erection.	Number of Beds.	Cost of Contract.		Cost of Extras.		Total cost.		Cost per Bed.	
				£	s. d.	£	s. d.	£	s. d.	£	s. d.
Parramatta .....	One ward complete; hospital and 13 single rooms.	1890	114	9,100	0 0	1,017	14 10	10,117	14 10	88	15 0
Gladesville ..	One ward complete; stone...	1891	108	8,289	0 0	562	0 0	8,851	0 0	82	0 0
Rydalmere .....	One ward complete; brick; and 18 single rooms.	1892	68	4,995	0 0	285	14 1	5,280	14 1	77	13 1
Newcastle .....	One ward complete; wood and brick.	1892	25	1,799	0 0	53	1 0	1,852	1 0	74	1 7
Gladesville .....	One ward complete; brick...	1893	62	5,798	11 6	*350	0 0	*6,148	11 6	99	3 0

\* Estimate only, the work being in progress.

Sir,

I do myself the honor to request that the consent of the Colonial Secretary be granted, in accordance with section 27 of the Lunacy Act of 1878, to an addition being made to the licensed house, situated at Cook's River, and known as "Bayview House." The plans and description of such addition, according to the requirements of section 25 of the Lunacy Act of 1878, are herewith appended.

F. Norton Manning, Esq., M.D., Inspector-General's Office, Gladesville.

Bayview House, Cook's River, 2 September, 1893.

I have, &c.,  
A. J. VAUSE,  
Medical Superintendent.

MEMO. respecting additions to Buildings at the Licensed House for the Insane at Cook's River.

9 October, 1893.

THE land (5 acres in extent) on which the buildings are erected adjoins the licensed house at Cook's River, and the fences being removed now forms one property with it. The buildings are substantial in character, and are arranged and fitted for better-class patients, who can afford to pay comparatively high rates of maintenance. I recommend that the consent of the Colonial Secretary be granted, under section 27 of the Lunacy Act, to the additions in question, and that they be considered in future as forming a part of the Licensed House for the Insane at Cook's River.

The Principal Under Secretary.

F.N.M.

Sir,

In reply to your blank cover communication of the 9th instant, I am directed to inform you that, in accordance with section 27 of the Lunacy Act of 1878, the Colonial Secretary has approved of the plans therein submitted, for additions to the Licensed House for the Insane, Cook's River, and that the Medical Superintendent thereof has been apprised accordingly.

The Inspector-General of the Insane, Gladesville.

I have, &c.,  
CRITCHETT WALKER,  
Principal Under Secretary.

Sir,

I do myself the honor to forward herewith, for the information of the Chief Secretary, a memorandum on the farming-out of insane at Cook's River. My last report, dated 25th July, was drawn up somewhat hastily, and I have now gone more in detail into the whole question.

The Principal Under Secretary, Sydney.

I have, &c.,  
F. NORTON MANNING,  
Inspector-General.

[Enclosure.]

Memorandum for the information of the Chief Secretary.

THE Licensed House for the Insane at Cook's River was opened early in the year 1863 under the provisions of an Act of Parliament passed in the preceding year, authorising the license by the Government of such establishments, and providing for reception-houses, such as that of Darlinghurst.

As the wards did not fill with private patients, a request appears to have been made to the Government in 1868, before I took office, that the patients in Government establishments for the insane, who were paid for from their own means or by their friends, should be transferred thither, but in the majority of instances the friends objected, and this was only done in three or four cases.

In January, 1869, there being only eight or nine private patients at Cook's River, and room for about forty, an application was made to the Government to send a number of Government patients until such time as the private patients increased in number; and the Government asylums being then in a terrible condition by reason of overcrowding, the Government agreed, in January, 1869, to send twenty-five Government patients, and to pay for them at the rate of 25s. a week, on the understanding that they should be removed as the private patients increased.

As the private patients did not increase (and indeed did not number more than ten until eleven or twelve years after the licensed house was opened), a further number of Government patients was sent, until in 1874 the number was thirty-two.

In July, 1873, the licensee of Cook's River, Mr. G. A. Tucker, applied to the Government to take 100 patients on a lease for four years, and, recognising the great difference in the cost of maintaining male and female patients, offered to take the former for 25s. a week for two years, and 25s. a week for the remainder of the period, and the latter at 22s. 6d. a week for the whole term of four years.

The high price asked, and the objections to the practice of farming out insane patients, which I felt it my duty to set forth in the following terms—

"The system of farming out patients is one to which there are great and well-founded objections. It is wrong in principle, since the cost and maintenance of the insane poor should never be a matter of commercial speculation. It is costly, and it is liable to abuses which are impossible in the plan of providing for the insane in public institutions."— appear to have deterred the Government from entertaining Mr. Tucker's proposal; but in 1874, when these were renewed seeing no hope of relief for the overcrowding in the Government asylums, which was becoming unbearable and dangerous, especially in the wards for women, I was reluctantly compelled, as the least of two evils, to recommend a further proposal made by Mr. Tucker that he should receive sixty-eight more female patients, making, with the thirty-two then in his charge, a total of 100, at a charge of 22s. 6d. a week for a period of four years.

Mr. Tucker agreed to put up special buildings for these patients, and accommodation for sixty-eight patients was erected, at a cost of £4,200, as appears in a letter forwarded to me by Mr. Tucker. This is at the rate of £62 a bed, and these buildings are still in use.

The

The contract commenced on 1st December, 1874, when the additional sixty-eight Government patients were removed to Cook's River, and should have terminated in December, 1879.

Instead of this, however, and notwithstanding my frequent remonstrances and representations, this contract was renewed from time to time, and was only concluded at the close of 1886. Then seventy-five of the patients were removed, but appeals were made to retain the remaining fifty, and these have ever since remained at Cook's River, the present contract for their maintenance at 22s. 6d. a week ending in December, 1894.

During the twelve years during which the 125 patients were farmed out, the Government paid £87,750, exclusive of burial fees, all charges for transfer, &c. Up to December, 1894, the charges for the fifty patients will amount to £23,400, making a total of £111,150, and it is not difficult to show that the licensees of Cook's River have during these twenty years enjoyed a very profitable monopoly.

	£	s.	d.
The annual rate paid at Cook's River at 22s. 6d. a week, amounts per patient to...	58	10	0
And from this must be deducted collections made from patients and their friends by the Master in Lunacy. These in 1892 were somewhat above the average and amounted to per patient .....	2	16	0
Leaving the annual cost of maintenance per patient at .....	56	3	2
The average annual maintenance rate for the last ten years in hospitals for the insane was .....	31	15	11
And this included all expenses of management, together with minor repairs to buildings. From this must be deducted the average collection made by the Master in Lunacy for maintenance, which amounted on an average for the ten years to—per annum per patient.....	3	16	11
Leaving for the cost of maintenance .....	27	19	0
To this must be added £7 7s. for rent of buildings*—a liberal calculation† .....	7	7	0
And 15s. for repairs to buildings carried out by the Government Architect‡ .....	0	15	0
.....	8	2	0
Making the annual cost of maintenance .....	36	1	0

It is necessary, however, in comparing these two calculations of annual cost, to point out :—

1st.—That the Government patients at Cook's River are all women, whilst the patients in the Government establishments are nearly two-thirds men. It is well known that it is much more costly to maintain insane men than women owing to the higher rate of male attendants' wages, the greater cost of men's clothing, and the larger diet scale necessary for men. This is recognised in England, where the difference in cost is reckoned at 1s. a week, or £2 12s. a year, in favour of women, and it is even more in this country as was seen by Mr. Tucker when, as I have previously mentioned, he asked 28s. and 25s. a week for men and 22s. 6d. a week for women.

2nd.—That the Government patients at Cook's River are all chronic cases who are not criminals, whilst those in the Government establishments include criminals and a very large proportion of acute cases, who are admitted to the Government establishments at the rate of 650 per annum. Criminal lunatics are a specially costly class, as they require a larger staff for supervision, and this goes to swell the cost in the Government establishments, and acute cases are also very decidedly more costly than chronics, inasmuch as they require a larger proportion of attendants, more food, medicine and medical care, and are more given to destroy clothing, to say nothing of their requiring more costly buildings and other accessories. This is seen in the lower maintenance rates at Parrmatta and Newcastle, where the patients are largely chronics, as compared with Callan Park and Gladesville where the acute cases predominate—the cost being 9s. 4d. and 9s. 8d. a week, as compared with 10s. 2d. and 10s. 8d. a week respectively.‡

I have no hesitation in saying that female patients of the chronic class are maintained in the Government asylums at very considerably less cost than £34 a year, counting all charges and including interest of money as rent of buildings and cost of repairs of every description. I have made calculations which clearly show this, and yet for patients of this class £56 a year, after all collections are deducted, is paid at Cook's River.

To put the matter briefly, the Government has paid the highest rate for the maintenance of the cheapest kind of lunatics.

The difference between £56 and £34 a year for 125 patients during the twelve years from 1875 to 1886, and for fifty patients during the eight years from 1887 to 1894 inclusive is as follows :—

	£	£
125 patients at £56 a year for 12 years .....	84,000	
50    "       "       8       .....	22,400	
.....	106,400	
125    "    £34    "    12       .....	51,000	
50    "       "       8       .....	13,600	
.....	64,600	
.....	£41,800	

So that in twenty years the Government has paid £41,800 to the proprietors of Cook's River in excess of what the Government patients sent there could have been maintained in Government Establishments—and to what purpose?

The patients would have been as well housed, as well fed, as well clothed, and in every way as well, if not better, cared for in the Government Asylums as at Cook's River—and there could scarcely have been fewer recoveries. The excess in cost has certainly not tended to the recovery of the patients since there has not been a single instance of recovery or discharge since 1880—twelve years ago. The only reason which can be given for the unnecessary expenditure of this large sum of money is by way of subsidising a private asylum for the reception and care of patients able and willing to pay for their maintenance, and this is an object if not of doubtful advantage certainly one to which it is possible to take exception.

The Legislature in Great Britain, by an Act passed in 1890, has seen fit to stop all further licenses to private houses, and in the Colony of Victoria it is not now legal to keep an institution of this character.

There is indeed no private asylum in any of the Australian Colonies except New South Wales—and, as a consequence, patients are sent here from Victoria and Queensland—a decided proportion of the patients in Cook's River being drawn from these Colonies, which are thus reaping advantages at the expense of New South Wales and sending their insane to swell our Statistics.

But even admitting that a private asylum is an advantage—which I am inclined to do—and should be subsidised in its early stages, which is a doubtful question, I would submit :—

1st.—That there is now no longer any reason for continuing this subsidy, since the number of private patients at Cook's River, including those from other Colonies, has now reached fifty-four, and their payments return a large income to the proprietor.

2nd.—That if the subsidy is to be continued it should take the direct form of an annual grant voted by Parliament, and not given indirectly as at present.

I have shown that there has been no economy but a greatly increased cost in farming out insane patients, and, incidentally, that by reason of political and other extraneous influences, it has been found difficult for the Government to regain possession of the patients farmed out. It is now necessary to point out that the whole principle of farming out insane patients is wrong.

The

\* See Appendix A.

† See Appendix B.

‡ Report of Inspector-General of the Insane for 1892.

The Government and the patients farmed out have been singularly fortunate in having to deal with Dr. Vause during the last eight years, but this has been by accident only—since the patients under the contract with the Government were sold to him without the consent of the Government, and there is nothing now to prevent the contract being transferred to someone else, who may be but little fitted for the charge.

It can never be right to place helpless insane persons under the charge of any individual whose interests are to maintain them at the lowest possible rate for his own profit.

The material interests of the patients conflict with the pecuniary interests of the individual. No system of inspection can altogether prevent abuse and wrong, and experience has shown that it is difficult in the extreme to keep up, through inspecting officers, a proper standard of general care when the person in charge is governed mainly by pecuniary considerations.

If the system of farming out has anything to recommend it, why should it not be applied to the ordinary pauper who can speak for himself and show where it pinches, rather than to the lunatic who is under special disabilities in making known grievances and abuses.

So far as I am aware the farming out of insane patients for profit, which is a totally different thing to boarding them out with their relatives, who are unable to maintain them without some assistance, has never been a success, and often a lamentable failure, and in a former communication I have quoted the opinion of authorities on this subject.

Turning to the proposal recently made on behalf of the licensee at Cook's River to take 300 patients at 20s. a week, on which I have already reported, I desire now to point out that each and all of the objections, which are stated with regard to the existing arrangements, apply to this proposal. The cost is still much greater than the patients can be provided for by the Government in its own establishments. The site of the estate at Cook's River is far from good, and the area of land, even with recent additions, too limited to afford the necessary privacy, recreation and employment for this number in addition to the private patients.

There will be even greater difficulty in regaining possession of the patients, since the interests involved will be larger and more worth striving for by means of political and other influences, and the Government is but little likely, unless some public outcry is made, to be in a position to receive back such a large number at the termination of the contract.

Further, the contract will be a monopoly. Several applications have from time to time been received from persons willing to take charge of the insane for profit, and if the Government still desires to farm out patients it might be advisable that tenders for the purpose be invited, and those which appear most eligible receive due consideration. I do not, however, recommend this course.

The proprietor of the licensed house at Cook's River has no claim upon the Government. He bought out the original proprietor. A contract, originally entered into for four years, has been prolonged to twenty, and the last renewal of the agreement for fifty patients was made in July, 1891, for three years, and therein it was expressly stated that "the renewal is granted under exceptional circumstances, and the Government patients will be removed on 31st December, 1894."

In conclusion, I have to point out that it will be necessary to place on the estimates the large sum of £15,600 a year to meet the charge of farming out 300 patients, whilst immediate needs will be met by carrying out the buildings at Rydalmere and Goulburn, for which plans have been prepared and tenders invited.

## APPENDIX A.

RETURN showing Cost of Buildings for 1,655 patients, erected since the year 1860.

Date of Erection.	Description of Building.	Hospital.	No. of Beds.	Contract.	Extras, &c.	Total Cost.	Cost per Bed.
1869-70	Weatherboard .....	Parramatta .....	300	£ 7,809	£ 1,853	£ 9,662	£ 32
1879-81	" with brick single rooms and administrative buildings.	" .....	350	40,347	2,001	42,358	121
1877-79	Weatherboard, with brick single rooms and administrative buildings.	Callan Park .....	90	8,365	697	9,062	100
1892	Weatherboard .....	Newcastle .....	25	1,799	53	1,852	74
Weatherboard and brick buildings for 765 beds cost £62,934, or £82 per bed.							
1870-72	Stone .....	Gladesville .....	121	4,330	1,003	5,333	44
1878-79	" .....	" .....	49	3,600	309	3,909	79
1879-81	" .....	" .....	164	31,333	2,123	33,456	204
1890-91	" .....	" .....	108	8,239	562	8,859	82
1873-75	" .....	Parramatta .....	106	18,750	1,604	20,354	192
1883-84	" .....	" .....	101	8,571	1,200	9,771	97
1890-91	" .....	" .....	114	9,100	1,017	10,117	88
1874-75	Brick .....	Newcastle .....	59	2,430	1,318	3,748	63
1891-92	" .....	Rydalmere .....	66	4,995	255	5,280	77

Stone or brick buildings for 890 beds cost £100,827, or £113 per bed.

Weatherboard, brick, and stone buildings for 1,655 beds cost £162,761, or £98 per bed.

The cost per bed for buildings for 1,655 patients is £98; and allowing 7½ per cent.—a liberal rate—as annual charge for interest on the outlay, gives an annual rental per patient of £7 7s.

## APPENDIX B.

A sum varying from £2,000 to £6,000 a year is voted annually on the Estimates of the Government Architect's Department for "additions, alterations, repairs, furniture, &c.," to institutions for the insane generally.

The vote has averaged £4,800 during the last ten years, and about one-half has been expended in permanent additions, &c., leaving £2,400, or about 15s. per patient per annum, for repairs.

My dear Manning,

I send you Mr. Hibble's return regarding the cost of maintenance of lunatics in the Asylums, which I hope you will find correct.

Chief Secretary's Office, Sydney, 5 February, 1894.

Yours sincerely,

CRITCHETT WALKER.

## LUNACY.

Recapitulation of Expenditure from 1857 to 1892.

	Maintenance.		Buildings, &c.		£	s.	d.
Official Visitors .....					13,289	15	4
Institutions generally .....					37,365	1	5
Lunatic patients .....					140,930	19	4
Gladesville .....	£574,246	14 5	£153,277	2 6	727,473	16	11
Parramatta .....	608,680	19 6	132,247	10 6	740,928	10	0
Reception House .....	28,866	19 8	8,164	15 9	37,031	15	5
Newcastle .....	119,760	0 11	18,535	9 1	138,295	10	0
Callan Park .....	182,502	9 5	192,542	10 10	375,045	0	3
Cooma .....	19,111	10 1	1,650	0 0	20,761	10	1
Buildings and unclassified .....					215,167	11	2
					£2,446,289	9	11
					MAINTENANCE		

MAINTENANCE Return, less deduction of Collections.

Year.	Buildings, &c.— Cost of.	Buildings, &c.— Accrued cost of.	Interest on total cost of Build- ings, &c., at 5 per cent.	Maintenance in full.	Average number of patients	Rate per week.		
						Buildings, &c.	Maintenance.	Total.
1883	£ 68,326	£ *544,865	£ 27,243	£ 76,600	2,347	4 5 1/2	11 10 1/2	16 4
1884	53,310	598,175	29,908	75,003	2,435	4 7 1/2	11 10	16 5 1/2
1885	25,964	624,139	31,206	77,436	2,535	4 8 1/2	11 8 1/2	16 5 1/2
1886	6,921	631,060	31,553	77,172	2,639	4 7 1/2	11 2 1/2	15 10
1887	5,023	636,083	31,804	79,018	2,722	4 6	11 2	15 8
1888	10,593	646,676	32,333	79,478	2,815	4 5	10 10 1/2	15 3 1/2
1889	6,118	652,793	32,639	80,932	2,880	4 4	11 6 1/2	15 10 1/2
1890	21,243	674,037	33,701	84,904	2,960	4 4 1/2	11 0 1/2	15 4 1/2
1891	†18,069	692,106	34,605	89,177	3,149	4 2 1/2	10 10 1/2	15 1
1892	†13,056	705,162	35,258	95,329	3,151	4 3 1/2	11 7 1/2	16 11

\* Exclusive of expenditure prior to year 1857. † The sum of £15,158, purchase of Rossiville, not included. ‡ The sum of £1,216, part purchase of Rossiville, not included

MAINTENANCE Return, less deduction of Collections.

Year.	Buildings, &c.— Cost of.	Buildings, &c.— Accrued cost of.	Interest on total cost of Build- ings, &c., at 5 per cent.	Maintenance, less Collections.	Average number of patients.	Rate per week.		
						Buildings, &c.	Maintenance.	Total.
1883	£ 68,326	£ *544,865	£ 27,243	£ 65,721	2,347	4 5 1/2	10 8 1/2	15 2 1/2
1884	53,310	598,175	29,908	67,003	2,435	4 7 1/2	10 6 1/2	15 7 1/2
1885	25,964	624,139	31,206	68,545	2,535	4 8 1/2	10 4 1/2	15 1 1/2
1886	6,921	631,060	31,553	67,181	2,639	4 7 1/2	9 9 1/2	14 4 1/2
1887	5,023	636,083	31,804	68,723	2,722	4 6	9 8 1/2	14 2 1/2
1888	10,593	646,676	32,333	68,528	2,815	4 5	9 4 1/2	13 9 1/2
1889	6,118	652,793	32,639	75,546	2,889	4 4	10 0 1/2	14 4 1/2
1890	21,243	674,037	33,701	73,002	2,960	4 4 1/2	9 5 1/2	13 10 1/2
1891	†18,069	692,106	34,605	75,669	3,149	4 2 1/2	9 2 1/2	13 5 1/2
1892	†13,056	705,162	35,258	80,841	3,151	4 3 1/2	9 10 1/2	14 1 1/2

\* Exclusive of expenditure prior to year 1857. † The sum of £15,158, purchase of Rossiville, not included ‡ The sum of £1,216, part purchase of Rossiville, not included

LUNACY Expenditure from 1857 to 1892.

Year.	Maintenance.			Buildings, &c			Total.		
	£	s.	d.	£	s.	d.	£	s.	d.
1857	20,440	12	1	1,000	0	0	21,440	12	1
1858	22,500	18	6	6,791	6	7	29,292	5	1
1859	17,867	16	4	6,884	9	3	24,752	5	7
1860	18,412	16	6	517	11	10	18,930	8	4
1861	17,248	9	1	6,452	9	7	23,701	8	8
1862	20,863	3	11	10,412	1	1	31,375	6	0
1863	17,333	5	3	4,915	2	3	22,248	7	6
1864	21,285	17	10	3,955	8	0	25,241	6	10
1865	21,323	10	3	5,946	15	1	27,270	5	4
1866	23,162	1	3	10,813	18	0	33,975	19	3
1867	21,103	5	3	10,938	10	0	32,041	15	3
1868	26,109	13	9	13,689	2	8	39,798	16	5
1869	28,226	16	1	11,044	13	1	39,271	9	2
1870	29,152	11	4	7,556	14	2	36,709	5	6
1871	31,716	17	0	5,895	15	11	37,612	12	11
1872	33,948	4	1	2,463	13	0	36,411	17	1
1873	36,989	14	3	22,136	2	8	59,125	16	11
1874	39,931	17	11	22,438	15	4	62,370	13	3
1875	45,245	12	9	21,626	10	2	66,872	2	11
1876	51,933	6	11	14,633	14	2	66,617	1	1
1877	55,705	13	5	65,847	10	10	121,553	4	3
1878	58,042	10	7	26,945	18	1	84,988	8	8
1879	55,219	0	1	17,519	7	5	72,737	7	6
1880	60,128	18	9	25,634	4	10	85,763	3	7
1881	63,592	6	0	66,606	1	8	130,199	7	8
1882	70,064	8	7	83,872	16	3	153,937	4	10
1883	72,600	10	10	68,326	14	4	140,927	15	2
1884	75,003	8	8	53,310	7	5	128,313	16	1
1885	77,436	18	6	25,964	5	3	103,401	3	9
1886	77,172	0	9	6,921	8	9	84,093	9	6
1887	79,018	1	6	5,023	13	8	84,041	15	2
1888	79,478	2	9	10,593	15	4	90,070	18	1
1889	86,932	17	9	6,118	8	9	93,051	6	6
1890	84,904	12	1	21,242	18	8	106,147	10	9
1891	89,177	4	3	33,226	17	0	122,404	1	3
1892	95,329	0	7	14,271	13	5	109,600	14	0
	£1,724,751	5	5	£721,538	4	6	£2,446,289	9	11

EXPENDITURE in connection with the Hospitals for Insane, 1857 to 1892.

Year.	Official Visitors.	Institutions generally.	Lunatic Patients	Gladesville.		Parramatta.	
				Maintenance.	Buildings, &c.	Maintenance.	Buildings, &c.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1857	.....	.....	.....	8,545 19 8	.....	11,894 12 5	1,000 0 0
1858	.....	.....	.....	9,107 4 10	5,991 6 7	13,393 13 8	800 0 0
1859	.....	.....	.....	7,528 15 6	4,777 8 11	10,339 0 10	2,107 0 4
1860	.....	.....	.....	11,154 3 4	119 9 0	7,258 13 2	398 2 10
1861	.....	.....	.....	7,857 16 5	3,157 0 4	9,390 13 8	3,295 18 3
1862	*237 10 0	.....	.....	8,041 4 4	6,614 11 1	12,684 9 7	3,797 10 0
1863	*260 0 0	.....	.....	7,880 18 0	2,918 4 6	9,192 7 3	1,996 17 9
1864	*260 0 6	.....	.....	10,669 17 1	4,571 14 6	10,456 0 9	3,955 8 0
1865	*260 0 0	.....	.....	10,397 2 4	8,472 13 5	10,666 1 6	1,475 7 0
1866	*375 0 0	.....	.....	11,458 8 8	6,767 13 9	11,328 12 7	1,841 4 7
1867	*208 6 5	.....	.....	10,856 14 2	8,484 4 9	10,038 4 8	800 0 0
1868	125 0 0	1,870 14 0	.....	12,079 11 9	3,416 5 7	11,961 18 7	4,784 13 11
1869	550 0 0	.....	.....	15,857 7 8	4,978 4 7	11,207 13 0	7,628 7 6
1870	544 6 3	.....	1,609 3 4	13,004 9 11	746 10 1	13,309 1 6	2,578 9 7
1871	350 0 0	.....	2,018 15 0	13,477 8 10	1,969 16 5	14,093 9 5	376 10 8
1872	350 0 0	.....	2,087 18 6	13,326 1 3	8,810 12 5	13,610 1 7	276 17 4
1873	350 0 0	.....	2,099 10 5	14,248 10 10	4,116 18 8	15,518 14 5	6,907 5 0
1874	350 0 0	.....	2,917 10 2	15,427 14 0	8,562 4 11	16,463 15 8	4,728 11 0
1875	338 12 2	800 0 0	6,175 13 8	15,963 19 6	5,348 16 4	16,092 1 10	10,387 18 11
1876	342 4 10	998 10 5	9,752 13 7	17,293 6 11	.....	17,252 13 1	1,825 5 5
1877	350 0 0	350 19 0	11,764 0 8	17,471 4 11	23,752 5 6	18,433 10 6	25,000 0 0
1878	350 0 0	1,527 19 6	9,707 8 11	18,184 15 0	10,993 19 2	18,891 3 2	13,145 17 5
1879	350 0 0	1,117 3 6	7,836 17 1	17,975 3 4	11,781 7 8	15,908 7 8	1,867 4 8
1880	500 0 0	1,417 1 6	9,803 2 2	17,260 4 9	208 3 10	17,999 13 10	.....
1881	500 0 0	1,400 18 6	9,953 12 4	19,246 15 3	.....	18,885 4 1	8,431 0 2
1882	478 6 8	1,395 1 7	9,968 3 7	21,692 10 6	5,069 15 8	21,487 5 2	12,731 7 0
1883	500 0 0	2,098 7 7	9,018 0 2	22,455 1 8	.....	22,751 17 0	2,065 5 1
1884	450 0 0	2,324 12 8	8,723 17 6	23,490 9 4	4,197 14 10	23,622 10 1	6,998 18 2
1885	500 0 0	1,658 14 10	8,750 17 3	22,001 5 2	.....	23,057 16 2	1,151 10 0
1886	659 10 0	1,710 0 6	3,425 2 6	23,113 15 9	.....	24,492 13 6	.....
1887	655 0 0	1,702 13 5	3,591 18 3	22,009 19 8	.....	24,610 15 7	.....
1888	670 0 0	1,758 16 0	3,765 19 2	21,857 11 9	{ 7,400 0 0 }	24,353 4 8	.....
1889	658 15 10	1,703 16 1	4,840 19 10	23,245 14 4	{ purchase of land }	26,473 7 6	.....
1890	535 0 0	1,954 2 1	4,147 5 6	23,341 16 0	.....	26,022 6 5	.....
1891	627 3 2	1,745 17 11	5,126 8 9	23,676 13 9	.....	26,651 9 10	.....
1892	*605 0 0	1,706 15 4	3,798 6 0	22,646 18 2	.....	23,319 4 4	.....
	.....	†7,502 16 3	.....	.....	.....	Rydalmere, 5,588 10 10	.....
	13,289 15 4	37,365 1 5	140,930 19 4	574,246 14 5	153,277 2 6	608,680 19 6	132,247 10 6

Year.	Darlinghurst.		Newcastle.		Callan Park.		Cooma.	
	Maintenance.	Buildings, &c.	Maintenance.	Buildings, &c.	Maintenance.	Buildings, &c.	Maintenance.	Buildings, &c.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£
1866	.....	500 0 0	.....	.....	.....	.....	.....	.....
1867	.....	3,370 16 3	.....	.....	.....	.....	.....	.....
1868	72 8 8	420 4 0	.....	.....	.....	.....	.....	.....
1869	611 15 5	.....	.....	.....	.....	.....	.....	.....
1870	625 10 4	.....	.....	.....	.....	.....	.....	.....
1871	749 11 1	.....	1,027 12 8	.....	.....	.....	.....	.....
1872	881 0 11	.....	3,713 1 10	.....	.....	.....	.....	.....
1873	893 12 10	.....	3,379 5 9	2,000 0 0	.....	.....	.....	.....
1874	964 16 3	.....	3,315 11 10	2,151 0 0	.....	.....	.....	.....
1875	1,009 10 10	.....	4,875 14 9	665 6 4	.....	.....	.....	.....
1876	952 14 1	.....	5,391 4 0	5,593 18 3	.....	1,865 14 2	.....	.....
1877	992 1 10	2,805 15 6	5,353 16 6	4,728 16 2	.....	9,073 15 2	.....	.....
1878	976 7 9	.....	5,707 12 2	.....	.....	745 11 6	2,697 4 1	1,650
1879	1,018 12 7	1,068 0 0	5,314 4 4	1,059 4 6	2,594 18 11	1,500 17 3	3,048 10 8	.....
1880	1,005 9 6	.....	5,351 2 11	2,307 3 10	3,997 9 2	21,662 10 1	2,851 16 11	.....
1881	1,122 15 2	.....	5,399 13 1	.....	4,402 3 11	57,685 11 0	2,681 3 8	.....
1882	1,315 6 10	.....	6,004 18 4	.....	5,042 15 7	47,651 0 0	2,680 0 4	.....
1883	1,342 6 4	.....	6,417 10 6	.....	5,130 19 1	13,999 2 5	2,652 15 2	.....
1884	1,549 15 7	.....	6,302 3 3	.....	6,274 14 4	26,713 8 7	2,499 19 3	.....
1885	1,600 15 11	.....	6,209 8 9	.....	13,659 0 5	11,417 18 5	.....	.....
1886	1,696 7 7	.....	6,461 1 7	.....	15,613 9 4	227 2 3	.....	.....
1887	1,544 1 5	.....	6,469 18 3	.....	18,393 14 11	.....	.....	.....
1888	1,574 15 5	.....	6,286 13 3	.....	19,211 2 6	.....	.....	.....
1889	1,552 6 10	.....	6,872 15 11	.....	21,585 1 5	.....	.....	.....
1890	1,536 17 6	.....	6,175 15 0	.....	21,161 9 7	.....	.....	.....
1891	1,714 6 3	.....	6,577 7 3	.....	23,058 2 4	.....	.....	.....
1892	1,594 12 9	.....	6,154 9 0	.....	22,377 7 11	.....	.....	.....
	28,866 19 8	8,164 15 9	119,760 0 11	18,535 9 1	182,502 9 5	192,542 10 10	19,111 10 1	1,650

\* Styled allowance to Medical Board. † £7,522 16s. 3d. under "General" to be distributed to various institutions; particulars not taken.

Unclassified Buildings, &c. (separate sheet) .....£215,167 11s. 2d.

## BUILDINGS, &amp;c.—ASYLUMS GENERALLY.

Particulars of the amounts chargeable to each institution not obtainable.

Year	Loans.			Revenue.		
	£	s.	d.	£	s.	d.
1871.....	4,772	15	2	.....	.....	.....
1872.....	216	19	3	.....	.....	.....
1873.....	4,418	5	3	.....	.....	.....
1874.....	11,446	15	8	.....	.....	.....
1875.....	.....	.....	.....	2,011	0	0
1877.....	486	18	6	.....	.....	.....
1878.....	410	10	0	.....	.....	.....
1879.....	242	13	4	.....	.....	.....
1880.....	1,426	7	1	.....	.....	.....
1881.....	433	10	6	.....	.....	.....
1882.....	16,352	8	6	.....	.....	.....
1883.....	48,822	8	0	5,505	3	11
1884.....	8,062	18	10	7,337	7	0
1885.....	900	0	0	12,494	16	10
1886.....	318	15	3	6,375	11	3
1887.....	1,025	0	0	3,998	13	8
1889.....	220	1	0	2,972	14	4
1889.....	118	8	9	6,000	0	0
1890.....	7,022	2	9	14,220	15	11
1891.....	*23,260	15	5	9,966	1	7
1892.....	8,435	2	0	15,836	11	5
	<u>£138,448</u>	<u>15</u>	<u>3</u>	<u>£76,718</u>	<u>15</u>	<u>11</u>
					£215,167	11 2

\* Includes £15,158, account Rossville.

† Includes £1,216 4s. 2d., account Rossville.

Sir,

Chief Secretary's Office, Sydney, 21 March, 1894.

With reference to your letter of the 1st December last, forwarding a memorandum on the farming out of insane at Cook's River, I am directed to inform you that the Chief Secretary having carefully perused and considered your reports, and the proposals of the Medical Superintendent of the Licensed House for the Insane, Cook's River, and having had the figures of cost at the private establishment and the cost of patients in Government institutions carefully checked, has come to the conclusion that no further extension of the system of boarding out of insane should be permitted, and to state that Dr. Vause has been so informed, and that his proposal cannot be accepted.

2. I am desired to add that Sir George Dibbs fully concurs in your report and suggestions contained in your paper of the 1st December last, and to request that you will be good enough to make the necessary arrangements for carrying the same into effect.

I have, &amp;c.,

CRITCHETT WALKER,  
Principal Under Secretary.

The Inspector-General of the Insane.

Sir,

"Bayview" Licensed House for the Insane, Cook's River, 21 April, 1894.

The contract for the maintenance of fifty Government patients will expire on 31st December, 1894, and I do myself the honor of requesting its renewal.

I have, &amp;c.,

A. J. VAUSE.

To the Honorable the Chief Secretary.

Refer to Dr. Manning.—C.W., B.C., 26/4/94. The Inspector-General of the Insane.

Sir,

Lunacy Department, Inspector-General's Office, Gladesville, 7 May, 1894.

In reply to your B.C. minute of the 26th ultimo, I do myself the honor to inform you that acting on the decision of the Chief Secretary, as conveyed to me by your letter of 21st March last, that no further extension of the system of boarding-out insane patients should be permitted, and in accordance with your request that I would make the necessary arrangements for the carrying this into effect, I have, as far as possible, hurried forward the erection of the new buildings for women in connection with the hospital for the insane at Rydalmere.

These buildings will be ready for occupation about October next, and I shall, therefore, be in a position to receive the fifty Government patients now at Cook's River when the contract expires on 31st December, 1894.

I beg to point out that when the contract with Dr. Vause was renewed for a further period of three years from 31st December, 1891, he was expressly informed that "this renewal was granted under exceptional circumstances, and that the Government patients would be removed on 31st December, 1894."

I have, &amp;c.,

F. NORTON MANNING,  
Inspector-General.

## BAYVIEW HOUSE.

This institution was opened in 1863, under the management of Dr. Tucker, the proprietor.

In January, 1869, the Government sent twenty-five patients, for which they paid at the rate of 25s. per head per week, the conditions being that as the private patients increased the Government ones should be withdrawn.

Up to 1874 there was no increase in private patients, and Government patients in that year numbered thirty-two.

In 1873 Dr. Tucker applied for 100 patients to be placed under his care and treatment, which application was then refused.

In 1874 this latter proposal was renewed and agreed to, when the number of Government patients was increased to 100 for a period of four years, at 22s. 6d. per head per week.

This contract was subsequently continued up to the 31st December, 1885, with a further increase in patients of twenty-five.

From the commencement of 1886, when Dr. Vause took charge of the establishment, the number of patients was reduced to fifty, at the charge previously paid.

This contract has been renewed, the last renewal being for three years from 1st January, 1892, and terminating on the 31st December, 1894. When this renewal was sanctioned in July, 1891, Dr. Vause was distinctly informed by letter that all Government patients would be withdrawn at the end of that term, namely, 31st December of this year.

C.W., 23/5/94.

Dr. Vause might be informed that the contract will not be renewed.—C.W., 11/7/94.

The Chief Secretary declines to do this, Dr. Vause having already been informed of the termination of his contract.—C.W.

## J2.

## CASE No. 2.

Age, 43 (on first admission); social condition, married; number of children, nil; occupation, storekeeper; \* \* \* religion, Presbyterian; form of mental disorder, mania; supposed cause, overwork; duration of attack, several weeks; prior attacks, one (been in Cook's River Hospital); admitted, 22nd January, 1883.

*Previous history.*—When he was first in the Reception House about two months ago he made his escape at night through a window measuring 9½ in. x 10½ in. He was then sent to Cook's River Hospital for the Insane; and while there he made two keys—one of wood and one of wire—to fit the locks of the ward and outer doors. He made his escape from there, and a short time after was discharged at his wife's request. He seems to have rapidly become worse while at home, and is now more troublesome than he ever had been before. He went about naked, carried a loaded revolver, &c. In the Reception House he was excitable, noisy, and very troublesome by day, and at night he was very noisy, and destroyed his bed-clothes.

*On admission.*—He was very restless and excited, constantly talking and impressing on people his own importance and knowledge. He was apt to become ill-tempered and troublesome if interfered with, and often did all he could to pick a quarrel with patients and attendants, but especially with the latter. His tendency was to exaggerate everything he spoke of; said that when being arrested he put two detectives out of his house, and knocked down three or four more. He said that he was strong enough to beat any man here, and evidently believed he was capable of doing so. He believed that great respect was owing to him. He took his food well, but was sleepless and noisy at night.

*After admission.*—He is described as the most troublesome patient in the hospital; tried to pick quarrels with attendants and would then report them, but on very careful investigation his charges were found to be untrue. After a time he became rather less troublesome, but not less anxious to escape. On 28th February, 1883, it is recorded that a few days previously he had made a determined effort to escape. With a spoon, which he got into his room, he cut away the wood around the lock-plate of his door, and got into the corridor. He made a rope which, with the assistance of an epileptic patient, he intended to use to strangle the night watch, and then get his key. Fortunately his companion did not get out of his room in time, and patient was removed to another room. On 31st March it is noted that patient was stouter, quieter, and made fewer attempts to escape, and on 14th May, 1883, he was transferred to Licensed House, Cook's River.

## CASE No. 2 Readmitted on 16th February, 1886.

*Previous to admission.*—Medical certificates state that he was incoherent and excitable; threatened to destroy himself in various ways; was sleepless, restless, and garrulous. In Receiving House (three hours) he was quiet.

*On admission.*—He was in fair health, but suffering from acute mania, in which he was restless, untidy, more or less incoherent, and very mischievous. His speech was that of one drunken, but his memory seemed good for both recent and remote events. He took his food, but slept badly; was placed in a single room, as he molested other patients, who would strike him in return.

*After admission.*—He improved a little both mentally and physically, but continued very restless, flighty, and troublesome. He said he had large sums of money, was a monarch, and was "all powerful," and was still restless, mischievous, and destructive. On 30th June, 1886, he was improving, and afterwards commenced to do some work in garden, and improved still further. On 3rd September, 1886, he was allowed leave of absence for six months, and the leave was extended from time to time till he was returned to hospital on 17th September, 1891, very much reduced in flesh, feeble in body, restless and dirty in habits, and talking incoherently. For some time he was too feeble to be out of bed, and was very restless and full of delusions; very untidy, would not wear a shirt, or have pillow-slip on pillow. He then became a little quieter, and was able to be up-sitting in a chair, but on 24th January, 1892, he commenced to break up in health more rapidly, and was removed by his friends in an ambulance on 1st February, and died on 2nd February, 1892.

## E1.

## CASE No. 2.

Age, 44 years; social condition, married; occupation, storekeeper; religion, Presbyterian; form of mental disorder, mania (subacute); supposed cause, excitement connected with electioneering; duration of attack, a few weeks.

*Admitted.*—December 20, 1882.—The medical certificates of Drs. Egan and Brady state that he is violent at times, and very excited and irritable, and threatens to make away with himself; gets into a fit of temper if at all contradicted, and attacks the warders who are in charge, &c. He is violent and excitable, talks continually and attempts to escape; he wrote excited appeals to his wife to take him from the reception house before he becomes insane.

*Mental and Bodily Conditions, Symptoms, &c.*—A well-developed robust man, 5 feet 5 inches high, temperament highly nervous, eyes grey, quick and restless, pupils contracted, determined and cunning expression of countenance, pulse 120 full. With the exception of a slight cold, the vascular and respiratory organs reveal nothing abnormal, bowels regular, appetite good, tongue coated, skin warm and moist, several bruises about the body, particularly on the right thigh. The attack came on about fourteen days ago. \* \* \* His boastful ideas of power and ability were noted at the time, and still more commented on when he kissed all the ladies present. The next day, Sunday, he expressed his intention to visit Sydney by the overland route, Wiseman's Ferry, a journey entailing much trouble and inconvenience, on account of paucity of post horses and no established mail route. He issued orders for an unusual number of horses, &c.; was very persistent in his wishes, and became excited when at all opposed. He came to Sydney by sea, however, and on the journey, contrary to his usual habits, drank considerable quantities of champagne and sodawater, and smoked cigars after he arrived. He bought a considerable quantity of merchandise unnecessarily, but made fairly good bargains, for which he is noted. At Mr. L.——s he bought a quantity of scents, &c., and was very voluble in explaining the value of the articles to the persons from whom he purchased them. His movements were characterised by great excitement. On passing through Parramatta on his way to Windsor he stopped at Whelow's Hotel, having previously ordered dinner by telegram, but followed his telegram so quickly that no time was allowed to execute his orders, and he left before the order was completed. At Ardrossan House, where he was staying, he was very much excited, giving them some of his electioneering speeches and reciting poetry, &c. He was taken to the reception house, and while there, effected an escape by a window 10½ in. x 9½ in., 24 feet from the ground. He was recaptured and brought here.

*Previous History.*—Has always been very active in his habits, very energetic and successful in business, and consequently much lauded and flattered by his friends and acquaintances; required very little rest, and capable of estimating the value of details in a remarkable manner; would frequently work three or four days consecutively with only an hour or two of rest during the night; always a temperate man; no hereditary tendency known.

Single room—December 21st—Passed a fair night; visited specially every hour until 1 a.m., and every two hours afterwards; very excited; constantly writing letters; has a very exalted opinion of his own ability. Treatment—Haust led, No. 5, ter in die; diet, ordinary; allowances, fruit, &c. December 22nd—Inclined to be very troublesome and exacting. December 23rd—Tore up a sheet during the night, and very ingeniously constructed a rope with which to escape; made no secret of his intentions after being asked what became of the sheet; the rope was found concealed in his mattress; very excited on going to bed. December 24th—Concealed a knife, and became very excited and troublesome on being questioned about it, so that muffs had to be put on, during which his face got slightly grazed. December 25th—Promised to give no more trouble, as he found violence unavailing; acknowledged that he had thought his wonderful force of character would have beaten us—that we should have been obliged to give way to him. December 26—Comparatively quiet, but very busy writing instructions to various persons about the purchase of estates, horses, shares, &c. December 27th—Determined to restrain himself; makes no secret of his remarkable powers; sleeps very little; full of projects, particularly

particularly on election topics: asserts that he is covered with bruises and wounds from head to foot; full of exaggerations and exalted notions. December 30th—the patient threw a voluminous letter, addressed to Mr. B. H. Brown, over the gate into the first yard, thinking to throw it into main road; the patient stated that he had been watching for an opportunity all day to get this letter out of the establishment without being observed. 1883.—January 1st—At 5:30 this morning, shouting and making a great noise in dormitory for the alleged purpose of being allowed to leave the room; he states that the husband of one of the female private patients was the father of the five Jew boys hanged some thirty years ago, which is not the case. January 11th—Effected an escape from No. 2 dormitory before 5:30 a.m. January 12th—Discharged by the authority of his wife, under 84th section of Lunacy Act. Improved. Weight 11st.

*On admission into Gladesville, 22nd January, 1883* :—He was very restless and excited; constantly talking; impressed upon people his own importance and his knowledge; was apt to become ill-tempered and troublesome if interfered with; often attempted to pick quarrels with patients and attendants; exaggerated everything he spoke of, and fancied that he was strong enough to beat any number of men; both pupils were much contracted, and when speaking the muscles of the face were continually twitching, but no deviation of the tongue when protruded; he was in good bodily health, and took food well, but was frequently sleepless and noisy at night; showed the greatest ingenuity and energy in attempting to escape; he frequently incited his fellow patients to violence and escape; he made ropes, he stated, for strangling several attendants, and on one occasion, with a common spoon, managed to cut himself out through a strong hardwood door, and provided an epileptic patient had been so successful, no doubt a tragedy would have occurred.

*Condition at Gladesville* :—He has made considerable improvement in physical health, but is very garrulous, restless, fidgety; writes despondently when he can secure sufficient paper, and loses no opportunity in attempting to escape; recently, through continued failures, he has not been so active in that direction, but no doubt he would lose no opportunity of doing so; he has still exaggerated notions respecting his mental and physical powers.

*Condition at Bayview House Asylum at Cook's River* :—On admission, 14th May, 1883, was very talkative, and continually boasting of his escapes from this and other places; says there is not a place in the Colony that could hold him if he did not choose to stay; says that just at present he does not intend to make any attempts at escape; in searching his clothes two razor-like pieces of glass were found concealed in the lining of his coat. May 16th—Offered to send for some brandy for the attendants, saying that his wife would bring or send it without the doctor knowing. May 17th—Persists in repeating the particulars of his escape from the reception-house, and evinces great satisfaction that so much is thought of it, particularly that a model has been made of the window; expresses great indignation at his detention here; says the doctor treats him very discourteously, and that it is evident he intends to revenge himself for the manner in which he left him last January; received a letter from his wife, read it to all the attendants; flew into a passion because she had gone home without his consent, and said she did not care a straw about him. May 19th—Said that as a matter of fact he would not remain here, and that he would get out or escape, if not discharged. May 20th—Repeated the story of his escapes four times to-day, giving a somewhat different version each time. May 21st—Expressed great indignation at what he calls his unjustifiable incarceration, and says his conduct did not warrant his arrest, and when he is released he will have the satisfaction of exposing the asylum at Gladesville and here in such a way as to open the eyes of the public. May 22nd—While having his bath this morning stated that his last valet always turned back the foreskin and washed it for him; he frequently tried to make unpleasantness between both patients and attendants. May 24—Stated that he could get away from here any hour of the day he liked, but that he did not wish to kill any of the attendants; he might, however, be forced to do so, because he would not put up with his confinement much longer. May 25th—Appeared very angry to-day, because there were neither visitors nor letters for him; says he will stir up their flagging interest in him when released. May 25th—Expresses his determination to escape. June 1st—Tried to persuade the attendants to allow him to escape; used very objectionable language in speaking of his relatives, friends, and medical adviser. June 3rd—Very excited and abusive in language; had to be placed in seclusion for two hours. June 6th—Saw his wife, Mr. ———, and Dr. Harper-Crew, and detailed the whole of his experience since his electioneering troubles, particularly mentioning his nude condition in Sussex-street, when he wished his wife's sister to come into the room to him, and distinctly stating that the females of his family were in the habit of seeing him going about the house in a nude state, and that he had one of them in bed with him; he failed to see anything indicating insanity in all this. June 12th—At times he is full of reproach and anger towards his friends and relatives, and at others states he considers they are doing all they can for him; his wife called to-day, and was severely talked to, accused of swearing falsely, lying, and perjury, &c.; took a solemn oath that he would escape if something was not done shortly; he afterwards stated he would keep quiet, as he thought all was being done for his benefit. June 13th—Mr. ——— called. June 14th—Mr. ——— called again this morning, and had a long interview with the patient. June 16th—Mr. ——— called, and had a long interview with the patient. July 10th—continues much the same; asserts that he never did anything that he would not do again. July 16th—Says he is determined to agree to everything that is proposed until he gets his discharge. July 31st—In a highly excited state during the forenoon, talking in a fast and furious manner about his supposed wrongs. August 3rd—Although quiet, he gave all the trouble he could to the attendant in charge; very restless, and talking to himself a good deal; he appears to be very vain of his personal appearance, as he delights to stand before a looking-glass, arranging his hair and beard, fixing his wig, &c. Frequently very irritable with the attendants, even when spoken to in the most gentle manner, *e.g.*, when asked if he would kindly move his seat from the table so that the cloth for tea might be arranged, replied that he would not, and that it was like the attendant's d-m-d impudence to ask him. August 9th—This morning the patient had a special interview with me, and expressed himself in a markedly different manner to any previous occasions; he apologised for anything he might have said of an objectionable nature; he also stated that, not being able to get any confirmation of his own views, he had arrived at the conclusion that what everybody said must be true, and that he could not have been in his usual mental condition when the circumstances occurred which led to his being placed under restraint. August 20th—Since the last entry the patient has been very reticent, merely saying that he has determined to comply in every respect with the advice of the doctors and his friends. September 6th—Discharged under 84th section of Lunacy Act.

## K.

## CASE NO. 23.

AGE 36 (when admitted); social condition, married; number of children, two; occupation, servant; religion, Roman Catholic; form of mental disorder, main acute; duration of attack, eight days; admitted, 25th April, 1881.

*Previous to admission*.—This was her first attack, and it was said to have existed for about two weeks. She was said to have been raving and quite delirious, with a maniacal look; had many delusions, and that it required four persons to restrain her from jumping out of the window. In the Reception House she sometimes refused food, was troublesome and violent at times, and noisy at night.

*On admission*.—She was a tall, stout woman, whose accent and features strongly indicated her Celtic origin, and whose mental condition was one of the mildest mania. She was extremely restless and flighty in manner, incoherent and rambling in her speech, spit at those about her, was dirty in her habits, would often strike if interfered with in any way, refused to dress or to do anything she was told, and was very mischievous and troublesome. She was very restless at night; would not remain in bed. She only took a small amount of food, and only when fed by hand, and though fairly stout, her health was somewhat below par.

*After admission*.—On 2nd May, 1881, she was taking a more satisfactory amount of food, and was perhaps not quite so wild and noisy as when admitted, and was still restless, excitable and mischievous, and wore a refractory belt to prevent her from denuding herself. On 16th May, 1881, it had been necessary to feed her by stomach-pump on several occasions. After this she is described as being dull and stupid, at times taking food well, and at others refusing it and having to be fed by a stomach-pump. On 30th September she was taking her food well, but was silent and self-absorbed. On 13th March, 1882, she was taking food well, but persistently attempted to denude herself and destroy her clothing, so that a camisole was worn by day. She was filthy in her habits. Up to 29th March, 1883, she continued to wear a camisole only on account of her filthy habits, and on that date was transferred to the hospital for the Insane, Parramatta.

MARGARET.

## CASE No. 23.

AGE (on transfer from Hospital for Insane, Gladesville, 29th March, 1883), 37 years; social condition, married; number of children, two; occupation, housewife; religion, Roman Catholic; form of mental disorder, mania acute; duration of attack, two years. Admitted to Hospital for Insane, Parramatta, 29th March, 1883. Case 23 was transferred from Gladesville, where she was admitted 25th April, 1881. The following transcript was forwarded with her at the time:—

*Before admission.*—This attack was her first; was said to have existed for about two weeks. In it she had been raving and quite delirious, with a maniacal look. Had many delusions, and had required four persons to restrain her from jumping out of the window.

*On admission.*—She was suffering from the wildest mania, and was extremely restless and flighty in manner, incoherent and rambling in speech. She spat at those about her, was dirty in her habits, would often strike if interfered with in any way, refused to dress or do anything she was bid, and was very mischievous and troublesome. She was very restless at night, would not remain in bed, and took a small amount of food only when fed by hand, and her physical health was below par. Shortly after admission it was necessary to feed her by stomach-pump on several occasions, and she was as maniacal as on admission. During the past twelve months she has taken food well, but has persistently attempted to denude herself and destroy her clothing, and has been so filthily dirty in her habits that it has been necessary for her to wear a camisole.

*Present condition.*—She is extremely restless, mischievous, dirty in habits, and troublesome, and is so unmanageable that it is necessary for her to wear a camisole by day. She is in fair bodily health, takes food well, but requires a great deal of care and watching, on account of her mischievous propensities.

*After admission to Parramatta.*—She made no improvement at first, and for a year was almost continuously in camisole on account of her filthy habits. She was as unmanageable as ever.

About twelve months after admission (28th April, 1884), she is described as being better and brighter, and no longer in camisole.

The improvement described, as far as I recollect, was only of a comparative nature, for up to the time of her transfer she was a continual source of worry and anxiety to all in charge of her, at times being much worse than at others; she was extremely filthy in her habits, destructive, and constantly exposing herself to all and sundry, and it was only by incessant watchfulness and care on the part of the nurses that she could be kept moderately decent in habits and appearance. On account of these habits she at all times occupied a single room, being utterly unfit for association. Several of the nurses recollect her, and describe her habits as infinitely worse than any other patient ever here.

E. G.

## L.

## CASE No. 20.

Sir, Lunacy Department, Inspector-General's Office, Gladesville, 17th September, 1894.

I do myself the honor to forward herewith a report on a fracture of the arm in one of the Government patients at the Licensed House for the Insane at Cook's River.

I have, &amp;c.,

F. NORTON MANNING,

Inspector-General.

The Principal Under Secretary, Sydney.

REPORT on Case No. 20, a patient in the Licensed House for the Insane, Cook's River.

Lunacy Department, Inspector-General's Office, Gladesville, 31 August, 1894.

On the 21st instant Dr. Vause reported to the Inspector-General that on the morning following his visit on the 16th instant, a patient was found to have a fracture of the left arm, which had been properly attended to by Dr. Sinclair, of Newtown, and himself, and was doing well, and on the 23rd Dr. Vause requested a special investigation as to the cause of the accident, as some representations had been made to him implicating one of the nurses.

On the 30th instant an inquiry was made into the whole circumstances by the Inspector-General, Mr. Nugent Robertson, and Dr. Huxtable, official visitors. The circumstances of the case were briefly these:—The patient was admitted to Cook's River, being transferred from Gladesville on the 7th July, 1894. Her age was 37 or 38, but she looked older, and was a tall, heavy woman, in a condition of very advanced dementia, due to alcoholic excess and epileptic fits. She was so deaf that all communication with her had to be carried on by signs or by writing. She was admitted to Gladesville on 15th September, 1893, and had epileptic or epileptiform attacks at long intervals. She had seizures in October of that year, and in February and March of 1894, either singly or in a series, and these attacks left her lost and more demented. She had no epileptic attacks since admission to Cook's River, and was on the whole a quiet, well-behaved, manageable patient, but for two or three days before the accident she was restless, and seemed to wish to get away. She slept in an associated dormitory with a nurse and ten or twelve quiet patients—some of the quietest and cleanest in the house—though one or two were occasionally disturbed and noisy, though not violent.

On the 16th she was visited by a man she mentions as her husband, and with whom she is said to have lived before admission to Gladesville, and that evening was more restless and excited than she had been during the last few days.

After a bath given, because she was dirty (an unusual occurrence), she was placed in bed at 7 o'clock, and seen by the matron, and as she was restless and wanted to get out of bed and dress herself Nurse Ada Simpson sat beside her bed from 7 to about 8, and then left her, but saw her again through an opening in the door at 8.30. No nurse was in the ward from this time to 9, but Nurse M'Bride saw her at 9, and she was then restless and wandered about the room. At 10 she was seen by the matron and night nurse, who, passing through the room, found her in bed, but she got up and followed them to the door. At 10 or shortly after, Nurse M'Leod, who was sleeping in the room that night, went to bed. The patient was then restless and inclined to wander about the room, and touch and pull the bed-clothes off other patients, using both hands in doing so, and at 10.30, as this continued and other patients complained, Nurse M'Leod went to the night nurse, Brennan, and requested her to remove No. 20 to a single room. This the night-nurse demurred to doing, but on a second request from Nurse M'Leod, made shortly after, she sought and obtained the matron's permission, and M'Leod and Brennan removed patient to a single room, M'Leod having her arm through the patient's left arm and Brennan having hold of the sleeve of the nightdress of the right arm. There was no difficulty or struggle; the patient went willingly, and one nurse carried blankets and the other a lantern whilst taking her. She was put into bed in a single room with an iron bedstead and ordinary bedding at 10.30. At 12 o'clock, on Night-nurse Brennan visiting her room, she was seen standing at the door and she called out for her clothes, and, after this, the nurse heard her call out "let me out," or something of that sort. At 2 a.m. and 4 a.m. the night nurse visited the room, according to her instructions, but finding everything perfectly quiet did not open the door. At 5.30 a.m., Night-nurse Brennan unlocked the door, and going in found the patient in bed covered up, and on turning down the clothes from off her head, found she was awake, left her, and went away. The bed-clothes were at that time all on the bed. At 6.30 a.m. of the 17th, Nurse M'Bride on duty, opened the single room door and found patient standing near the door in her night-gown. Saw stains of blood on her night gown, but not deeming it important passed patient over to Nurse Ada Simpson, to whose ward she belonged, and asked her to look after her. Nurse Ada Simpson saw blood on body of nightdress and on sleeve, but put the patient's dress on to satisfy her as she clamoured for her clothes, and then went for the matron. The patient made no complaint, but said, "What is the matter? How have I done this? I remember waking and finding my arm hurt, but I do not know how I did it." When the matron came, she sent for the doctor. The patient told matron she had been fighting with the landlord, and had a difficulty about paying her rent, and afterwards said she went to sleep and woke up with her arm paining her, but did not remember anything else.

Dr. Vause saw her about 7—she was in matron's room—and he found fracture of left arm at junction of lower and middle third, with a small wound on inner side of arm at site of fracture. Patient did not appear to suffer pain, and tried to remove bandages, being very restless. There was no protrusion of bone from the wound, and on probing wound bone could not be felt. Dr. Vause was of opinion that it was scarcely possible that any rough handling by nurses could have caused fracture and wound, and considered that, from the nature of the injury, it might have been caused by a fall against any hard object, such as a bedstead. The blood was fresh and was oozing from wound, and the nurses and matron all concur in saying that the blood was fresh and not dry. An intelligent patient who slept in the same dormitory was examined, and said

said nothing happened in the dormitory which could have caused injury. The patient, who was reported to have been very restless ever since the accident, could give no account of the accident, and had evidently forgotten all about it, saying, when asked (in writing) what was the matter with her arm, that it was a boil, and she did not know how it came.

The conclusions arrived at were that the fracture was a compound one, but that on the patient straightening the arm the protruded end was withdrawn from wound; that it was caused by the patient falling in an epileptic fit against the edge or end of the bedstead; and that probably the fall occurred between half-past 5 and half-past six o'clock on the morning of the 17th, the condition as to bleeding, the absence of marked swelling, and the ease with which the patient allowed her dress to be put on all pointing to this.

1. In the course of inquiry it was apparent that a recording clock, which Dr. Vause had some time before undertaken to supply, was an absolute necessity, so as to record and check the visits of the night nurse.
2. That some want of care had occurred in placing this patient, who was an epileptic and restless, in a single room with a bedstead, though this appeared to be partly due to a recent change in the officer filling the position of matron, and to the fact that the patient had had no fits since admission, so that there was only the Gladesville report to which the new matron had not access on this point.
3. That the associated dormitories should be lighted at night, as in the case in the Hospitals for the Insane.

F. NORTON MANNING,  
Inspector-General.

A. NUGENT ROBERTSON.  
L. RALSTON HUXTABLE.

## HI.

### CASE No. 20.

Age 36; social condition, S.; No. of children, 0; occupation, barmaid; religion, C. of E.; form of mental disorder, mania del.; supposed cause, ill-health; duration of attack, 9 months; previous attack, unknown; date of last admission (if any) unknown; insane relations, no; date of last discharge (if any), unknown; admitted, July 7, 1894; on admission, this patient was transferred from Gladesville, July 7, 1894.

1894—July 14—General health fairly good; has been fairly tranquil since admission; is very deaf, and does not speak much. July 21—The same. No medicine required; diet, ordinary. August 17—I was called to see the patient about 7 a.m., and found she had sustained a fracture of the left arm (humerus); there was also a small wound on the inner side of the same arm. Nurse Macleod states that the patient was placed in a S.R. about 10.30 on the previous evening, with the authority of the matron, in consequence of a disturbance in the ward caused by Hoffman walking about and pulling off the bedclothes from the rest of the patients, who, for the most part, are quiet and clean. The night nurse, Brennan, says she accompanied Nurse Macleod and the patient to the S.R., and that the patient went quietly. No sign of injury was observed by either nurse at this time beyond a slight graze on the temple. Brennan visited her at 12 o'clock (midnight), when she found the patient standing behind the door and asking for her clothes, but she made no other complaint. The nurse did not enter the room. Brennan visited the room again at 2 a.m. and at 4 a.m., but did not enter as all was quiet. At 5.30 a.m., however, she entered the room and found the patient quiet and in bed; she arranged the bedclothes and left the room without noticing anything unusual about the patient. At 6.30 a.m. Nurse M'Bride, who attends to the S.R. patients in the mornings, entered and found the patient standing by the side of the bed; she took her to the bathroom and gave her in charge of Ada Simpson who was to dress her. Shortly afterwards it was found she had sustained a fracture of the humerus. As soon as Nurse Jones (the matron) saw the case she sent for me and I did what was necessary at the time and sent for Dr. Sinclair. August 18—Patient doing well, but very restless and constantly attempting to disarrange the bandage and splints, so that a nurse is required constantly by her side, night and day. August 19—Temp. 101.6, otherwise the patient is doing well. August 20—Temp. normal. Great difficulty experienced in preventing patient from removing bandages, although she says there is no pain; in fact, she has not at any time complained of pain; she objects to the arm being confined in bandages and splints. August 21—Progressing favourably. R Chloral Hyd. 3 j at bedtime. August 25—Continues to progress favourably. September 1—The same. September 7—The same; requires a nurse continually by her side to prevent her removing the bandages. October 13—Plaster of Paris bandage applied a month ago; general health good. October 18—Plaster of Paris bandage removed two weeks ago; climbed over parapet wall near matron's sitting-room, on the 12th instant, and got into laundry-yard; height of wall about 9 ft. on one side, steps on the other; no injury. December 15—In good general health; much quieter of late. December 28—Transferred to Rydalmere.

## M.

RETURN showing nature of accidents at Bayview House from 1884 to 1893 inclusive:—

1884 (2).—Slight cut from fall; slight cut from fall. 1885 (3).—Slight cut from one patient striking another; slight cut from fall; slight cut while in epileptic fit. 1886 (5).—Slight burn of hand; penetrating wound of right eye; slight cut; injury to hip from fall; slight cut. 1887 (2).—Slight cut tip of tongue; slight cut of wrist from breaking window-pane. 1889 (2).—Slight cut; fracture of fibula. 1891 (4).—Cut forehead (slight); scalp wound (slight); fracture of humerus; injury to teeth from blow by another patient. 1892 (1).—Slight cut. 1893 (2).—Slight cut from fall during epileptic seizure; death from overdose of chloral.

## N.

RETURN showing average percentage of recoveries, relieved, and deaths, at the Licensed House, Cook's River, for ten years, 1884-1893 inclusive:—

Average percentage of recoveries on admissions and re-admissions for ten years, 1884 to 1893, 47.92. Average percentage of patients relieved on admissions and readmissions for ten years, 1884 to 1893, 14.28. Average percentage of deaths on average number resident for ten years, 1884 to 1893, 5.82.

## O.

RETURN showing average percentage of recoveries, relieved, and deaths, in the Hospitals for the Insane, exclusive of the Licensed House for the Insane at Cook's River, for ten years, 1884-1893:—

Average percentage of recoveries on admissions and readmissions for ten years, 1884-1893, 42.95. Average percentage of patients relieved on admissions and readmissions for ten years, 1884-1893, 4.63. Average percentage of deaths on average number resident for ten years, 1884-1893, 7.00.

## P.

RETURN showing average percentage of recoveries, relieved, and deaths, in Hospitals for Insane, including the Licensed House at Cook's River, for ten years, 1884-1893:—

Average percentage of recoveries on admissions and readmissions for ten years, 1884-1893, 43.07. Average percentage of patients relieved on admissions and readmissions for ten years, 1884-1893, 4.98. Average percentage of deaths on average number resident for ten years, 1884-1893, 6.96.

## Q.

## SECLUSION.

IN "The Lunacy Acts," by Danby Fry, Esquire, of Lincoln's Inn, Barrister-at-law, second edition, the question of seclusion is discussed, and at page 215 there is the following foot-note:—"As to the meaning of seclusion, see thirteenth report of English Commissioners in Lunacy, 1859, page 67." This reference is as follows:—

A question has arisen as to what kind of separation of individual patients from all other persons constitutes "seclusion" within the meaning of the Act. The Legislature requires that a record be kept of its duration, however short, as well as the reason for resorting to it. The term being, moreover, used in conjunction with that of "restraint," it would appear that, in the opinion of the Legislature, a modified coercion is implied by it. We have, therefore, held that any amount of compulsory isolation *in the daytime*, whereby a patient is confined in a room, and separated from all associates, should be considered as seclusion, and recorded accordingly.

The advantages resulting from the adoption of this definition have been abundantly manifest, especially in small private asylums, where the practice of locking patients in their rooms was formerly an ordinary and daily proceeding, amounting, in effect, to solitary confinement. Our remonstrances against this custom proved of little avail, but by requiring that the fact should on every occasion be recorded in the medical journal as "seclusion," attendants were compelled to bring it under the notice of the Medical Officer, which thereby produced a discontinuance of the practice, and a more satisfactory condition of the patients.

Notwithstanding our efforts, the practice of thus locking up patients alone, whether in their own rooms or not, is no doubt still carried to an injurious extent in a few asylums, and this not for medical reasons, but often as a matter of convenience, or, perhaps, of economy.

We are aware that we give to the term "seclusion" a wider interpretation than it may appear to some to bear, but yet one which we consider most important, so far as the treatment of the insane is concerned.

In those instances in which we have felt it our duty to notice the fact of patients being thus locked up *during the day*, we have simply stated our opinion that it should be recorded in the medical journal, and in no case have we implied that the omission was in any degree wilful on the part of the proprietor or medical officer.

In the opinion of many medical men, seclusion is a most valuable agent in the treatment of insanity, nor do we now offer any opinion as to the advantages or otherwise to be derived from its employment within moderate limits. All that we desire to secure is a strict record of every instance where it is resorted to, and to prevent its being adopted, not from medical reasons, but from motives of economy, and as a substitute for the watchfulness and care of properly qualified attendants.

In the Handbook for attendants on the Insane, published by the authority of the Medico-Psychological Association in 1894, the following are the definitions of "seclusion" and "restraint," page 116:—

By "seclusion" is meant the placing of a patient alone in any locked room or locality *during the daytime*.

By "mechanical restraint" is understood any restriction of the bodily liberty of a patient by some appliance, such as a sheet, rope, strait-jacket, towel, or straps.

CIRCULAR to Superintendents of Asylums in reference to what should be recorded as Seclusion.

Sir,

General Board of Lunacy, Edinburgh, 21 February, 1873.

As very different interpretations have been given by the Superintendents and Medical Officers of Establishments for the Insane to the term "seclusion," it is found impossible to institute any accurate comparison between the practice adopted in this respect in different houses, and recorded in their register of seclusion.

I am, therefore, instructed to request that whenever a patient is placed during the day in any room or locality, alone and with locked doors, the case may be viewed and recorded as one of seclusion, irrespectively altogether of the question whether seclusion was adopted for purposes of medical treatment or for purposes of discipline. The cause of its adoption will of course be recorded in the column of the register set apart for the purpose.

You will clearly understand that in issuing this instruction the Board do not in the smallest degree express an opinion as to the desirability or undesirability of seclusion. Their object is simply to introduce a uniform method of recording the practice and experience of each establishment.

I am, &c.,

W. FORBES,

Secretary.

See Appendix G, Seventeenth Report of the General Board of Commissioners in Lunacy for Scotland, 1873, page 271.

Extract from 27th Report of the Commissioners in Lunacy, England, 1873, pages 22 and 23:—"The use of seclusion (compulsory isolation by day) in the treatment of the insane in public asylums varies considerably."

Extract from "How to care for the Insane," by Dr. Wm. Granger, Member of the American Association of Superintendents of Hospitals for the Insane, &c., &c. Published by Pulman and Sons, New York, 1893:—"Seclusion is shutting a patient alone in a room *in the daytime*. If allowed to be done without orders from the physician it should be immediately reported."

## R.

## RESTRAINT.

REGULATION by the Commissioners in Lunacy as to the instruments and appliances for the mechanical bodily restraint of patients. Lunacy Act, 1890, s. 40.

By subsection 6 of section 40 of the Lunacy Act of 1890, it is enacted as follows:—"In the application of this section mechanical means shall be such instruments and appliances as the Commissioners may, by regulation to be made from time to time, determine."

In pursuance of subsection 6 of section 40 of the Lunacy Act of 1890, the Commissioners in Lunacy, by this regulation, made under their seal, do hereby determine that in the application of that section, mechanical means of restraint shall be and include all instruments and appliances whereby the movements of the body or any of the limbs of a lunatic are restrained or impeded.

See 44th Report of Commissioners in Lunacy, Appendix M, page 358.

## S.

## CASE BOOK ORDER.

Lunacy Act, 1878.—Sections 21, 39, and 56.

THAT the Medical "Case Book" by the said Act directed to be kept in every hospital and licensed house, shall be kept in the form hereinafter mentioned, viz.:—

First—A statement to be entered of the name, age, sex, and previous occupation of the patient, and whether married, single, or widowed.

Secondly—An accurate description to be given of the external appearance of the patient upon admission; of the habit of body and temperament; appearance of eyes, expression of countenance, and any peculiarity in form of head; physical state of the vascular and respiratory organs, and of the abdominal viscera and their respective functions; state of the pulse, tongue, skin, &c., and the presence or absence, on admission, of bruises or other injuries to be noted.

Thirdly—A description to be given of the phenomena of mental disorder; the manner and period of the attack, with a minute account of the symptoms, and the changes produced in the patient's temper or disposition—specifying whether the malady displays itself by any, and what, illusions, or irrational conduct, or morbid or dangerous habits or propensities; whether it has occasioned any failure of memory or understanding, or is connected with epilepsy or ordinary paralysis, or symptoms of general paralysis, such as tremulous movements of the tongue, defect of articulation, or weakness or unsteadiness of gait.

Fourthly—

Fourthly—Every particular to be entered which can be obtained respecting the previous history of the patient ; what are believed to have been the predisposing and exciting causes of the attack ; what the previous habits, active or sedentary, temperate or otherwise ; whether the patient has experienced any former attacks, and if so, at what periods ; whether any relatives have been subject to insanity ; and whether the present attack has been preceded by any premonitory symptoms, such as restlessness, unusual elevation of depression of spirits, or any remarkable deviation from ordinary habits and conduct ; and whether the patient has undergone any, and what, previous treatment, or has been subjected to personal restraint.

Fifthly—During the first month after admission, entries to be made at least once in every week, and oftener where the nature of the case requires it. Afterwards, in recent or curable cases, entries to be made at least once in every month ; and in chronic cases, subject to little variation, at least once in every three months.

In all cases an accurate record to be kept of the medicines administered, and other remedies employed, with the results. All injuries and accidents to be noted, and in case of death the appearances on *post-mortem* examination (if any) to be fully recorded.

That the several particulars, hereinbefore required to be recorded, be set forth in a manner so clear and distinct as to admit of being easily referred to and extracted, whenever the Colonial Secretary shall so require.

That a copy hereof be inserted at the commencement of each Case Book.

Approved by the Colonial Secretary, November 29th, 1879.

T.

NUMBER OF SINGLE ROOMS LIGHTED BY GAS AT GLADESVILLE.

THERE are 98 single rooms in the male division, of which 6 are specially lighted by gas bracket ; but the gas is only lighted in these occasionally, and for special reason in individual cases.

Of the remainder, about one-half can be dimly lighted by gas bracket on opposite wall of corridor on to which the rooms open, but are not often lighted.

In the remaining half there are no lights.

There are 59 single rooms in the female side ; none of these are specially lighted, but the majority get a dim light from gaslights in the corridor or day or dining rooms, from which the rooms open ; but these are seldom lighted, except in the observation corridors, where new patients are received.

E.S., 27/12/94.

Dr. Manning.

U.

MEMO.

Hospital for the Insane, Callan Park, Balmain, 16 December, 1894.

THERE are 136 single rooms in the main building and 16 in the cottages. Twenty-six of these (in main building only) can be lighted specially, by means of gas jets placed outside and beside a ventilator. The position of these rooms is as follows :—No. 2 (Refractory), 3 each division ; No. 4 (Acute), 5 each ; No. 5 (Hospital), 5 each, =26.

The other rooms receive but little light, and only from the gas jets in the corridors, day-rooms, or dormitories, when these are lighted during the night, which is seldom. It is rarely necessary to light the special jets, except in the case of dying patients or occasionally for acute delirious maniacs, who are terrified if let alone in the dark.

H. BLAXLAND.

Dr. Manning.

V.

WEEKLY DIETARY FOR GOVERNMENT PATIENTS, BAYVIEW HOUSE.

Arranged by Mr. Tucker in 1874.

Day.	Breakfast.	Dinner.	Tea.
Sunday .....	$\frac{1}{2}$ oz. coffee, $\frac{3}{4}$ oz. sugar, milk, bread, and $\frac{1}{2}$ oz. butter.	Sea-pie, potatoes and other vegetables, bread.	$\frac{1}{2}$ oz. tea, bread, $\frac{1}{2}$ oz. butter.
Monday .....	$\frac{1}{2}$ oz. tea, bread, treacle or beef dripping.	Soup, with rice, carrots, parsnips, onions, turnips, &c., bread.	$\frac{1}{2}$ oz. tea, bread, treacle or beef dripping.
Tuesday .....	$\frac{1}{2}$ oz. tea, bread, $\frac{1}{2}$ oz. butter.	Meat pie, roast beef, rice, and vegetables .....	$\frac{1}{2}$ oz. tea, bread, $\frac{1}{2}$ oz. butter.
Wednesday .....	$\frac{1}{2}$ oz. tea, bread, treacle or beef dripping.	Pea soup, with vegetables, meat, and bread .....	$\frac{1}{2}$ oz. tea, bread, treacle or beef dripping.
Thursday .....	$\frac{1}{2}$ oz. tea, bread, treacle or beef dripping.	Roast beef, stew, vegetables, rice .....	$\frac{1}{2}$ oz. tea, bread, treacle or beef dripping.
Friday .....	$\frac{1}{2}$ oz. tea, bread, $\frac{1}{2}$ oz. butter.	Boiled beef or mutton, stew, vegetables, and rice.	$\frac{1}{2}$ oz. tea, bread, $\frac{1}{2}$ oz. butter.
Saturday .....	$\frac{1}{2}$ oz. tea, bread, treacle or beef dripping.	Soup, with rice, carrots, parsnips, onions, turnips, &c., bread.	$\frac{1}{2}$ oz. tea, bread, treacle or beef dripping.

NOTE.—Tea, sugar, coffee, and butter are the only articles weighed ; all other things *ad libitum*.

C. A. T.

WEEKLY DIETARY FOR GOVERNMENT PATIENTS, BAYVIEW HOUSE.

Arranged by Dr. Vause.

Day.	Breakfast.	Dinner.	Tea.
Sunday .....	Coffee, bread, and jam .....	Sea-pie, roast beef, potatoes and other vegetables, bread.	$\frac{1}{2}$ oz. tea, bread, and $\frac{1}{2}$ oz. butter.
Monday .....	$\frac{1}{2}$ oz. tea, bread, and $\frac{1}{2}$ oz. butter.	Vegetable soup, minced beef, boiled and roast mutton, potatoes, bread.	$\frac{1}{2}$ oz. tea, bread and jam.
Tuesday .....	$\frac{1}{2}$ oz. tea, bread and dripping.	Haricot mutton, boiled and roast beef, potatoes and other vegetables, bread.	$\frac{1}{2}$ oz. tea, bread, and $\frac{1}{2}$ oz. butter.
Wednesday .....	$\frac{1}{2}$ oz. tea, bread, and $\frac{1}{2}$ oz. butter.	Pea soup, corned beef and dumplings, boiled mutton, potatoes, bread.	$\frac{1}{2}$ oz. tea, bread and jam.
Thursday .....	$\frac{1}{2}$ oz. tea, bread and dripping.	Irish stew, roast and boiled beef, potatoes and other vegetables, bread.	$\frac{1}{2}$ oz. tea, bread and treacle.
Friday .....	$\frac{1}{2}$ tea, bread and treacle .....	Boiled and roast mutton, meat pie, potatoes, rice, bread.	$\frac{1}{2}$ oz. tea, bread, and $\frac{1}{2}$ oz. butter.
Saturday .....	$\frac{1}{2}$ oz. tea, bread, and $\frac{1}{2}$ oz. butter.	Barley broth, boiled mutton, potatoes, bread.	$\frac{1}{2}$ oz. tea, bread and jam.

The entire weight of tea given out is equal to  $\frac{1}{2}$  oz. at each meal.

Invalid diet is specially ordered by the Medical Superintendent, and entered in requisition books.

Tea, sugar, and butter are the only articles weighed. The rest is *ad libitum*.

WEEKLY

WEEKLY DIETARY—COTTAGES, H. I., CALLAN PARK.

Day.	Breakfast.	Dinner.	Tea.
Sunday .....	1 pint coffee,* 7 oz. bread, 1 oz. butter, 6 oz. steak.	14 oz. beef, 16 oz. potatoes or other vegetables. 2 oz. bread, rice pudding.§	1 pint tea,† 7 oz. bread, ½ oz. butter, 2 oz. jam.
Monday .....	1 pint coffee,* 6 oz. bread, 1 oz. butter, 6 oz. mutton chop.	14 oz. mutton, 1 oz. flour, ½ oz. curry powder, 2 oz. rice (currie and rice), 8 oz. potatoes, 1 oz. cheese, and 3 oz. bread.	1 pint tea,† 7 oz. bread, ½ oz. butter, 2 oz. marmalade.
Tuesday .....	1 pint coffee,* 6 oz. bread, 1 oz. butter, 3 oz. bacon, 1 egg.	14 oz. beef, 3 oz. bread, 16 oz. potatoes or other vegetables, soup (pea).‡	1 pint tea,† 7 oz. bread, ½ oz. butter, 2 oz. marmalade.
Wednesday .....	1 pint coffee,* 7 oz. bread, 1 oz. butter, 6 oz. mutton chop.	14 oz. mutton, 16 oz. potatoes or other vegetables, 3 oz. flour, 1½ oz. suet, 2 oz. currants or raisins, 1½ oz. sugar (currant or plum pudding), 2 oz. bread.	1 pint tea,† 7 oz. bread, ½ oz. butter, 2 oz. marmalade.
Thursday .....	1 pint coffee,* 6 oz. bread, 1 oz. butter, 4 oz. ham or 3 oz. bacon and 1 egg.	14 oz. beef (roast for males, boiled for females), 16 oz. potatoes or other vegetables, 3 oz. bread, 1 oz. cheese, soup (barley).‡	1 pint tea,† 7 oz. bread, ½ oz. butter, 2 oz. jam.
Friday .....	1 pint coffee,* 7 oz. bread, 1 oz. butter, 6 oz. mutton chop.	14 oz. mutton (roast), 2 oz. bread, 16 oz. vegetables, rice pudding.§	1 pint tea,† 7 oz. bread, ½ oz. butter, 2 oz. marmalade.
Saturday .....	1 pint coffee,* 6 oz. bread, 1 oz. butter, 6 oz. beef steak.	14 oz. beef (boiled for males, roast for females), 16 oz. potatoes, 3 oz. bread, 1 oz. cheese, soup (pea).‡	1 pint tea,† 7 oz. bread, ½ oz. butter, ½ oz. jam.

\* 1 pint of coffee made with ½ oz. coffee, 1 oz. sugar, ½ gill milk.

† 1 pint of tea made with ½ oz. tea, 1 oz. sugar, ½ gill milk.

‡ Soup made from liquor of bones of previous day and cooked meat, with 1 oz. barley, rice, or 2 oz. split peas; and leeks, onions, carrots, and other vegetables.

§ Rice pudding made with 2 oz. rice, sago, or tapioca, 1 oz. sugar, ½ pint milk, 1 egg.

Porridge for breakfast during winter months: Maize meal or oatmeal, 3 oz.; milk, ½ gill; treacle or sugar, 1 oz.

The following substitutions may be made at discretion of the Medical Superintendent:—

Corn-flour moulds—1 oz. corn-flour, ½ pint milk, ½ oz. sugar, with 2 oz. jam or 3 oz. tinned fruit—for rice pudding.

Roll jam pudding—2 oz. flour, 1½ oz. jam, 1 oz. suet—for current or plum pudding.

4 oz. fresh or German sausage, mutton ham, or smoked tongue—for 6 oz. meat for breakfast.

½ oz. anchovy or bloater paste, or 3 oz. tinned salmon or other fish—for 2 oz. jam for tea.

[LUNATIC ASYLUM, TABBAN CREEK.—DIETARY IN 1874.

Ration No. 2.—Patients.

1 lb. fresh beef or mutton,	½ oz. tea,
20 oz. bread,	1½ oz. sugar,
¾ lb. vegetables,	1 oz. barley or rice.
1 gill milk.	

½ lb. flour, ¾ lb. raisins, and 1 oz. of suet, on Christmas Day and the Queen's Birthday, in addition to the authorised ration.

DIETARY SCALE.

Patients.

HOSPITAL for the Insane, Gladsville (including Branch Establishment at Callan Park); Asylum for Imbeciles, &c., Newcastle; Lunatic Reception House, Sydney; and Temporary Lunatic Asylum, Cooma. Approved by Colonial Secretary, 15th December, 1876.

	Bread.	Meat, uncooked, with bone.	Vegetables	Sugar.	Milk	Tea.	Butter.	Treacle.	Rice, Barley, or Pease Meal.	Flour.	Oatmeal.
	Daily.	Daily.	Daily.	Daily.	Daily.	Daily.	5 days per week.	2 days per week.	3 days a week.	1 day per week.	3 days per week.
	oz.	oz.	oz.	oz.	gill.	oz.	oz.	oz.	oz.	oz.	oz.
Males .....	16	14	12	1½	1	½	1	2	1	4	.....
Females .....	14	14	12	1½	1	½	1	2	1	4	.....
	On 4 days per week.										
Children under 14 years of age ...	14	10	10	1	3	½	½	1	3	4	4
	On 3 days per week.										
	9	4	.....	.....	.....	.....	.....	.....	.....	.....	.....

1 oz. pepper and 20 oz. salt for every 100 full daily rations.

½ lb. flour, ¾ lb. raisins, 1 oz. suet, 1 oz. sugar, on Queen's Birthday and Christmas Day, in addition to the authorised scale.

Patients actively employed allowed 1 pint of ale, 1 oz. cheese, and 1 oz. bread, in addition to the authorised scale.

The following substitutions may be made once a week at the option of the Superintendents, viz.:—½ oz. coffee for ½ oz. tea, 2 oz. cheese for 1 oz. butter, 4 oz. maize meal for 4 oz. oatmeal, and salt for fresh beef in equal quantities.

The Superintendents may issue fresh vegetables for soup, &c., as may be necessary.

The Medical Officers may order any extra articles of diet they may deem necessary, and may place on diet for children any patient over the age of 14 to whom it may be specially applicable.

Attendants.

	Beef.	Bread.	Vegetables.	Milk.	Tea.	Sugar.	Butter (fresh).	Cheese.	Flour.
	Daily.	Daily.	Daily.	Daily.	Weekly.	Weekly.	Weekly.	Weekly.	Weekly.
	lb.	lb.	lb.	gill.	oz.	lb.	oz.	oz.	oz.
Attendants and Nurses .....	1½	1	1	1	4	1½	8	8	4

1 oz. pepper, 20 oz. salt, for every 100 fully daily rations.

½ lb. flour, ¾ lb. raisins, 1 oz. suet, 1 oz. sugar, on Queen's Birthday and Christmas Day, in addition to the authorised scale.

DIETARY SCALE.

Patients.

HOSPITALS for the Insane—Gladesville, Callan Park, Parramatta, and Newcastle; Reception House, Sydney; and Hospital for the Criminal Insane, Parramatta—approved by the Colonial Secretary, 5/7/90 and 19/9/90.

	Bread. Daily.	Meat, uncooked, with bone. Daily.	Vege- tables. Daily.	Sugar. Daily.	Milk. Daily.	Tea. Daily.	Butter. Daily.	Treachle. Daily.	Rice or Barley. 2 days a week.	Once a week.					Oatmeal or Maizemeal. 3 days per week throughout the year, or daily from 1st May to 31st October.
										Peasemeal or Split Peas.	Flour.	Suet.	Sugar.	Raisins or Currants.	
Males .....	16	14	12	1½	1	½	1	...	1	2	4	1½	1	1½	2
Females ...	14	14	12	1½	1	½	1	...	1	2	4	1½	1	1½	2
Children under 14 years of age .....	On 4 days per week.			1	3	½	½	1	3	3	4	1½	1	1½	4
	On 3 days per week.														

1 oz. pepper and 20 oz. salt for every 100 full daily rations.  
 ½ oz. sugar and ½ gill milk for each 2 oz. oatmeal or maizemeal drawn.  
 ¼ lb. flour, ¼ lb. raisins, 2 oz. suet, 1½ oz. sugar, on Queen's Birthday and Christmas Day, in addition to the authorised scale, for each patient.  
 Patients actively employed allowed ½ oz. coffee, ¼ oz. sugar, ½ gill milk, 1 oz. cheese, and 4 oz. bread daily, in addition to the authorised scale.  
 The following substitutions may be made at the option of the Medical Superintendents, viz, ½ oz. coffee for ¼ oz. tea; 2 oz. cheese, or 1½ oz. jam, or 1½ oz. honey, for 1 oz. butter; salt for fresh beef in equal quantities; and 2 oz. rice for 6 oz. potatoes.  
 The Medical Superintendents may issue fresh vegetables for soup, &c., as may be required, and order any extra articles of diet they may deem necessary, and may place on the diet for children any patient over the age of 14 years to whom it may be specially applicable.  
 Curry powder, spice, vinegar, mustard, and pickle, may be issued at the discretion of the Medical Superintendents.

Attendants, Nurses, &c.

	Bread. Daily.	Meat, uncooked, with bone. Daily.	Vege- tables. Daily.	Milk. Daily.	Sugar, 1st quality. Daily.	Tea, 1st quality. Daily.	Butter. Daily.	Flour. Daily.	Rice or Barley. Daily.	Suet. Daily.	Raisins. Daily.	Jam. Daily.
Attendants, nurses, &c.....	16	24	16	2	4	1	1	1	½	½	½	½

1 oz. pepper, 20 oz. salt, 1 shin beef, for every 100 full daily rations.  
 ¼ lb. flour, ¼ lb. raisins, 2 oz. suet, 1½ oz. sugar, on Queen's Birthday and Christmas Day, in addition to the authorised scale, for each attendant.  
 The following substitutions may be made, once a week, at the option of the Medical Superintendents, viz., 2 oz. coffee for 1 oz. tea; 4 oz. oatmeal for 8 oz. beef or mutton; 2 oz. rice for 6 oz. potatoes; salt for fresh beef in equal quantities.  
 Curry powder, spice, vinegar, mustard, and pickles, may be issued at the discretion of the Medical Superintendents.

WEEKLY DIETARY.

Hospitals for the Insane.

COMPILED from Dietary Scale. Approved for Gladesville, Callan Park, Newcastle, Cooma, and Reception House, 15/12/76; and for Parramatta, 17/12/78.

Day.	Breakfast.*	Dinner.	Tea.
Sunday .....	1 pint coffee, † 7 oz. bread (males), 6 oz. bread (females), ½ oz. butter.	14 oz. mutton (roast), 16 oz. potatoes, 2 oz. bread.	1 pint tea ‡ 7 oz. bread (males), 6 oz. bread (females), ½ oz. butter.
Monday .....	1 pint tea, 7 oz. bread (males), 6 oz. bread (females), 1 oz. treacle.	14 oz. beef (roast), 12 oz. potatoes, 2 oz. bread, soup.§	1 pint tea, 7 oz. bread (males), 6 oz. bread (females), 1 oz. treacle.
Tuesday .....	1 pint tea, 7 oz. bread (males), 6 oz. bread (females), ½ oz. butter.	14 oz. beef, 3 oz. flour, 4 oz. potatoes, (Meat pie¶) 2 oz. bread.	1 pint tea, 7 oz. bread (males), 6 oz. bread (females), ½ oz. butter.
Wednesday..	1 pint tea, 7 oz. bread (males), 6 oz. bread (females), ½ oz. butter.	14 oz. mutton, 12 oz. potatoes, 1 oz. flour, (Irish stew**) 2 oz. bread.	1 pint tea, 7 oz. bread (males), 6 oz. bread (females), 1 oz. cheese.
Thursday ...	1 pint tea, 7 oz. bread (males), 6 oz. bread (females), ½ oz. treacle.	14 oz. beef, roast (males), 14 oz. beef, boiled (females), 12 oz. potatoes, 2 oz. bread, soup.§	1 pint tea, 7 oz. bread (males), 6 oz. bread (females), 1 oz. treacle.
Friday .....	1 pint coffee, 7 oz. bread (males), 6 oz. bread (females), ½ oz. butter.	14 oz. mutton (roast), 16 oz. potatoes, 2 oz. bread, soup.¶	1 pint tea, 7 oz. bread (males), 6 oz. bread (females), ½ oz. butter.
Saturday ...	1 pint tea, 7 oz. bread (males), 6 oz. bread (females), ½ oz. butter.	14 oz. beef, boiled (males), 14 oz. beef, roast (females), 12 oz. potatoes, 2 oz. bread, soup.§	1 pint tea, 7 oz. bread (males), 6 oz. bread (females), 1 oz. cheese.

\* With 2 oz. maizemeal or oatmeal, and 1 oz. treacle or sugar for each patient, at discretion of Superintendent. [Approved, 29/5/80. † 1 pint coffee made with ¼ oz. of coffee, ½ oz. of sugar, ½ gill milk. ‡ 1 pint tea made with ½ oz. tea, ½ oz. sugar, ½ gill milk. § Soup made from liquor of bones of previous day and cooked meat, with 1 oz. barley, rice, or peasemeal, and leeks, onions, artichokes, carrots, turnips, herbs, and other vegetables. ¶ Soup made from liquor of bones of previous day, with full quantity of pumpkins, tomatoes, onions, carrots, and other vegetables. ¶ Meat Pie.—Beef, with 4 oz. potatoes; crust, with 2 oz. flour and dripping. \*\* Irish Stew.—Liquor from meat cooked the previous day, with mutton, 1 oz. flour, 12 oz. potatoes, and other vegetables, onions, and herbs.

## WEEKLY DIETARY.

Hospitals for the Insane.

COMPILED from Dietary Scale approved for Gladesville, Callan Park, Parramatta, Newcastle, and Reception House, Sydney, 5/7/90 and 19/9/90.

Day.	Breakfast.*	Dinner.	Tea.
Sunday .....	1 pint coffee, † 7 oz. bread (males), 6 oz. bread (females), $\frac{1}{2}$ oz. butter.	14 oz. beef (roast or salt boiled), 12 oz. potatoes, 2 oz. bread.	1 pint tea, † 7 oz. bread (males), 6 oz. bread (females), $\frac{1}{2}$ oz. butter.
Monday .....	1 pint tea, 7 oz. bread (males), 6 oz. bread (females) $\frac{1}{2}$ oz. butter.	14 oz. mutton (roast), 12 oz. potatoes, 2 oz. bread, pea soup. §	1 pint tea, 7 oz. bread (males), 6 oz. bread (females), $\frac{1}{2}$ oz. butter.
Tuesday .....	1 pint tea, 7 oz. bread (males), 6 oz. bread (females), $\frac{1}{2}$ oz. butter.	14 oz. beef (roast), or in meat pie, ¶ 12 oz. potatoes, 2 oz. bread.	1 pint tea, 7 oz. bread (males), 6 oz. bread (females), $\frac{1}{2}$ oz. butter.
Wednesday..	1 pint tea, 7 oz. bread (males), 6 oz. bread (females), $\frac{1}{2}$ oz. butter.	14 oz. mutton (roast), 8 oz. potatoes, pudding, ** 2 oz. bread.	1 pint tea, 7 oz. bread (males), 6 oz. bread (females), $\frac{1}{2}$ oz. butter.
Thursday ...	1 pint tea, 7 oz. bread (males), 6 oz. butter (females), $\frac{1}{2}$ oz. butter.	14 oz. beef, roast (males), 14 oz. beef, boiled (females), 12 oz. potatoes, 2 oz. bread, soup. §	1 pint tea, 7 oz. bread (males), 6 oz. bread (females), $\frac{1}{2}$ oz. butter.
Friday .....	1 pint coffee, † 7 oz. bread (males), 6 oz. bread (females), $\frac{1}{2}$ oz. butter.	14 oz. mutton (boiled or roast), or Irish stew, or curry, * 16 oz. potatoes, 2 oz. bread.	1 pint tea, 7 oz. bread (males), 6 oz. bread (females), $\frac{1}{2}$ oz. butter.
Saturday ...	1 pint tea, 7 oz. bread (males), 6 oz. bread (females), $\frac{1}{2}$ oz. butter.	14 oz. beef, boiled (males), 14 oz. beef, roast (females), 12 oz. potatoes, 2 oz. bread, soup. §	1 pint tea, 7 oz. bread (males), 6 oz. bread (females), 6 oz. butter.

\* With 2 oz. of maize meal or oatmeal,  $\frac{3}{4}$  oz. sugar, and  $\frac{1}{2}$  gill milk for each patient, three days a week, or daily in winter. † 1 pint coffee made with  $\frac{1}{2}$  oz. of coffee,  $\frac{3}{4}$  oz. of sugar,  $\frac{1}{2}$  gill milk. ‡ 1 pint tea made with  $\frac{1}{2}$  oz. tea,  $\frac{3}{4}$  oz. sugar,  $\frac{1}{2}$  gill milk. § Soup made from liquor of bones of previous day and cooked meal, with 1 oz. barley, rice, or 2 oz. pease meal, and pumpkins, tomatoes, leeks, onions, artichokes, carrots, turnips, herbs, and other vegetables in season. ¶ Meat pie—Beef, with 2 oz. flour and dripping, onions, herbs, &c. \*\* Pudding—2 oz. flour, 1 $\frac{1}{2}$  oz. suet, 1 $\frac{1}{2}$  oz. raisins, and 1 oz. sugar (quantities may be varied if desirable within limits of scale). \* Irish stew—Mutton, with 2 oz. flour, 12 oz. potatoes, and other vegetables, onions, and herbs. Curry—Mutton, with 1 oz. flour,  $\frac{1}{8}$  oz. curry powder, onions, &c. 2 oz. flour may be used for meat pie on Tuesday, Irish stew or suet pudding on Friday, or for cake with dripping and extra sugar for tea. Variations may be made by salt beef, hot or cold, with salad or pickles, instead of fresh beef; fish (when procurable) instead of meat; curried instead of roast or boiled meat; and rice instead of potatoes.

## II.

DIETARY AT PRESENT IN USE.—BAYVIEW HOUSE.

Private Patients.

Day.	Breakfast.	Dinner.	Tea.
Monday .....	Porridge, grilled chops, tea and coffee, bread and butter.	Vegetable soup, roast mutton, two vegetables, baked rice pudding.	Haricot mutton, jam, bread and butter, tea.
Tuesday .....	Porridge, stewed steak, grilled bacon, tea and coffee, bread and butter.	Roast beef, two vegetables, jam tart, baked custard.	Cold roast beef and salad, pickles, jam, bread and butter, tea.
Wednesday..	Porridge, cold meat pie, tea and coffee, bread and butter.	Pea soup, roast mutton, two vegetables, sago pudding.	Irish stew, jam, bread and butter, and cheese and tea.
Thursday ...	Porridge, grilled steak, tea and coffee, bread and butter.	Roast beef, two vegetables, roly-poly pudding, ground rice.	Cold corned beef, salad, pickles, jam, bread and butter, tea.
Friday .....	Porridge, grilled chops, tea and coffee, bread and butter.	Boiled fish, roast mutton, two vegetables, blancmange, baked custard.	Curried mutton, jam, bread and butter, tea.
Saturday ...	Porridge, stewed and grilled steak, tea and coffee, bread and butter.	Barley broth, boiled mutton, and capers, two vegetables, boiled rice, and stewed fruit.	Irish stew, jam, bread and butter, tea.
Sunday .....	Porridge, eggs and bacon, grilled steak, tea and coffee, bread and butter.	Roast beef, two vegetables, plum pudding, bread and butter pudding.	Cold roast beef, and salad, pickles, jam, bread and butter, tea.

Government Patients.

Day.	Breakfast.	Dinner.	Tea.
Sunday .....	Coffee, bread and jam .....	Sea pie, roast beef, potatoes, and other vegetables, bread.	Tea, bread and butter.
Monday ...	Tea, bread and butter .....	Vegetable soup, minced beef, boiled and roast mutton, potatoes, bread.	Tea, bread and jam.
Tuesday .....	Tea, bread and dripping .....	Haricot mutton, boiled and roast beef, potatoes and other vegetables, bread.	Tea, bread and butter.
Wednesday..	Tea, bread and butter .....	Pea soup, corned beef and dumplings, boiled mutton, potatoes, bread.	Tea, bread and jam.
Thursday ...	Tea, bread and dripping .....	Irish stew, roast and boiled beef, potatoes and other vegetables, bread.	Tea, bread and treacle.
Friday .....	Tea, bread and treacle .....	Boiled and roast mutton, meat pie, potatoes, rice, bread.	Tea, bread and butter.
Saturday ...	Tea, bread and butter .....	Barley broth, boiled mutton, potatoes, bread.	Tea, bread and jam.

Working patients have luncheon and afternoon tea extra.

Tea, $\frac{1}{2}$ oz. at each meal .....	} The only measured articles. The rest <i>ab libitum</i> .
Sugar, 1 $\frac{1}{2}$ oz. at each meal .....	
Butter, 1 oz. at each meal .....	
Jam, 1 $\frac{1}{2}$ oz. at each meal .....	

## X.

Case No. 15.

Dear Dr. Manning,

Hospital for the Insane, Gladsville, 8th January, 1894.

Enclosed please find transcript from the case-book here of Case No. 15.

Since she has returned to us we have found her a troublesome and destructive patient. She requires a "strong dress" by day, and at night destroys her bedding and clothing so that she has now a canvas rug and straw only, and is put to bed without night-dress. One night she tore the canvas rug, even, into small pieces, and threw them out of the window.

I remain, &amp;c.,

ERIC SINCLAIR.

Age, 24 (on admission); social condition, married; number of children, one; occupation, wife of cook; nativity, England; residence, Sydney; religion, Church of England; form of mental disorder, mania puerperal; supposed cause, puerpery; duration of attack, one week; prior attacks, none, admitted 20th October, 1876.

*Before admission.*—She was confined about six weeks ago of her first child, and soon afterwards symptoms of inanity showed themselves. She has been violent at times; has imagined that she was in Heaven; threatened to kill herself, and made an attempt to do so. In the Receiving House she was noisy both by day and night, dirty in habits, and given to denude herself.

*On admission.*—She is a tall well-formed woman, pale, thin, and generally out of health. She is restless, fanciful, and incoherent; imagines all sorts of absurdities; breaks out into tears or laughter without cause, and displays all the ordinary symptoms of sub-acute insanity. She is unable to collect or control her thoughts so as to fix dates, or give any connected account of herself; but she answers simple questions if time is allowed her to think. She is restless and sometimes noisy at night.

31st October.—She is improving physically, but is noisy, erratic at times, violent, and continually troubled by fancies that people are speaking about her and accusing her of all sorts of evil actions and thoughts. 25th November.—She is not yet better mentally, and is often quarrelsome, erratic in conduct, and troublesome. 30th November.—She is now quite stout and healthy in appearance, but remains extremely erratic, mischievous, and troublesome. She will not wear any covering for her head or feet. 31st December.—Remains exactly the same. 31st January, 1877.—No sign of improvement. 28th February.—No sign of improvement. 31st March.—Remains very erratic, restless, mischievous, and troublesome. 30th April.—She is very violent, obstinate, vicious, and troublesome. On the 21st, while being placed in her room at dinner time (as is usual at meal times) by two nurses, her right humerus was fractured. Although there is no evidence of extraordinary force being used, it was deemed necessary by the medical superintendent to give one month's notice to the nurse who held the arm which was fractured. 31st May.—The arm is well. She is a most vicious, obstinate, violent, ill-tempered patient. 30th June.—Remains extremely violent, troublesome, and insane. Monthly notes.—Much the same, &c., to 30th September, 1879, when noted. She is very restless and fidgety, tears her clothes, denudes herself, is erratic in conduct, incoherent and absurd in speech, markedly suicidal, and extremely troublesome. Quarterly notes.—No alteration, &c., to 7th October, 1881, when transferred to licensed house, Cook's River.

## Y

CASE No. 1.

Age, 58; social condition, married; number of children, four; occupation, \* \* \*; religion, Church of England; form of mental disorder, G.P.; supposed cause, mental worry; duration of attack, six or seven days; previous attack, none; date of last admission (if any), none; insane relations, none; date of last discharge (if any), none.

*On admission.*—This patient is well developed, tall, of spare habit and nervous temperament; eyes clear and bright, pupil equal and responsive to influence of light; countenance, watchful, furtive and cunning; unreliable. The physical examination of the vascular and respiratory organs reveals nothing unusual, and the same may be said of the abdominal viscera. This attack came on six or seven days ago, with considerable excitement, and with delusions of exaltation. Previously he had been depressed and low-spirited, but now all became changed: he thought he could make large sums of money by land speculation, also by a patent stoking apparatus; but, on attempting to explain himself, becomes lost in a maze of illogical and bombastical assertions. Said that he was king of Barataria, and that, although he will pretend to sell land, he will not do so, and thus secure both land and money. From an amiable, kindhearted gentleman he has become an arrogant, bombastical, vindictive, and bloodthirsty tyrant, ordering people to be flogged and shot without the slightest provocation, and imitating the noise of the lash thus, counting "one—swish," "two—swish," with a fiendish expression of countenance, showing his teeth and smiling sardonically. He will pass his word to do anything he is asked to do, and in a minute afterwards act in a contrary manner; inclined to be aggressive and strike anyone near him; memory and understanding defective; no sign of epilepsy. There is, in addition to exaltation of ideas, a marked tremulousness in speech, with difficulty in articulating words; but his gait is, at present, apparently free from motor-incoordination.

*Previous history.*—That of an invalid for some years past. Unable to stand without holding on to something, not, perhaps, so much as a matter of necessity as from a fear of falling. The knee jerk, so called patellar tendon reflex, somewhat impaired.

*Predisposing cause.*—History of specific contagion 20 years ago.

*Hereditary tendency.*—Not known.

*Exciting cause.*—Adverse criticisms on the part of Victorian military authorities within recent date.

*Previous habits.*—Temperate, and fairly active; no previous attacks.

At the present time there is great restlessness, excitement, loquacity, exaltation of ideas, suspicion of people wanting to poison him, and consequent refusal of food.

November 23—Passed a fairly quiet night; walking about garden with two attendants during the day; became violent about 5 p.m.; when returning towards the house, and passing near the kitchen, the patient made a rush, and secured a knife that was upon the kitchen table; this was easily removed from him, but while doing so he received a slight cut on the ulnar side of the left hand; he was very noisy all night, and was placed in a single room; warm hip bath. November 24—Much quieter; passed the day in his bedroom; took but little food; became excited and noisy towards evening; returned to single room. November 25—Much the same; only partook of a little whisky and milk towards evening; very excited; warm hip bath. November 26—Much the same; noisy and excited, refusing food, except a small quantity of milk and whisky; warm hip bath. November 27—Took a little tea and milk for breakfast; warm hip bath; carefully rubbing with warm, dry towels; asked for coffee of which he partook sparingly. November 28—Refusing food entirely; very excited; fed artificially with milk, strong beef tea, two eggs and sugar, chloral hyd. ʒi; no difficulty in feeding; passed a more tranquil night. November 29—Much quieter, but refusing food; occupied dormitory downstairs all day; full of delusions of grandeur and importance; talk of dining at once with the Governor; promises to introduce all his attendants to Lord Jersey; offers them presents of a thousand pound each one moment, and threatens to have them shot the next, if they refuse to leave the room at his command. November 30—Much the same; still refusing food; fed as before. December 7—Much the same. December 14—The same. December 21—No change. December 23—The same; occupies dormitory upstairs. 1893.—January 14—Commenced eating. January 23—Has continued to take nourishment in the usual way. February 15—Continues much the same; continues to eat well; goes out every day for exercise in the grounds. March 1—Much the same; seems very weak at times; subject to attacks of diarrhoea; rambling in his talk; very thin. March 17—Much the same. April 17—About the same; articulation good; no advance of paralytic symptoms. May 12—Somewhat stronger physically. June 20—Still gaining strength, but very disconnected in his talk. July 16—Much the same. August 14—Much more connected in his ideas; power of locomotion good. August 21—Much the same mentally, but somewhat incorrect in his habits. September 19—Much the same. October 24—More or less excited, with short intervals of apparent sensibility. November, 20—Apparently much better. November 24—Very excited, destructive, and dirty in habits. 1894.—February 2—Condition, as on 24th October; very restless at night; dirty in habits. March 24—No change. April 21—There is considerable muscular tremor; delusions of an exalted character; sulphonal, gr. xl. at bedtime three or four times a week. April 23—Single room at night. April 30—Sleeps in a single room; very destructive. May 5—Still very destructive; general health fairly good; excited. May 10—Could not be managed without mechanical or manual restraint during night; in the absence of a single room, generally

generally destroys all his bedclothes, and urinates on the floor; sulphonal, gr. xl. continued. May 19—Much the same. May 20—Removed by Chief Secretary's order. In November, 1893, he became very excited, destructive, and dirty in his habits; so much so, that it was deemed advisable to place him in a single room to sleep at night. While an attendant was with him in his bedroom he was constantly ordering him out of the room; and if not obeyed became more excited, throwing pillows or anything that came handy at the attendant. He would drag the bedstead from place to place under the idea that he was barricading himself from the attacks of enemies; he would assure the attendant that his forces were coming rapidly towards him, and that he would soon be relieved. At these times he would shout at the top of his voice, issuing orders for the advance of his troops; in fact, the noise he succeeded in making, partly by hammering the door, partly by shouting, and partly by rattling his bedstead about was something to be remembered by all who heard it. Under these circumstances, I never had the slightest doubt in my mind as to the advisability and humanity of placing the patient in a single room at night, which was the time when he manifested the greatest amount of excitement. March, 1894.—The muscular tremor had become very marked. During all his treatment he had required some one by his side when walking about the grounds, in consequence of great uncertainty of gait, but now this precaution had become still more necessary in consequence of the increased muscular tremor. His medical treatment had consisted of 40 grains of sulphonal three or four times a week. This was invariably administered in his food, as he persistently refused to take any medicine which he could detect. He was in fairly good physical condition; taking abundant exercise in the grounds daily, sleeping in a single room at night, but very destructive and dirty in his habits, requiring canvas bedtick and strong rugs, as anything of a lighter character was generally torn into ribbons. He continued under this treatment to 20th May, when he was removed by the order of the Chief Secretary.

From the foregoing notes it will be seen that Case No. 1 occupied a private room during the night in the main building for over twelve months, i.e., from December, 1892, to November, 1893.

Admitted, 22nd November, 1892.

Date	Treatment	Diet.	Allowances.
23rd November, 1892 ...	B. chloral hyd. ʒi H.S.S. ....	Milk .....	Beef-tea and eggs.
10th January, 1893 ...	Sulphonal ʒi H.S.S. ....	" .....	" .....
8th March, ,, ...	Sulphonal ʒii H.S.S. ....	" .....	Wine, &c.
1st June, ,, ...	Treatment continued.		
11th September, ,, ...	No change. 28th December.—The same.		
21st April, 1894 .....	Sulphonal continued at bedtime, three or four times a week.		

ARTICLES of Clothing destroyed by Case No. 1 at Callan Park.

1894.—May 22—3 flannel shirts, 2 regatta shirts, 1 Crimean shirt, 1 night shirt, 1 bedtick. May 23—1 night shirt, 1 flannel shirt. May 24—2 flannel shirts, 2 night shirts, 2 blankets. May 25—2 regatta shirts. May 26—1 regatta shirt. May 27—1 blanket, 1 night shirt. May 28—2 blankets, 1 flannel shirt, 2 regatta shirts. May 29—2 blankets, 2 night shirts. May 30—1 blanket, 1 night shirt. May 31—1 night shirt. June 2—2 flannel shirts, 1 blanket. June 3—1 blanket, 1 flannel shirt. June 4—1 flannel shirt, 1 blanket, 1 regatta shirt. June 5—1 regatta shirt, 1 flannel shirt. June 6—1 blanket, 2 regatta shirts. June 7—2 flannel shirts, 1 night shirt. June 8—2 regatta shirts, 1 blanket, 1 night shirt, 2 flannel shirts. June 9—2 sheets, 1 night shirt, 1 regatta shirt, 1 night shirt. June 10—4 flannel shirts, 2 night shirts, 2 blankets, 3 sheets. June 11—1 night shirt, 1 flannel shirt. June 12—1 blanket, 1 night shirt, 1 regatta shirt. June 13—1 blanket, 2 regatta shirts. June 14—1 flannel shirt, 2 blankets. June 15—1 blanket. June 16—1 flannel shirt, 1 blanket, 1 night shirt. June 21—1 blanket. June 22—1 blanket, 1 night shirt. June 23—1 flannel shirt. June 24—1 flannel shirt. June 26—1 blanket, 1 night shirt, 1 flannel shirt. June 27—1 blanket, 1 night shirt. June 28—1 night shirt. June 30—1 night shirt, 1 flannel shirt. July 1—1 blanket. July 8—1 blanket and 1 flannel shirt. July 10—1 blanket, 1 flannel shirt, 1 night shirt. July 12—1 blanket, 1 flannel shirt, 1 pillow-slip, 1 night shirt. July 13—2 flannel shirts, 1 night shirt, 1 blanket, 1 pillow-slip. July 14—1 flannel shirt, 1 blanket. July 22—2 night shirts, 4 flannel shirts. July 23—1 pair drawers, 1 cap, 1 shirt, 1 pair trousers, 1 blanket. July 24—1 pillow-slip, 1 blanket, 1 night shirt. July 25—1 night shirt. July 26—2 night shirts, 1 pillow-slip. July 27—2 night shirts, 1 blanket. July 28—1 blanket. July 29—1 night shirt. July 31—1 regatta shirt. August 1—1 felt hat (private). August 2—1 handkerchief (private). August 3—2 night shirts. August 4—1 regatta shirt. August 5—1 merino singlet (private). August 6—1 night shirt, 1 blanket. August 7—1 night shirt. August 8—1 blanket, 1 pair of drawers (private). August 9—1 singlet and hat (private). August 10—1 pair socks (private), 1 overcoat (private). August 12—1 night shirt. August 13—1 blanket. August 14—1 blanket. August 15—1 night shirt. August 16—1 night shirt. August 17—1 night shirt. August 18—1 hat (private). August 20—1 night shirt. August 21—1 private shirt. August 22—1 blanket, 2 night shirts. August 23—1 night shirt. August 25—1 blanket, 1 night shirt. August 21—1 night shirt. September 1—1 night shirt. September 4—1 private shirt. September 6—1 merino singlet. September 7—1 blanket, 1 sheet. September 8—1 night shirt, 1 white counterpane. September 9—1 pair private socks.

Z.

CASE NO. 34.

Copy of Entry in Case-book No. 5; fol. 61, reg. No. 635.

Age, 43; widow, three children; Church of England in religion; mental disorder, melancholia; supposed cause, mental worry; duration of attack, twelve months; insane relations, none; admitted to Bayview, 16th May, 1892; died, 28th May, 1892.

Tall and of large build, but has evidently been wasting of late; she was carried in, being unable to walk; pupils equal and small; does not speak when spoken to, but talks to herself inaudibly; no history of nervous disease in the family; her husband died some twelve months ago, and since that time she has been very much worried about money affairs, which caused her to be depressed in spirits; the present attack seems to have been precipitated by the influenza. 18th May, 1892.—She does not sleep well or eat well; she can walk a short distance with assistance; her pulse is small and quick, 120; she keeps her limbs rigid, and her expression is vacant; dirty at times. 22nd May, 1892.—Pulse still very quick and soft; takes liquid nourishment very well; does not speak, and lies in one position all day; bed sores threatening. 26th May, 1892.—Appears to be dying slowly. 28th May, 1892.—Died to-day at 5 p.m., cerebral softening,

In Mrs. —'s evidence she states that she thinks £4 4s. a week was the arrangement made for her maintenance, whereas the books show that the terms were £3 3s. per week.

Dr. Heatherington states he certainly was not anything but polite to Mrs. —, although that lady states the contrary; but we know that Dr. Heatherington has the reputation of behaving himself with the greatest kindness and consideration towards others, why therefore should he make any exception towards Mrs. —?

As to the witness' statement relative to the mortuary, I can only say it was constructed for the purpose some years ago, and has never been used for any other purpose. The Inspector-General requested it to be constructed, and approved of it afterwards. The Commission have had an opportunity of seeing it.

The evidence of Mrs. — as to the unfitness of Case No. 34 for asylum treatment has been sufficiently contradicted by medical witnesses and certificates to require further comment from me.

Rate of fees arranged for Case No. 34 was £3 3s. per week, and no mention was made of a private room.

The amount actually paid for the twelve days was £5 5s., so that nothing was charged for the extra trouble and expense attendant upon the death of the patient.

As to the mortuary, where the body was placed after death. There is no reason to suppose it was in any other condition than that which it presented on the day it was seen by the members of the Commission. Personally, I have never seen it otherwise.

## C3.

## THE ISOLATION ROOMS AT BAYVIEW HOUSE.

Copy of letter sent to Mr. F. H. Reuss, Architect.

Dear Sir,

Bayview House, Cook's River, 30 January, 1895.

I believe you acted as architect for Dr. Tucker in the various additions and improvements he made to the Bayview House property.

Will you be kind enough to tell me whether the single rooms on the male side of the house were built under your instructions, and with the knowledge of the purpose to which they were to be applied.

I have, &amp;c.,

A. J. VAUSE.

F. H. Reuss, Esq., Architect.

Dear Sir,

Hermitage, 72, Pyrmont Bridge Road, Glebe Point, 31 January, 1895.

In reply to your inquiry, relative to a seclusion room at Bayview, I beg to state that about the year 1868 to 1869, I acted as architect to Dr. Tucker, in the erection of a dormitory, and at the same time I erected a building for a seclusion room, all under the doctor's direction. The builders were Messrs. Smith and Bennett of Woolloomooloo. The walls were padded about half way, and the ventilation was a very great point with Dr. Tucker and received special attention.

Yours, &amp;c.,

F. H. REUSS.

Architect.

Dr. Vause, Bayview.

The position of the building is marked A on the plan signed by me.

## D1.

## CASE No. 12.

Age, 28; social condition, S; occupation, housekeeper; religion, R.C.; form of mental disorder, melancholia acute; supposed cause, love affair; duration of attack, three weeks; previous attack, none; insane relations, none.

Admitted, 8 March, 1894.

*On Admission.*—Patient is of medium height, spare habit, nervous temperament, eyes normal, countenance dark-skin anemic expression, much careworn and miserable; sits in a chair moaning and weeping with dishevelled hair and untidy dress; vascular system, heart sounds reduplicated; respiratory, chest rather flat; abdominal viscera, no physical signs; tongue pale, appetite lost, bowels constipated, skin normal to touch, bruises both legs and arms, and nits in head.

*History of Illness.*—Patient had excellent health till three weeks ago, and was cheerful and active. At that time her lover left ——— for Sydney, and patient said that he had a down on her, because he pulled his hat over his eyes when saying good-bye; she fretted, could not sleep at night, would sit up talking all night, but would work hard during the day; she got low-spirited, lost her appetite, got thin; would sit watching the road as if expecting her lover, though she knew he had gone to Sydney; she was aware that she was making herself ill by fretting, and tried to overcome it by hard work, &c., but was unable to do so; during the last week she has ceased to work; has been with great difficulty induced to take very small quantities of nourishment, and the bowels have been constipated; she has been in great dread of being moved from home, saying that she would be burnt if she was; she has had hallucinations of seeing blue lights, but no suicidal or homicidal expressions or actions. March 8th—This afternoon patient tried to injure herself by knocking her head on floor and bedstead; with difficulty she was got to take a little nourishment. Treatment—*R.* chloral hydrat. gr. xx; pot. brom. gr. xv; ammon. brom. gr. v; H.S.S. om. noct. Allowances—bread, milk, eggs, soups, slops, puddings. March 9th—Slept well, has ceased moaning, took a fair amount of liquids, but has to be fed with spoon; pulse still weak; is constantly trying to undo her dress; will not dress or bathe herself; quiet all day. Treatment—Hydrag ammoniat, ʒi; adipis ʒi; M. p. ung. Sig.—To be applied to head as directed. March 10th—Taking a little more nourishment; slept well. March 11th—Taking a fair amount of nourishment. Treatment—*R.* tr. nuc. vom., M 40; tr. gent. co., M 40; pot. bicarb., ʒi; spirit chloroform, ʒi grs.; aq. ad. ʒ viii; sig. ʒi t. d., rep. choral; pot. brom., ad. gr. xv; H.S.S. om nocte. March 12th—The same. Treatment—*Ol.* castorii, ʒi; to be given with starch as an enema. March 13th—The same. March 15th—Very timid; frequently states her dread of injury being done her; fed by spoon, with difficulty, but getting a fair amount down; sleeps well. Treatment—*R.* ol. castorii, ʒi; to be given with starch as an enema. Diet full. Allowance—Milk (extra), eggs, soups (extra), puddings (extra). March 17th—Feeds herself, taking a fair amount; pulse slightly fuller; very quiet and timid and miserable. March 19th—Treatment—Rep. enema. March 22nd—Very melancholy, weeping a good deal; somewhat restless at night. March 23rd—Treatment—Rep. enema. March 26th—Not so depressed. April 21st—Still very depressed. Treatment—*R.* tr. nucis vom.; ac. nit. dia a. l. ʒii; aq. ad. ʒvi. Sig.—A tablespoonful three times daily. May 12th—Much the same. May 19th—Very restless; constantly tearing her clothes. Treatment—*R.* ti. opii. M x. ter die sum. June 6th—Very noisy; habits, dirty; single room required during the night. Treatment—*R.* ti. opii m. xx. ter die sum. June 18th—Much better; sleeps in hospital; occupies herself in various ways. July 11th—Leave of absence granted for three months; patient returned to her family. Treatment—*R.* chlor. hych. gr. xv; m. ft. Haush. H.S.S.; *R.* tr. nucis vom.; ac. phos. dil.; ti. card. co. a.a. ʒii; aq. ad. ʒvi. Sig.—A tablespoonful three times daily. October 15th—Discharged cured.

## F1.

## CASE No. 3.

Age, 45 years; social condition, single; religion, Jewish; form of mental disorder, general paralysis of insane; duration of attack, 4 months.

*Admitted.*—11th June, 1882. The medical certificate of Dr. J. C. Cox and Dr. L. Laure state:—Some four months ago he lost the power of speech, and also some power in the right arm and leg; his memory was at the same time much impaired; his manner became childish, and he showed complete inability to manage his own affairs, as well as an erroneous judgment in the ordinary affairs of life. Subsequently he became violent at times, fancying himself pursued by someone who wished to kill him.

*On admission.*—June 12th.—He was well developed, though very thin in habit; about . . . in weight and in height; nervous in temperament, and strongly marked with wrinkles round the eyes, giving a dissipated expression to the countenance; eyes blue and somewhat widely opened, pupils rather large. The respiratory and circulating organs reveal nothing abnormal, bowels regular, tongue foul, breath fetid, appetite good though not large, skin warm, but rather dry; no sign of bruises or other injuries beyond two small abrasions of the skin on the ankle and the instep of the right foot. In walking he moves with his legs widely separated, and slides his feet without much bending of the knees; his head is slightly inclined towards the left shoulder and bent forward. In speaking there is a considerable tremulousness of the lips and tongue; he has at the same time great difficulty in articulation, his words being almost unintelligible; at times he pronounces a word quite clearly and then repeats it many times. His memory appears to be entirely gone, so that he does not recognise the names of his friends when they are mentioned to him. He is fond of calling attention to his fine physique and great strength, both being much below the average, relating at the same time stories of personal encounter with persons who have attacked him and whom he has beaten, all being entirely imaginary. He is quiet and tractable in manner, but apt to be violent if thwarted or resisted. Living formerly a very dissipated and irregular life, addicted to the use of stimulants more or less in excess, and has long been notorious for his fondness of sexual indulgence. His disposition has always been prone to extremes of meanness and generosity, never discharging one of his company if possible, but often pleading poverty as an excuse for not paying salaries, although the excuse

excuse was plainly untrue; giving freely to charitable purposes in his profession, but often endeavouring to avoid payment of claims of those who could ill afford the loss. Since the beginning of the present attack the latter disposition has greatly increased, and he has latterly evinced the greatest unwillingness to part with money for the necessary expenses of his household, fancying that he is being robbed and cheated by those around him. On the first night after his admission it was necessary to restrain with gloves in a seclusion room to prevent his doing violence to himself by striking his head against the bedstead, breaking windows, &c. *Since admission*—He has been very quiet, giving little trouble to the attendants, and taking his food well. June 14th—Much quieter, sleeps well, and eats well. June 16th—Has obscure fears of being injured, thinks someone wants to poison him. June 18th—Comparatively quiet, bodily health improving. June 21st—Very restless during the night; fears of persecution still continue. June 25th—Concealed a knife while at dinner; wishes to drink from the attendants' glass as he thinks he might otherwise be poisoned; general health improving. June 27th—Still very suspicious, but quiet and tractable; habits clean. June 30th—Very restless and talkative during the night; tried to obtain possession of a knife at dinner; tried to pull out his whiskers; imagined someone wanted to kill him, and annoyed the other patients by taking books from them and ordering them from their chairs. June 14th—Treatment—Taking tonic No. 1; diet, ordinary; allowances, fish, fruit. July 2nd—Very restless and troublesome during the night; gloves required this morning to prevent his undressing himself; treatment, sedatives occasionally at bedtime. July 3rd—Somewhat quieter; gloves not necessary; occupied associated bedroom. July 5th—Continues quiet; bodily health improving; mental state much the same. August 1st—Treatment— $\mathcal{R}$ . pot. iodidi gr. v., liquor strychnæ m.v., ter in die; diet, ordinary; allowances, fish, fruit. August 5th—Continues much the same. August 21st—Very weak physically; can hardly utter a word; cannot stand alone, but retains a good appetite; treatment, mixture changed for No. 1 tonic, as at first; allowances, milk and beef tea. August 28th—Much better in bodily health; can stand and walk alone. September 1st—Treatment,  $\mathcal{R}$ . Tr. ferr. mur. m.xv., ter in die. November 1st—Continues much the same; very demented and physically weak; appetite good; treatment, No. 1 tonic, ter in die; diet, ordinary; allowances, whiskey at bed-time, beef tea, milk, eggs, arrowroot, &c. December 1st—No alteration. January 2nd—Continues much the same. January 10th—Retention of urine, drew off by catheter about 10 oz. January 12th—Has been passing water better. February 17th—No further trouble with water; weight, 7st. 9 lb. March 15th—Continues much the same; fell while attempting to cross the room on the 10th, and cut his left eyebrow. April 20th—Continues the same. May 1st—Weight, 8 st. 6 lb.; appetite good; requires constant supervision on account of partial paralysis. June 6th—Weight, 8 st. 6 lb.; very mischievous, tries to tear off his clothes; strikes at the attendant; becomes noisy and violent without provocation of any kind; uses very bad language; both wet and dirty; urine passes better; bowels require careful watching. June 21st—Cheerful in manner when not troubled with any imaginary annoyance; physically weak. July 10th—Somewhat stronger of late; no improvement mentally; tendency to formation of bedsores. July 18th—The bedsores are treated anti-septically as far as possible; weight, 9st. 4lb. August 10th—Very troublesome, dirty and noisy. September 15th—Getting weaker. October 2nd—Cannot walk and requires feeding; passes both urine and feces involuntarily; very destructive. October 9th—Very weak. October 16th—Eats well, but seems to be losing flesh. October 23rd—Still getting thinner and weaker; remains in bed most of the day. October 30th—Emaciation still progressing; very irritable if disturbed at all. November 7th—Has been quite unintelligible for some weeks past; has several bedsores. November 14th—Died to-day, 4.10 p.m.

Case No. 3 was, during a certain part of his illness, very difficult to manage; he was restless and mischievous; constantly trying to undress himself, and if left for a moment would roll out of his chair, so that it was difficult to prevent his injuring himself. The arrangements for this purpose were various;—sometimes a sheet would be fixed round his waist and sometimes a belt, and these would be attached to an arm-chair; a reclining chair was constructed for him, so as to obviate the danger of his falling out; he was taken regularly to the closet, but notwithstanding this he was occasionally wet in his chair in consequence of partial paralysis, resulting in incontinence.

## G1.

## CASE No. 17.

Age, 56; social condition, widowed; number of children, six; occupation, widow of grazier; religion, Roman Catholic; form of mental disorder, mania acute; supposed cause, pecuniary troubles, spiritualism; duration of attack, one week; previous attack, yes—about six.

Admitted—10/11/1893.

*On admission*—This patient is well-developed, of nervous temperament, and somewhat plethoric habits; eyes clear and bright, pupils equal and responsive to the influence of light; countenance bright and cheerful. The vascular system reveals a fluxionary hyperemia of cerebral blood-vessels. There is also a history of hepatic and renal troubles. Pulse seventy-six, small and firm, tongue coated and indented, skin warm and moist. There are several bruises on front of legs, and about buttocks and left side of hips.

This attack came on about a week ago, with depression, followed by excitement, refusal of food to a certain extent, delusions of various kinds, e.g., she thought she could destroy the world by making certain passes with her hands. She has been noisy, aggressive, and destructive; memory and understanding defective.

No history of epilepsy or paralysis. Predisposing cause—Naturally of a highly nervous organisation, and has been accustomed to stimulants for years. Exciting cause—Financial troubles and spiritualism. There have been about six previous attacks of short duration during the past year. November 11—Considerably excited; takes food only moderately well. Treatment— $\mathcal{R}$ . Pot. brom., gr. x, t. d. s.; diet, milk; allowances, beef-tea. November 18—Much the same. November 25—The same. December 2—No change. December 9—Still very excited; takes food sparingly. December 10—Depressed and weak; growing worse. Treatment— $\mathcal{R}$ . Sp. ammon. aromat.,  $\mathcal{M}$ . x; eth. rect.,  $\mathcal{M}$ . x; syr. aurantii,  $\mathcal{M}$ . xv; aq., ud. 3j. Sig.—To be taken every two hours. Allowances, milk and brandy. Dr. Tarant was called in to see this case, and stated that he did not think the patient could live more than two or three days; the pulse was soft and feeble, beating at 120 per minute; temperature 101, breathing 24. December 11—Almost refusing food; propose feeding to-morrow. December 12—Very exhausted, pale, and moist skin, fluctuation over the region of the bruises noted on admission; rapidly growing weaker; died at 8 p.m.

## MR. GEAREY'S CONNECTION WITH THE CHARGES.

Board of Health Offices, 127, Macquarie-street, Sydney, 16 June, 1894.

GEAREY left the paper herewith at this office, but as it is not a matter that comes within my cognizance, I forward it to the Principal Under Secretary, with a suggestion that it be referred to the Inspector-General of Insane.

A. STUART,  
Medical Adviser.

Principal Under Secretary, B.C.

## Enclosures.

ABOUT the end of April I discovered that Case No. 1 was shamefully treated at Dr. Vause's asylum, Bayview House.

My charge is that \* \* \* \* \*, at 5 to 6 p.m., was put in a room—really an old stable—no windows, in perfect darkness, and without any attendance, from 5 to 6 p.m. till 8 a.m. the following morning.

On Sunday, the 20th May, I saw \* \* \* \* \*, as I described, in the presence of Dr. Stuart, Mr. Sager, J. J. O'Brien, and Dr. Vause. The room at this time contained a piece of canvas sewed together, and stuffed with straw, also three pieces of canvas. Four months ago \* \* \* \* \* was placed in this room without any bedding at all. Some canvas rag were thrown to him, and this was the sole contents of the room. A humane attendant sowed up this piece of canvas and stuffed it with straw. This treatment has been going on since last December and until our visit on 20th May, 1894. It is said \* \* \* \* \* had certain filthy habits, necessitating this treatment. I will prove that this is untrue, and that \* \* \* \* \* was the quietest of patients, so much so that any attendant would sleep in the same room without any fear of violence. His family paid 6 guineas per week, the agreement being that \* \* \* \* \* was supplied with an attendant day

day and night, for which purpose the \* \* \* room is supplied with a bed for himself and an attendant, which, as a matter of fact, he never occupied after 5 p.m. Everything was readied up when the \* \* \* family called to see him. As to Dr. Manning's reports as the Visiting Doctor Inspector of Insane, Dr. Manning did not have the opportunity of seeing the place in its worst state, as he always went to Dr. Vause's private house first, and as soon as he did there would be word sent over that the visiting doctor was coming. Then, of course, everything would be tidied up, and clean carpets laid on the floors, and clean sheets put on the beds if they were wanted. All this was done before Dr. Manning ever left Dr. Vause's house. \* \* \* used to be put in at 5 p.m., and never taken out before half-past 8 or 9 a.m. in the morning. The room next \* \* \* used to be occupied by \* \* \*, who is now at Parramatta Asylum. He attacked Dr. Vause one Sunday with a table knife, when a warder was sent for Dr. Sinclair, of Newtown. This man was not mad, but subject to fits. He knew too much. He used to tell his friends when they came to see him if he was badly treated. Dr. Vause is no fool about \* \* \*. He had the best bed in the house, but always grumbled about the food, and so would any man growl about the food that they used to get there. Even the milk they used to get in the tea was sour—in fact, rotten some mornings—and the meat used to be rotten very often. I mean what the paying patients used to get. Then, when that is the case, you may form an idea what sort the poor Government patients used to get. Someone should go there and interview \* \* \* and another patient called \* \* \* also \* \* \*. They would give a lot of information about the place and the way they are treated there. The two latter are not lunatics—they are only in there for protection. All the men servants could tell all about it if they liked to do so, but of course times are bad, and they would not sacrifice the positions they hold there for the sake of anyone that did not concern them in any way. The gardener knows a lot if he could be made to give evidence. James Copley has been a warder there about eight months. He is an old soldier, and served twelve years in the Eniskillen Dragoons—a sensible, straightforward man, and would no doubt give evidence. He used to sympathise and be very sorry for the way the poor \* \* \* was treated.

Dr. Vause's report, taken from the *Daily Telegraph*, 6th June, 1894, states:—Sometimes two and three attendants waited on \* \* \*, "constantly in attendance on the patient," one was "supposed" to visit him every two hours. They did not do so. "The room was specially built for isolation purposes." This is untrue as the room in question was formerly a stable. All the bed-clothing on \* \* \* when the inspection was made on the 20th May was three pieces of canvas, filthy and saturated with urine. Dr. Vause says \* \* \* tore up thirty-six bed coverings. If this is true where were the attendants who were "constantly in attendance on the patient." When \* \* \* was found on the morning of 20th May he had nothing on but a flannel shirt. The trousers and coat were taken into the room and put on him. Dr. Manning says it is impossible the treatment could be "continuous" without his knowledge. I can prove it has been continuous since the middle of December last. The story told of \* \* \* rubbing himself with excrement is false. Being shut in a dark room for fourteen hours without any utensil, it is most likely he would in the course of the night fall into the faecal matter.

#### INFORMATION FOR H. GEAREY.

ABOUT \* \* \*, I know this much: that he has been kept in that room where you found him that morning every night from the 13th day of November, 1893, till the 1st of March, 1894, to my knowledge, without any exception. The fact is, about him plastering himself with his own dirt is, that he had no other place to do it in only on the floor. Then what could you expect of a man that was in the state he was in but to roll and ramble about all over the place? In fact, the most careful man would be apt to come in contact with anything like that in a small place like that. To my knowledge, he was as sensible as you could wish any man to be some nights he was put in there. In fact, I could prove he has been there for the last twelve months, as I know two or three of the men that has been there for about twelve months or more. There was something in Dr. Vause's report about an attendant visiting the patient's room every two hours. That is false, as I never heard or know of it being done. And also that these rooms were supplied with india-rubber utensils. The patient never had one. If you knew the state of affairs as well as I do, and to read Dr. Vause's report, you would think he was one of the biggest liars on the face of the earth. He must have a terrible hard neck on him to dare to send such a report into Parliament, knowing very well that there is people all through the country who know as well as he does himself the way things were carried on in his place. There were a dozen attendants and nurses discharged from there. They all know how things are carried on; in fact, better so than I do. I would like very well to have a talk with Dr. Vause on certain matters. I would soon shut him up. There were weeks that the patient never dirtied his room, and Dr. Vause never offered to put him anywhere else; in fact, he never bothered himself to know what state his room was in to my knowledge. I suppose as long as he got his £300 a year he did not care. I suppose he thought roguery would last for ever; but this time Dr. Vause has put his foot into it at last. To know that \* \* \* has got justice and proper treatment is far sweeter to me than revenge, for I care nothing for Dr. Vause. There would be no danger for an attendant to sleep with the patient all night. Some nights he might not be able to sleep much, but then he would sleep through the day; but, of course, that would be more expense to Dr. Vause. The patient had been violent, to my knowledge, on very rare occasions, but even then only for an hour or two at a time. It was always through where he was kept and the way he was treated. The patient, as a rule, used to be in splendid form of mind through the day. He would make anyone laugh if they were half dead. At times he liked to be outside on fine days.

#### HI.

##### AN ANONYMOUS LETTER.

To the Members of the Legislative Assembly of New South Wales,—  
Gentlemen,

Bayview Asylum, Cook's River Road.

Owing to influential friends, \* \* \* has been removed from this hell upon earth.

Fifty Government patients are half starved and nearly naked, being only clothed properly when it is known that the Government Inspector, Dr. Manning, is coming.

Men and women are placed in solitary confinement without light, bedding, or clothing.

Paralysed patients are eaten alive by rats.

Women batter their heads and die in dark cells.

Women are dragged by the hair of their heads and placed in dark solitary confinement.

Women die without any inquiry being made.

Men likewise.

A hell upon earth is the only name for this institution, which is presided over by Dr. A. J. Vause.

A drunken Dr. Vause!

Why did Dibbs suppress the papers and the honest report of Dr. Anderson Stuart?

Because Copeland (his mate) was a shareholder in this impious concern.

Why is Alfred Bennett, of the *Evening News*, silent?

Because he is well tipped.

The other dailies have been squared by Edward Greville, another shareholder.

Members, do not let this evil spot remain in your midst.

Greville, Copeland, Vause, Gannon, & Co., must not be allowed to illtreat with impunity the poor and insane from whom they are netting £6,000 per annum.

Yet the late Government and the present also wish to hush up the matter, so that Greville, Copeland, & Co., can still go in for their daily spoil of flesh and blood.

Members, how long is this to be carried on?

Will no one take the matter up and demand a searching inquiry?

ARISTIDES.

## APPENDIX.

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## Jl.

## ACCIDENTS AT BAYVIEW HOUSE FOR 10 YEARS (1884 TO 1893 INCLUSIVE). FROM STATUTORY BOOKS.

Year.	Total accidents.	Fatal.	Fracture of bones or dislocation. †	Patients under care.	Percentage of total accidents.	Percentage of fatal accidents.	Percentage of fractures and dislocations.	
1884.....	2	.....	.....	172	1.16	.00	.00	Average annual percentage of accidents, 1.36.
1885.....	3	.....	.....	177	1.09	.00	.00	
1886.....	5	.....	.....	174	2.87	.00	.00	
1887.....	2	.....	.....	121	1.65	.00	.00	
1888.....	.....	.....	.....	126	.00	.00	.00	Average annual percentage of fatal accidents, .08.
1889.....	1	.....	1	122	.81	.00	.81	
1890.....	.....	.....	.....	129	.00	.00	.00	
1891.....	4	.....	1	130	3.07	.00	.76	Average annual percentage of fractures and dislocations, .15.
1892.....	1	.....	.....	118	.84	.00	.00	
1893.....	2	1	.....	125	1.60	.80	.60	

\* Overdose of chloral.

† Includes falls and struggling with attendants.

## ACCIDENTS SCOTCH ASYLUMS FOR 10 YEARS (1883 TO 1892 INCLUSIVE). FROM REPORTS OF LUNACY COMMISSIONERS FOR SCOTLAND.

Year.	Total accidents.	Fatal.*	Fracture of bones or dislocation. †	Patients under care	Percentage of total accidents.	Percentage of fatal accidents.	Percentage of fractures and dislocations.	
1883.....	120	17	22	7,800	1.63	.21	.41	In every 100 patients there is a fracture or dislocation about once in every two years, and a fatal accident in every 100 patients about once in every seven and a half years. Average annual percentage of accidents, 1.36. Average annual percentage of fatal accidents, .13. Average annual percentage of fractures and dislocations, .48.
1884.....	129	10	37	7,868	1.63	.12	.46	
1885.....	101	9	33	7,881	1.28	.11	.41	
1886.....	115	15	48	7,898	1.45	.18	.60	
1887.....	114	9	45	8,048	1.41	.11	.55	
1888.....	95	9	40	8,358	1.13	.10	.47	
1889.....	124	9	45	8,549	1.45	.10	.52	
1890.....	111	9	48	8,785	1.26	.10	.49	
1891.....	117	11	44	8,034	1.29	.12	.48	
1892.....	114	18	43	9,215	1.23	.19	.46	

\* Includes suicides, poisoning, falls, choking in fits, &amp;c.

† From falls, struggles with attendants, &amp;c.

## Kl.

## RETURN SHOWING NATURE OF ACCIDENTS AT BAYVIEW FROM 1884 TO 1893 INCLUSIVE.

1884 (2)—Slight cut from fall; slight cut from fall. 1885 (3)—Slight cut from one patient striking another; slight cut from fall; slight cut while in epileptic fit. 1886 (5)—Slight burn of hand; penetrating wound of right eye; slight cut; injury to hip from fall; slight cut. 1887 (2)—Slight cut tip of tongue; slight cut of wrist from breaking pane of glass. 1889 (2)—Slight cut; fracture of fibula. 1891 (4)—Cut forehead; scalp wound; fracture of humerus; injury to teeth from blow by another patient. 1892 (1)—Slight cut. 1893 (2)—Cut head from fall in epileptic seizure; death from overdose of chloral.

## Ll.

## RETURN SHOWING PERCENTAGE OF RECOVERIES, &amp;C., BAYVIEW ASYLUM, COOK'S RIVER.

	In Hospitals for the Insane, exclusive of Cook's River.	Cook's River.
Average percentage of Recoveries on admission and re-admission for ten years, 1884-1893.....	42.95	47.92
Average percentage of Patients relieved on admission and re-admission for ten years, 1884-1893.....	4.63	14.23
Average percentage of Deaths on average numbers resident for ten years, 1884-93.....	7.00	5.82
Average percentage of those Discharged, either recovered or relieved, for ten years, 1884-1893.....	47.58	62.20

In the average percentage of recoveries, Cook's River stands nearly 5 per cent. ahead of all other asylums in the Colony; in the average percentage of Cases Relieved, Cook's River stands 9.65 per cent. ahead of all other asylums in the Colony; and in the average percentage of those Discharged either recovered or relieved, Cook's River stands 14.62 per cent. ahead of all other asylums in the Colony.

## BAYVIEW HOUSE, COOK'S RIVER.—NUMBER OF ADMISSIONS AND RE-ADMISSIONS, RECOVERIES, AND RELIEVED CASES FOR TEN YEARS 1884-1893.

Year.	Admissions and Re-admissions	Recovered.	Relieved.
1884.....	19	12	1
1885.....	21	13	4
1886.....	19	4	3
1887.....	30	10	4
1888.....	22	15	3
1889.....	19	2	1
1890.....	17	19	1
1891.....	34	10	6
1892.....	16	6	4
1893.....	20	13	4
	217	104	31

## M 1.

LIST OF NAMES OF PATIENTS WHO HAVE DIED AT BAYVIEW DURING THE YEARS 1890 TO 1894, INCLUDING CAUSE OF DEATH AND DURATION OF ILLNESS.

Name.	Age.	Cause of Death.	Duration of Illness.	Remarks.
* * * (12/4/90) .....	78	Heart disease .....	22 years insane; 14 days duration of last illness.	
* * * (16/4/90) .....	71	Hemiplegia and syncope...	5 years; 3 months gradually sinking.	
* * * (3/9/90).....	34	Melancholic exhaustion and diarrhoea.	8 years; 2 months gradually sinking.	
* * * (30/9/90) .....	60	Chronic softening of brain	3 years; 4 months gradually sinking.	
* * * (9/11/90) .....	...	General paralysis.....	5 years; 3 months rapidly sinking.	
* * * (1/12/90) .....	51	Marasmus .....	3 years .....	Attended by Dr. Elliott during last illness.
* * * (8/12/90) .....	80	Senile decay.....	6 years; 2 months gradually sinking.	
* * * (29/12/90).....	...	Heart disease .....	4 years .....	Died at Dubbo while on leave of absence.
* * * (4/1/91).....	82	Senile decay.....	3 years; 1 month rapidly sinking.	An epileptic.
* * * (8/2/91).....	35	Phthisis .....	3 years .....	Died at Burwood while on leave of absence.
* * * (21/2/91) .....	59	Heart disease .....	5 years; 2 months duration of last illness.	
* * * (20/5/91) .....	31	Exhaustion subsequent to chronic mania.	16 months; 5 months duration of last illness.	
* * * (26/5/91) .....	74	Senile decay .....	3 weeks.	
* * * (25/5/91) .....	74	Senile decay .....	2 months .....	Died at Miller's Point while on leave of absence.
* * * (10/7/91) .....	...	Pneumonia .....	10 days.	
* * * (30/9/91) .....	..	Chronic mitral disease.....	6 years; 1 month duration of last illness.	
* * * (17/10/91).....	64	Senile decay .....	12 years; gradually failing for over a month prior to death.	
* * * (23/10/91) .....	36	General paralysis and apoplexy.	2 months; died 9½ hours after apoplectic attack.	
* * * (18/12/91).....	72	Senile decay .....	14 years; 3 weeks ailing prior to death.	
* * * (20/12/91).....	45	Acute brain softening.....	Died 17 days after admission	
* * * (9/4/92) .....	47	Chronic tubercular disease	14 years.	
		Diarrhoea and exhaustion..	3 weeks.	
* * * (28/5/92) .....	43	Cerebral softening .....	Died 12 days after admission	
* * * (29/7/92) .....	63	Sanguineous apoplexy.....	Died while on leave of absence.	
* * * (4/2/93).....	40	Epilepsy and exhaustion...	6 months; status epilepticus for last 9 days.	
* * * (5/3/93) .....	58	Melancholic exhaustion ...	1 month.	
* * * (18/5/93) .....	55	General paralysis.....	2 years and 5 months; rapidly failing during last 3 months.	
* * * (24/6/93) .....	23	Epilepsy .....	For over 10 years.	
		Cardiac failure.....	3 weeks.	
* * * (13/11/93) .....	45	Morphia habit of 20 years' standing and heart failure.	1 week.	
* * * .....	55	Hereditary insanity, marasmus.	3 months; gradually failing	
* * * .....	47	Epilepsy and overdose of chloral.	Epilepsy had existed for over 10 years.	Coroner's inquest.
* * * .....	56	Cerebral hyperamia.....	2 months .....	Dr. Tarrant in consultation.
		Cardiac asthenia .....	1 week.	
* * * .....	45	Epilepsy and cardiac failure.	2 years, and status epilepticus during 3 days.	Dr. Sinclair in attendance.
* * * .....	53	Intestinal catarrh, cardiac asthenia.	3 months .....	Dr. Coutie in attendance.
* * * (20/6/94) .....	63	Malignant disease of rectum, and intestinal catarrh.	3 months .....	This patient had been gradually sinking for over 3 months.
* * * (10/9/94) .....	23	Epilepsy and heart failure	10 years .....	Status epilepticus set in 3 days before death.
* * * (8/10/94) .....	54	Melancholic exhaustion and decay, with heart failure.	3 months .....	This patient had been gradually failing in health for over 3 months.
a * * * .....	34	Delirium tremens, syncope	Several weeks .....	He had been drinking heavily before coming to Bayview.

a This patient was admitted by Dr. Ramsay during my temporary absence on the evening of 20th March, 1894. A telegram announcing his intention of coming to Bayview was received by Dr. Ramsay about an hour before his arrival. I saw the patient next day, and found he was too weak to be removed. Stimulants and medicine were administered, and he also partook of food fairly well; but syncope took place on the evening of the 23rd instant, and the patient died. Dr. Ramsay certified to the cause of death. The patient had been under the medical care of Dr. Brereton \* \* \* and Dr. Lewers, \* \* \*, and had been treated by them on various occasions for delirium tremens. \* \* \* was admitted to Bayview in the first instance on 31st May, 1892, suffering from acute delirious mania, and was allowed to go out on leave of absence on 21st June, 1892. He was discharged on 8th July, 1893, after being on leave of absence since 21st June, 1892.

## BAYVIEW HOUSE, TEMPE.

AVERAGE percentage of Deaths on average number of Resident Patients for ten years ending 1893.

Year.	Average Number resident.	Deaths.	Percentage.	Year.	Average Number resident.	Deaths.	Percentage.
1884.....	148	6	4.05	1890.....	101	8	7.92
1885.....	152	8	5.26	1891.....	97	12	12.23
1886.....	87	4	4.59	1892.....	99	3	3.03
1887.....	93	1	1.07	1893.....	100	8	8
1888.....	101	6	5.94				
1889.....	104	7	6.73	10 years.....	1,082	63	5.82

Average percentage of deaths on average number resident in all asylums for 10 years, 1884-1893, exclusive of Cook's River—7.00.

## N1.

## DR. TUCKER'S MOVEMENTS.

My Dear Vause,

17 January, 1895.

Yesterday you asked for a second time as to the probability of Dr. Tucker having visited Australia in 1894.

Letters received by me from him and Mrs. Tucker, dated from London, and indicating all their movements, convince me that during the whole of that year, with the exception of a short period when they were at a watering place, they resided in London.

Yours faithfully,

EDWARD GREVILLE.

Dr. A. J. Vause.

## O1.

## Re MISS M'LEOD.

Tempe, 19 November, 1894.

Dear Doctor,

I have not been able to lay my hands upon the papers. I thought I had handed the agreement and summons which you gave me back to you. However, there is no mistake about the claim she made. She sued you, not under the Master and Servants' Act, for wages, but in the Small Debts Court, for damages, claiming £3 in lieu of a month's notice, which amount you paid into Court contrary to my advice, as, according to her agreement, she was only entitled to a month's notice in the event of your discharging her before three months, the term for which she engaged, she having actually served you nine months. When you showed me the receipt for her wages, up to the time of her dismissal, I advised you not to pay any extra claim.

Yours truly,

FREDK. GANNON.

Dr. Vause, Bayview House.

## P.

## PRIVATE LETTERS.

Dr. Vause, Esq., Bayview House, Tempe,—

Dear Sir,

\* \* \* Sept. 4th, 1894.

I am shure you will be pleased to hear that My Daughter Bridget is quite Recovered. She is as well as Ever she was. Pleas to send me the Cirtificket. You will oblige. She drives hir Pair of Poneyes into town in the Bugey, but she is a little shic of those that scan hir when she was bad. She has taking now sleeping drops this last three weeks or any sort of Medisen. She wishes to be Remembered to Mrs. Gilerist. She sais Mrs. Gilerist was hir best frend at Tempe. Tell Mrs. Gilerist to tell Father Calighan that I mislaid his adres, ouley for that I would have writen to him, but the first time I goe to Sydney I will get Mr. Woods to drive me out to see him, and to tell him that Bridget is quite Recovered, thank God. She is going to the show at Cowra on next Thirsday, that is the grates Event of the year you will meat People from all parts of the Contry at the showes.

Hoping you ar well,

I Remain yours faithfully,

P.S.—Adres Wattermondara, v Cowra, and let me now how you are geting on.—P.C.

## P1.

Mrs. Gilchrist, Bayview House, Tempe,—

Dear Mrs. Gilchrist,

\* \* \* Sept. 19th, 1894.

I am In Receipt of your Kind Letter, and I am quite shure that ye ar all pleased to hear of Poor Bridget Recovery. She is as well as ever she was in hir Life. We had Father Hennessy from Young. He had Mass hear yestarday. Bridget Laid out the alter, and don Everything to it just the sain as she always did. She was at the cowra show, and Injoyed it the sain as always; thay held a Dance at hir Brother James place that night and she danced all night and cam home next day, and she would not goe to Bed, but don hir work. I Red hir your Letter, and she was so pleased to hear from you. She feals very sorey for Father Callaghan this, poor man, I hope he will sone be well again. We feal so happy to have Bridget himself again. She is in hir post, leader of the House. She don't forget the Horse Shoe and throwing it over hir sholder. She never sais anything about hir Ilnes or about Tempe since she got Real well. She sais she must forget It alltogeather. We ar going to have a grata Hair drive hear on Satarday next, and a dance in the Night, so she is bissey preparen for it. She wishes me to Remember hir to \* \* \* , and \* \* \* , and tell them she will write to them sone. I will call to see ye when I gow to town at your Invetashun.

Hoping this will find ye all well,

I am, yours faithfulley,

P.S.—When I cam to the part in your Letter whair thair is now place like Cowra she said ye wair always chafing hir about Cowra.

## Q.

## EXAMINATION OF DRAPERY ACCOUNTS.

Dear Sir,

Post Office Chambers, Pitt-street, Sydney, 11 March, 1895.

We have examined, at your request, the books of Dr. Vause, regarding the expenditure of drapery for the years 1893 and 1894, and beg to report as follows:—

Dr. Vause was unable, without due notice, to produce receipts for the expenditure of £630 18s. 2d., he claims to have incurred; but we have compared his ledger account with his check-books and pass-book of the City Bank of Sydney, and find his disbursements to the different "Drapery Houses" are properly set forth, viz. :—

	£	s.	d.
Hordern Brothers.....	384	0	9
Mark Foy .....	166	8	6
A. Hordern and Son .....	32	7	10
Munro & Co. ....	10	4	10
Riley Brothers .....	9	9	5
D. Jones & Co. ....	7	8	9
Robt. Reid & Co. ....	7	8	0
Dressmaking .....	5	18	3
Hatte & Co. ....	5	4	0
A. G. Price .....	1	0	0
Sundries .....	1	7	10
Total .....	£630	18	2

Regarding the Memo. of Sales sent in by the three firms of Hordern Brothers, Mark Foy, and A. Hordern and Son, we find that the former, which represents more than all the rest put together, is, within a few shillings, correct; while those of the latter two, in the main, agree. But only certain months are quoted, and as the payments were not always made on the same month as the goods were purchased, an exact comparison is impossible without the invoices and receipts were presented.

We could not, of course, certify that all the expenditure was on the Asylum account, but Dr. Vause assures us he had no private account with these firms; and to our mind there is every appearance of the entries being *bona fide* and reliable.

In the case of Messrs. Hordern Brothers is included an item of £70 16s., paid on 5th January, 1893, evidently for goods had in 1892, and therefore this amount should, strictly speaking, be deducted from 1893.

We are, &amp;c.,

J. T. DAVENPORT, DAVIS, &amp; Co.

To the Secretary to the Royal Commission of Inquiry re "Bayview House."

Sir,

Post Office Chambers, Pitt-street, Sydney, 20 March, 1895.

In reply to your further inquiry, we may say that the only data for a monthly comparison of 1893 and 1894, you have furnished us with, apart from Dr. Vause's cash account, is that of Messrs. Hordern Brothers; but as their transactions represent more than half the total, and most of the other firms give only very short credit, we think the following analysis may be accepted as substantially correct and reliable.

We understand from you that your Commission wish to be informed of the relative expenditure on drapery while Case No. 1 was in the establishment and after his withdrawal at the end of May, 1894.

	Summary.			1893.			1894.			
		£	s.	d.	£	s.	d.	£	s.	d.
Purchases from January to May, 5 months, per—										
Hordern Brothers.....		162	17	8		13	1	10		
Sundry accounts paid .....		21	8	2		73	3	10		
		£184	5	10		£86	5	8		
Purchases from June to December, 7 months, per—										
Hordern Brothers .....		119	16	9		6	15	8		
Sundry accounts paid .....		45	6	11		106	0	3		
		£165	3	8		£112	15	11		
It will thus be seen that the average monthly expenditure from—										
January to May was .....		36	17	2		17	5	2		
and from										
June to December.....		23	12	0		16	2	3		

showing a constantly declining ratio; but it also proves that a greater monthly outlay was incurred while Case No. 1 was under the doctor's charge, as after he left it reached its lowest point.

You will note that the above totals and those supplied to you by the doctor do not tally; but the difference has been explained in our previous report.

We trust that this will furnish you with the information you wish to obtain, and that the Commissioners will accept our regret that, in the absence of invoices and receipts, we cannot be so exact in our comparison as the members appear to desire, judging from the tenor of your instructions to us.

Yours, &amp;c.,

J. T. DAVENPORT, DAVIS, &amp; Co.

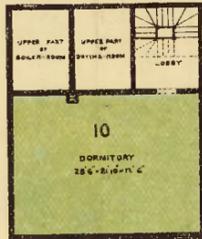
To the Secretary, Royal Commission of Inquiry re "Bayview House."

[4 Plans.]

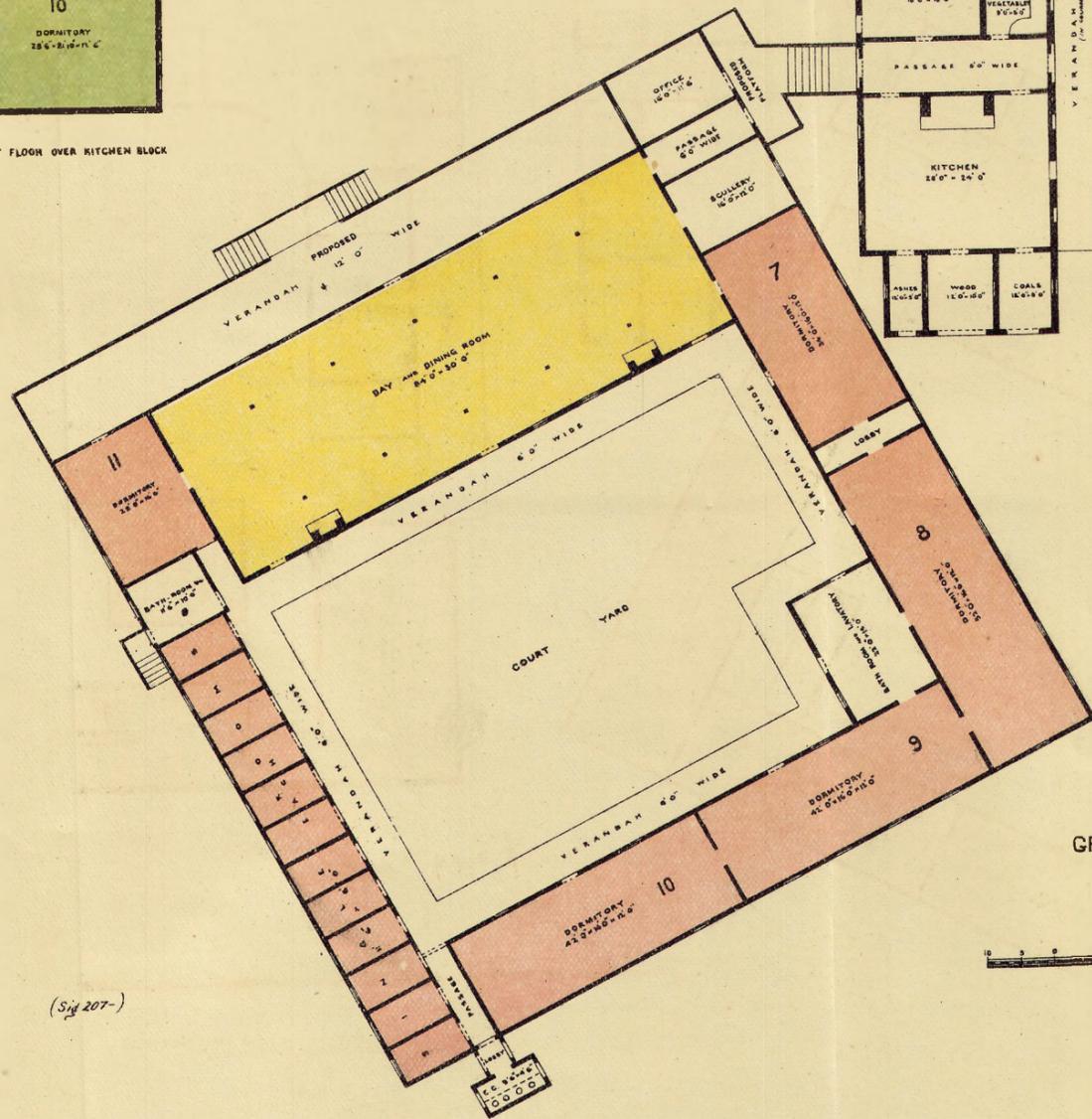
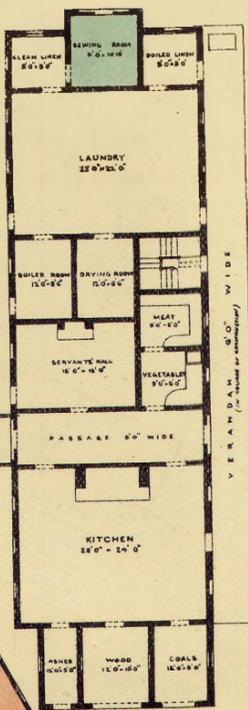
# "BAY-VIEW" TEMPE COOK'S RIVER

LICENSED HOUSE FOR THE INSANE (SYDNEY, N.S.W.)

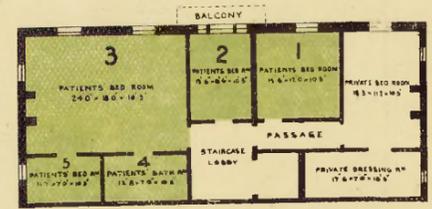
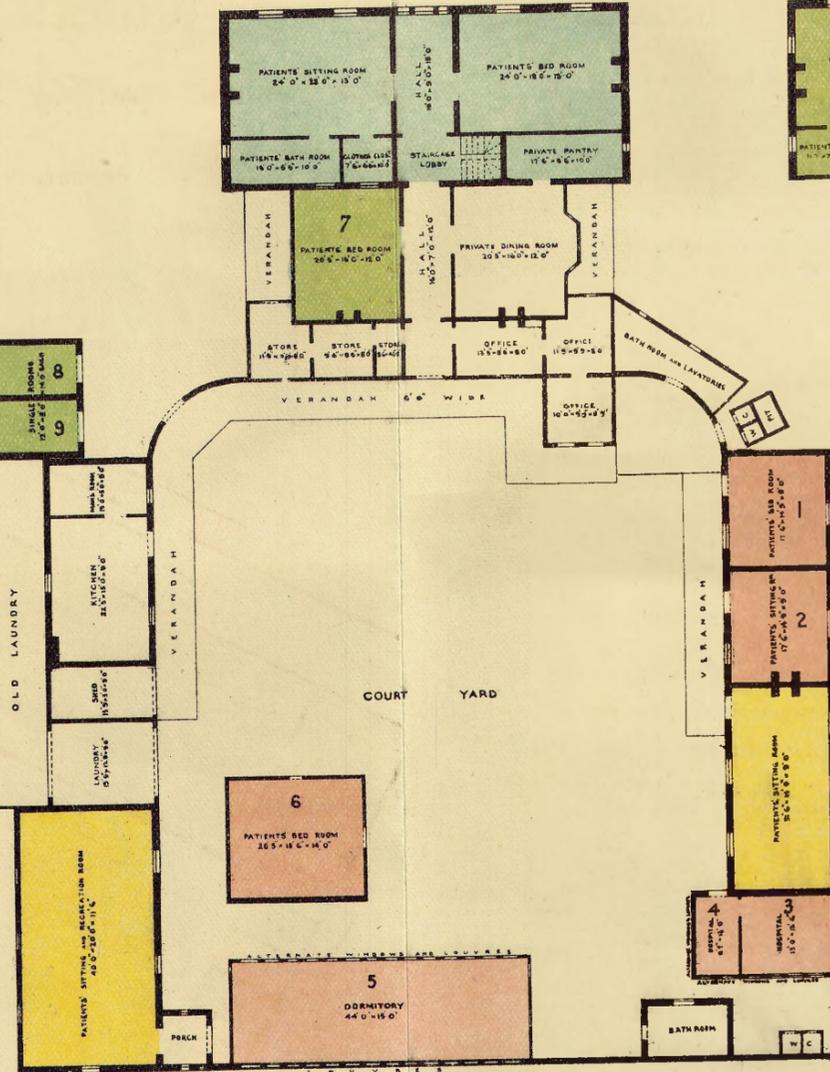
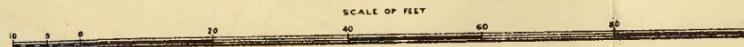
PROPRIETOR:- D<sup>r</sup> VAUSE



FIRST FLOOR OVER KITCHEN BLOCK



GROUND PLAN



FIRST FLOOR OVER MAIN BUILDING



ATTICS

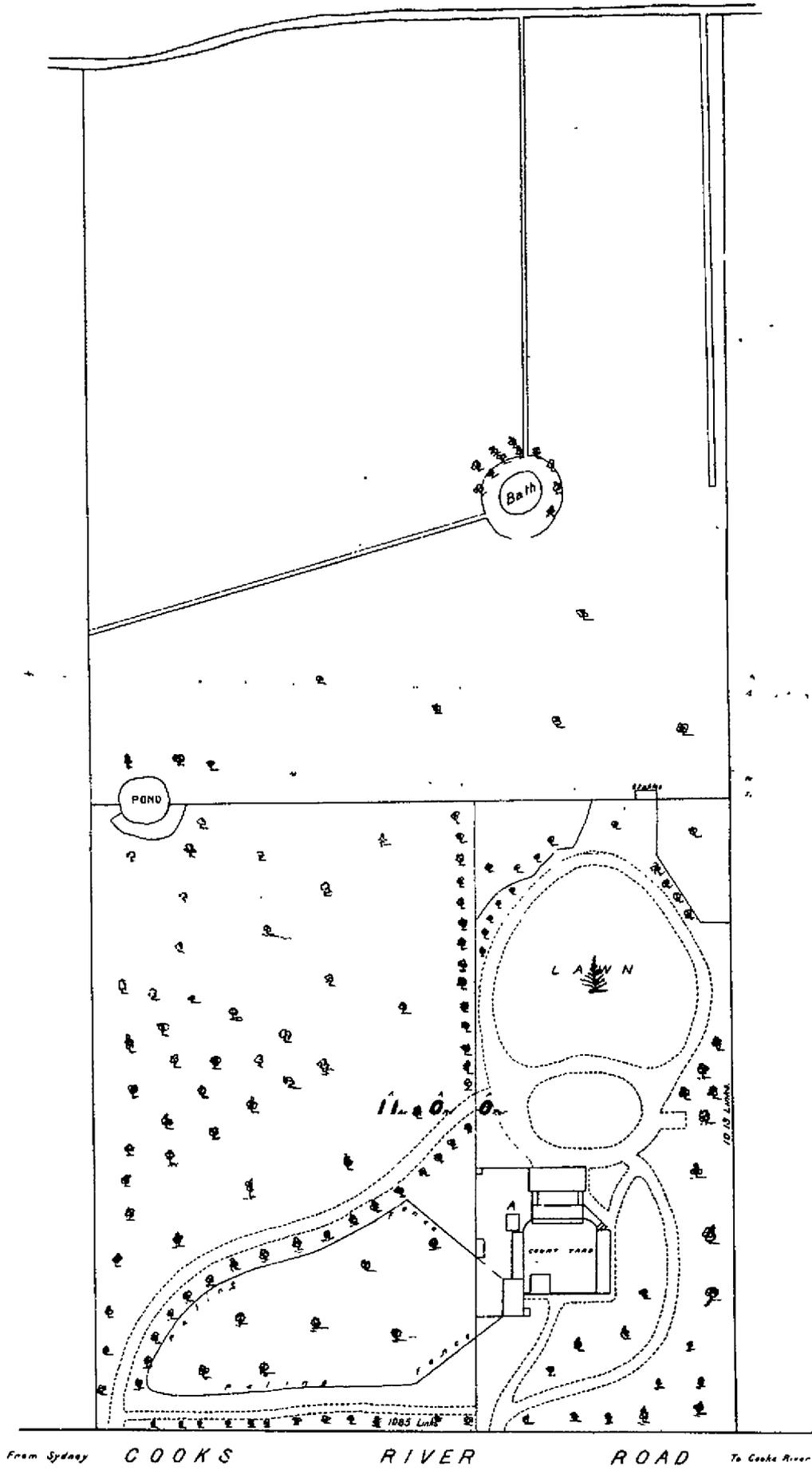
Color of Female Dormitories  
 " " " Day Rooms  
 " " " Male Dormitories  
 " " " Day Rooms



(Sig 207-)

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,  
SYDNEY, NEW SOUTH WALES.

# BAY VIEW ASYLUM



(Sig 207-)

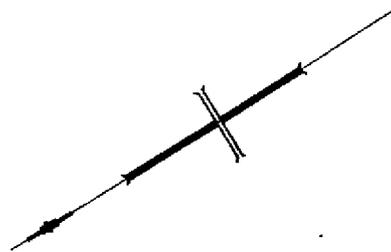
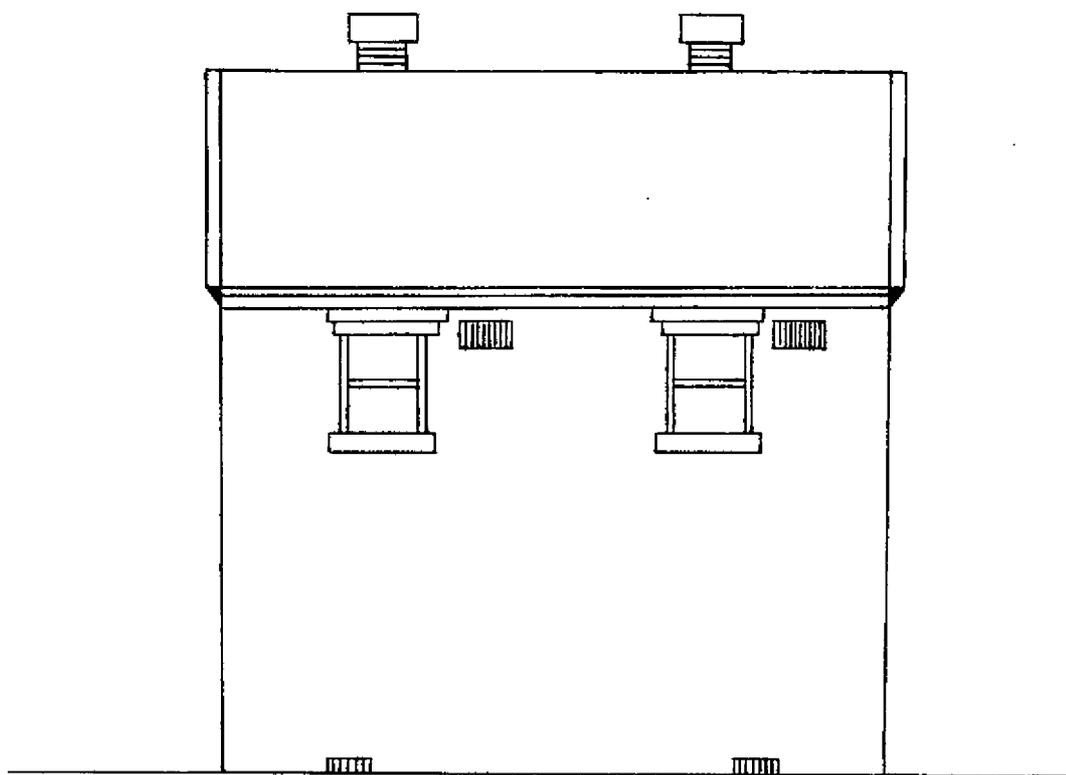
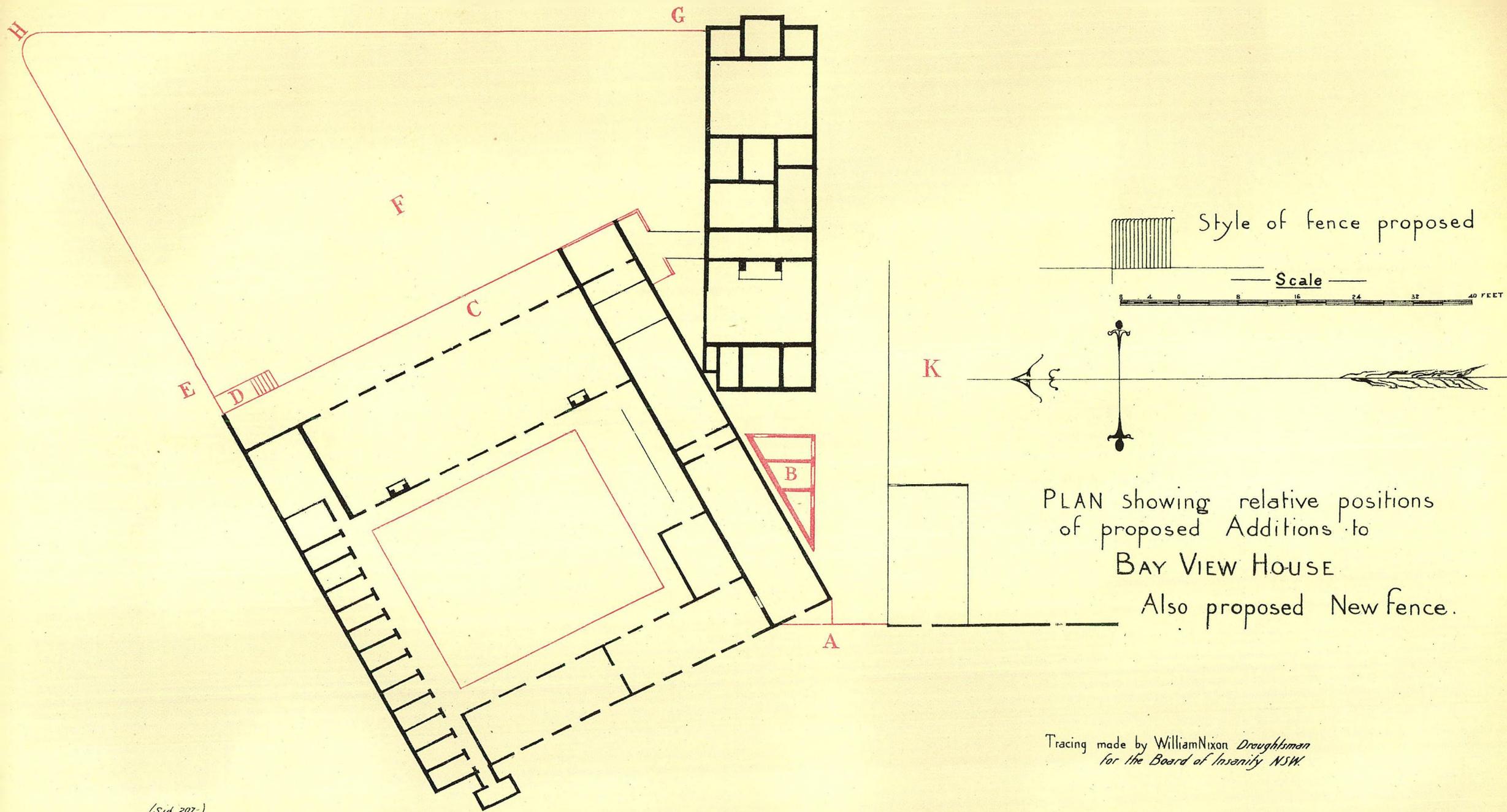


EXHIBIT Q1



(207-)



Tracing made by William Nixon Draughtsman  
for the Board of Insanity NSW

(Sig 207-)

1895.

## NEW SOUTH WALES.

## DEATH OF EDWARD POWER IN THE MOLONG HOSPITAL.

(CORRESPONDENCE RESPECTING, AND REPORT OF, AND DEPOSITIONS TAKEN BY, THE ROYAL COMMISSION APPOINTED TO INQUIRE INTO THE CHARGES AGAINST THE MANAGEMENT OF THE HOSPITAL IN CONNECTION THEREWITH.)

Presented to Parliament by Command.

## Minute of the Principal Under Secretary.

Subject:—Death at the Molong Hospital.

Sydney, 11 September, 1895.

THE within clipping, relating to the death of a man named Power in the Molong Hospital, which has been cut from the *Molong Express* of the 7th September, 1895, might be forwarded to the Inspector-General of Police, with a view to further particulars being furnished as to the circumstances in connection with the death of the unfortunate man.

C.W.

Approved.

The attention of the Inspector-General of Police may also be directed to the speech of Dr. Ross, M.P., on a motion of adjournment, in Parliament on the 10th instant. For the purpose of obtaining a full statement of facts the inquiry should be as full and complete as possible.—J.N.B., 11/9/95.

The Inspector-General of Police.—C.W. B.C., 11/9/95.

Inspector Ford was instructed to proceed to Molong and investigate this case. His report and statements taken by him are attached. Dr. Ross, M.P., should, I suggest, be allowed to see all the papers. I am by no means satisfied with Constable Hawkins' conduct in the matter. He is too meddling, and had lately to be moved for unsatisfactory conduct at Forbes. I will deal with him. No further inquiry appears to me to be called for.—EDMUND FOSBERY, 20/9/95. The Principal Under Secretary.

Submitted, 24/9/95. Dr. Ross, M.P., may be informed that an investigation has been held, and, also, be asked to peruse the statements and correspondence.—J.N.B., 30/9/95.

EXTRACT FROM *Molong Express*, 7 SEPTEMBER, 1895.

THE DEATH OF POWER.—A SERIOUS CHARGE.—INQUIRY AT THE MOLONG HOSPITAL.—THE CHARGE WITHDRAWN.—THE COMMITTEE FULLY EXONERATED.

IN pursuance of a resolution passed at the meeting of the committee of the Molong Hospital, on Monday night last, an investigation as to the truth or otherwise of a charge made by Mr. E. J. Hamey against the Hospital was held in the female ward, no patients at the present time being laid up in that part of the building. The members of the Hospital Committee present were—Messrs. C. Stockwell (President, who presided), J. Black, D. M. McCallum, E. G. Finch, G. Packham, J. Colter, G. Garlick, H. S. M. Betts, A. Parker, C. Parker, and the Secretary (Mr. W. C. Read). Dr. Browne (medical officer) and Miss Leahy (matron) were also in attendance, as well as a couple of outside persons.

Before the inquiry commenced, Mr. P. F. A. Kinna, solicitor to the Molong Hospital, directed the committee how to conduct the proceedings.

The President then stated that the committee of the Molong Hospital had met that day to investigate the truth or otherwise of the following charge, which had been laid by Mr. E. J. Hamey:—“That the man Power, who died in the local hospital on the 7th August, did not receive the attention due to him, and that his death was hastened by such neglect.” Although not a legally constituted court (the President observed), and therefore unable to swear the witnesses, the court only desired such evidence as the witnesses would be prepared to give on oath.

Eaton John Hamey stated: I am the person who laid the charge; on Saturday afternoon, 10th August, I was asked by a lady in this town holding a good social position if I heard of the death of a man named Power in the Hospital; after telling me what she had heard, I stated that I had not heard anything; the name of the lady is Mrs. Couch; she told me that she heard the man had bit himself on

the wrist and arm, and spat the pieces of flesh on to the floor; later on, Mr. Hawkins, who is a police constable, stationed at Molong, came to my shop, and I asked how the two poor old men were getting on whom he sent to the poor-house; I saw the two men referred to on the Sunday previous, and knowing they were to be sent away asked that question; Mr. Hawkins told me that one had died in the hospital, and then he made a statement which led me to ask for this investigation.

The President: Will you give us the statement?

The Witness: Mr. Hawkins will be called as a witness directly, and the statement will be given in his evidence.

The President: Have you summoned Mrs. Couch to attend this inquiry and give evidence?

Mr. Hamey: I do not want her, as I think I have sufficient witnesses to prove my case.

The President: But she is an important witness, surely, if she gave you such information as you say she did. Did she know what she told you of her knowledge?

Mr. Hamey: No; she heard her boy talking about it.

The President: I suppose it was all hearsay evidence!

Witness (continuing) stated: Mr. Hawkins told me that he took Power back to the hospital on Monday, 5th August, on Dr. Browne's order, and that when he arrived at the hospital the matron did not wish to receive him, but finally he was received; on the following day Mr. Hawkins visited the hospital; I am not sure whether it was the next or following day that Hawkins visited the hospital; he then saw Power lying on a bed in an out-house; the bed was on the floor, and he (Power) was covered with his own dirty blankets, a counterpane, and one or two clean sheets; on the floor of the out-house where Power was lying there were stains of blood; these were partly wiped up; he (Hawkins) considered the man was shamefully neglected.

In answer to Mr. Windred, Mr. Hamey stated: I know nothing of the man before he was admitted to the hospital on the 5th instant; I saw him on Sunday, the 4th August, in the afternoon, in the lockup yard; my wife was with me; I had about an hour's conversation with him and another man by the name of Sykes; the man Power seemed very ill, and my wife considered he would not live long in the poor-house; Power said nothing about the hospital to me.

Mr. Parker: He made no complaint about the hospital?

Mr. Hamey: None whatever.

Dr. Browne: He made no complaint about the hospital or lockup?

Mr. Hamey: No, none.

Dr. Browne: Did Constable Hawkins tell you that Power was in the hospital before?

Mr. Hamey: No.

Dr. Browne: Did Constable Hawkins say anything about Power's condition when he took him from the hospital?

Mr. Hamey: I don't remember him saying anything.

Thomas Hawkins stated: I am a police constable stationed at Molong; I remember a man named Power being in the Molong Hospital; on Friday, 29th July, the matron came to the lockup and stated that there was a man in the hospital mad, and she wanted him arrested; I met the matron in Bank-street on the afternoon of that date; I told her that it was impossible for me to go up and take the man in charge as the Sergeant and Constable Justinius were away in Bathurst; the matron said it was a case for the lockup and not the hospital; I told her it would be attended to as soon as the Sergeant returned; I then called on Dr. Browne and told him about the Sergeant being away and about the matron coming to the lockup; he made some remark, and said the matron had no business to go to the lockup; on Friday, the 2nd August, from information received from the Sergeant, I went to the hospital; I entered one of the wards and spoke to two patients in order to test their sanity; I wanted to know where the madman was; they pointed to some place outside; from the appearance of the man, I came to the conclusion that he was not mad; I told the matron that it was illegal for me to arrest him in the institution, and that she must put him outside the grounds; she done so and I arrested him and took him to the lockup.

The President: He walked down?

Witness: Yes, but he was very feeble.

Witness (continuing) stated: On the same day Power was brought before the Police Court for vagrancy, Mr. H. H. Chippindall, J.P., presiding; he was remanded till the following day, awaiting the arrival of a pass from Sydney; they were then remanded till Monday; on Sunday, Power showed signs of illness and could not take his rations, which consisted of bread and water for his breakfast, bread, meat, and water for his dinner, and bread and water for tea; I put him in a large cell, with barred windows, and gave to him and Sykes all the blankets, because it was a very cold night; I also left a candle in the cell in case it might be wanted during the night; I visited the cell twice during the night, and covered Power each time with the blankets; the man's habits in the cell were clean; I took Power to the hospital on Monday, 5th August, on Dr. Browne's orders; a man named Price accompanied me in Milgate's buggy; Power protested against going back to the hospital; when we arrived at the side gate of the hospital, the matron was in the garden; she asked, "Who have you there? Oh! its that old Power back again; we can't take him in; there's no room for him"; the matron repeated this latter statement twice; I said, "You must take him in, as it is the doctor's order"; I also said, "The doctor has ordered him some milk and whiskey, but you had better bring the whiskey without the milk, as he has just had some beef-tea"; I came into the hospital, and the matron gave me something in a glass; I took it to Power, who was sitting in a buggy at the side-gate; I offered it to him, and he refused it; I said, "Drink it, old man, it will do you good"; Price then advised him to drink it, and he did so; I helped Power out of the buggy, and put one of my arms round him and led him up to the place at the side of the garden into which he was to be put; there was no furniture in it but a chair-bedstead and a box; there was no bed there to receive the man; a flock bed was spread over the floor; I left Power sitting on a chair-bedstead, and said to him, "Cheer up, old man; in a day or two you will be able to travel"; on Wednesday, 7th August, from something I heard, I visited the hospital about 2 o'clock p.m.; before coming I saw the matron in the yard at the police station; when I came up I went to the out-house before referred to; I saw Power lying on the floor on a mattress; a bedstead was standing against the wall in the room; there were five blood-marks on the floor; the marks looked as if they had been wiped with a dry cloth; I spoke to Power, but he appeared to be unconscious; I looked at his wrists and saw each one bound with bandages about 9 inches wide;

wide; asked the wardman who bound the wrists, and he said he did; the wardman said the doctor had seen the wrists; I lifted the quilt that was covering Power and saw only two old blankets (the property of Power) and a sheet; Power was very cold; I felt his feet and legs; when I brought Power back to the institution on Monday the matron said he would have to use his own blankets; Power's blankets were in a filthy state, and I would not admit them into the police cell; I said to the wardman, "Do you call this proper treatment for a man? Don't you consider this inhumane—not even a glass or a pot to drink out of?" he said, "I must admit, sir, it is"; I went away, and sent the priest up; I met Father Hanley on the road, and asked him to go up to the hospital; I asked the wardman what was the matter with Power's wrists, and he said, "Yesterday afternoon he became light-headed and restless, and during the night he must have got out of his bed and bit his wrists"; the blood-marks on the floor were about 18 inches apart; I pointed to a place near the box and said, "Look at all that blood down there"; the wardman said he did not think it was all blood, but that it was some dye out of the coloured (red) cover on the box; I then said, "I believe that is turkey twill, and the colour will not move."

In answer to Mr. Hamey witness said: The matron did not receive the man kindly when I brought him back to the hospital; I do not consider the detached building to be a fit place in which to put a dying man; I believe he would have been better off in a cell in the hospital; the ceiling of the building is not lined; there is nothing to prevent the droppings from the sweated iron falling on the man; I believe that water on the roof of the building would freeze the night before I saw him; I do not consider the clothing Power had on him would keep him warm; Power's blankets were very old; the blood-stains were about the floor as if the man had rolled about; the covering on the box did not appear to be wet; from what I saw I consider the man was neglected.

Cross-examined by Dr. Browne: It was on Monday, 29th July, that I was first sent for to take Power from the hospital; I refused, owing to the absence of my superior officer, and it being illegal to arrest from a public institution such cases; the arrest took place on the following Friday; when I left the lock-up I did not know that Power would be put outside the gate for me to receive him; I consider he was not fit to be turned out; when before the Court, Power answered all questions put to him by Mr. Chippindall, the magistrate; he was worse on the Saturday and Monday; I reported his condition to the sergeant; he was out in the yard on Sunday; it is usual for spiritual advisers to see prisoners without anyone else being present; Power was lying on the ground in the yard when the Government Medical Officer visited him on Monday, the 5th August; the Government Medical Officer stated that there was no vacant bed in the male ward at the hospital, and he would have to put Power in an outbuilding; the sergeant remarked that the cells were damp; I believe you told the sergeant the building Power would be put into was a wooden one; the matron at first refused to receive Power, but admitted him upon my explaining that I was the bearer of a note from the medical officer; Power was given something on arrival at the hospital; I know that whiskey was ordered; I have reason to suppose that what was given him on arrival at the hospital was not whiskey; I saw Power put into the ward, but not to bed; the man could only walk with assistance; Power was not dirty in his habits at the lock-up; he was distinctly worse when I returned him to the hospital than he was when I took him away; the cell was too cold for a sick man to be placed in; I am prepared to swear that what I have said is correct; the spots on the floor to the best of my belief were those of blood; I would not swear that the spots were those of blood from the man Power; I do not consider the fact that a bed made on the floor amounted to neglect; I was not aware that you gave instructions to have the bed made on the floor; the man felt exceedingly cold when I visited him on Wednesday; I do not expect a dying man to feel warm; the wardman did not tell me that he was dying; I did not go into the male ward on Wednesday; when the medical officer saw Power at the lock-up on Monday, 5th instant, he was in an exhausted state; I reported the state in which I found Power to my superior officer, Sergeant Fagan; he gave me no instructions; I may have spoke to Messrs. Cady and Ben Bowler; I did not visit Mr. Kinna at his office, but met him in the street, and asked him if he was a member of the hospital committee; he refused to receive a complaint; I may have spoken about this case in Mr. Holland's shop; I do not remember advising anyone not to subscribe to the hospital; I do not remember saying that I would never give 6d. to the hospital; I do not consider that the wardman treated Power otherwise than very kindly; I know nothing of my own knowledge as to the treatment given to Power.

Re-examined by Mr. Hamey: I carried Power's swag more than half-way to the lock-up, also a wet pair of trousers, which he was trying to wash in a bucket of water; the wardman stated that the stains on the floor were those of blood.

Mr. Betts: Why did the police keep on remanding the man from day to day when they saw he was so bad?

Witness: He was remanded, awaiting the arrival of a pass from Sydney. The police could not send him away until they got this pass.

Mr. Parker: Did you ever tell anyone that the dampness of the cell hastened Power's death?

Witness: No, I don't think I did. I might have said the coldness of the cell hastened his death.

An adjournment was here made for lunch.

On resuming,—

Algeron Grenfel Price stated: I am a groom residing at Molong; I assisted to bring Power to the hospital on the 5th August; to all appearances he was in a very weak state; he could not walk alone, but had to be assisted; the matron came to the front of the hospital when we arrived; when we drew up at the gate Mr. Hawkins said to the matron, "We've fetched this man back to you again"; the matron replied, "You can take him back again, we don't want him here"; Mr. Hawkins then said, "Oh, but you'll have to take him"; the matron replied, "No, we don't want him; we have no beds"; eventually the matron allowed him to be admitted; I saw the man's swag, but could not tell what it contained; as far as I could see there were no good blankets in the swag; I made the remark to Power, "You are getting a warm reception"; Power said, "Ain't she an old b——h"; Power was put in an outbuilding; Mr. Hawkins brought out to Power a glass of whiskey; at first he refused to drink it, but upon Hawkins saying, "Take it, Jim, I wouldn't give you anything to do you any harm"; he drank it; I do not think he was at all welcome; Power was not very clean when we brought him to the hospital.

By Mr. Packham: I do not know that what Mr. Hawkins gave him was whiskey; he brought it out for whiskey.

By

By Dr. Browne: I would not be surprised to hear that he died two and a half days after he was brought back to the hospital; he was in a very low state when we took him from the lock-up.

The President: Did Hawkins tell Power that what he had in the glass was whiskey?

Witness: Yes.

Braxton Gunn stated: Am wardman at the Molong Hospital; I put Power to bed in the outside ward on the afternoon of the 5th August, on the matron's orders; I placed him on a clean bed on the floor, and covered him with the ordinary bed-clothing; the clothing consisted of two hospital blankets, two of his own blankets, a pair of clean sheets, a pair of clean pillow-slips, and a clean quilt; I saw Power at 10 o'clock on the night of the 6th August; I left a drinking vessel within his reach that night; I saw him again at 5 o'clock on the following morning; he was out of bed; both of his wrists were abraded by his teeth; I do not think he tried to destroy himself; he was in a melancholy condition; the floor of the ward where Power was was stained with blood in five or six places; the blood-patches were merely marks; there were no veins or arteries severed; I put Power back to bed, came and informed the matron, and then dressed his wrists with carbolic dressing; I was present when Hawkins came to the hospital on the 7th August; Hawkins asked if the stains on the floor were caused by blood from Power; I said, "Yes." Hawkins did not ask me if the treatment Power received was proper; what Hawkins said to me was, "God help us when we are poor"; there is neither a stove or a fireplace in the ward; the matron did not give me any instructions to give an eye to Power during Tuesday night, 6th August; at the time Power came back to the hospital six beds in the main ward were occupied; the nights were cold about that time; I consider he had plenty of clothing to keep him warm.

In answer to Dr. Browne: I knew you ordered the bed to be made on the floor; the bed was a new straw bed; two sacks were laid under it with a view to keep out any possibility of draught; the quilt that Power had over him was a thick one and clean; when I saw him at 10 o'clock on Tuesday night he was quiet and sleeping; he had beef-tea at 8 o'clock and whiskey and water at 9:30 p.m.; in addition to the clothing already mentioned, he had a hot-water can at his feet, and I put a sack across the foot of the bed to keep the clothes intact; I do not think the wounds on the wrists were serious; the blood-marks were not spots; when I put him to bed I gave him whiskey and water; he was lying quite still when I saw him on the Tuesday morning; I did not see any pieces of flesh that were spat on the floor; I saw Power on the following morning; he spent the chief part of the day outside the ward; he made a urinal of the ward; I had to feed him with a spoon; I always gave him something to eat about every three or four hours; I think Power was of weak intellect. [The habits of the deceased were here described; and they were shown to be filthy in the extreme.] The turkey-twill on the locker was new; Power wet it, and the stains run on to the floor; the matron saw Power very frequently; I understood from the matron that the doctor said he (Power) might die that night (Wednesday); I got patients to help me look after him; the door was left open as it was very warm; I knew you had ordered him to sit out in the sun; I was sent to Mr. Stockwell to see if anyone could be obtained to sit up with Power on Wednesday night; there were some very serious cases in the hospital at the time, and the usual staff were considerably worked; no further assistance could be got, and I sat up with him from 10 p.m. until he died; nothing more than what was done could possibly have been done; he had stimulants frequently, and I will swear that what was given him was whiskey.

In answer to the President: Power seemed pleased to get back to the hospital.

In answer to Mr. Parker: There were no large spots of blood on the floor; there was no flood of blood; he was in a dirty state when he came back to the hospital.

To Mr. Haney: I put the hospital blankets on Power when I put him to bed on Monday, and they were not taken off him until death; the hot-water can was put to his feet on admission, and while in bed was kept warm until death; I was present when Mr. Hawkins examined the bed-clothing on Power; he felt the patient's feet, and said they were very cold, and that he would soon die; the hot-water can was not there then; I had just taken it away to be refilled.

Sergeant Fagan, in answer to Dr. Browne, stated: You told me that you had no place to put the man Power in, and I replied that it would be better than the cells; the isolated ward is certainly a much better place than the cells at the lock-up; I would sooner die in it any day than in the cells.

Elenora Leahy stated: I am matron of the Molong Hospital; remember the man Power; I received him, and he was put to bed in the outside ward; he was suffering from debility and light-headedness; his system had run down; he was in a far better state when he left the hospital than when he returned; I consider the man's low state was due to the want of proper nourishment; a warm, even temperature is considered best for a man in such a state of health as Power was; it was impossible to keep the ward in an even temperature; everything was done to keep the patient warm with clothes; a man in Power's condition needed frequent attention; nourishment was given to him every three or four hours; he was very weak when he was brought back on the 5th August; why Power did not receive any attention on Tuesday night, 6th instant, was because Dr. Browne said he did not want looking after then; patients are not disturbed at night to give them nourishment, even though nourishment may be given to them every two or four hours during the day; I did not know Power to be particularly restless; I saw him last on Tuesday, 6th August, at 9 o'clock p.m.; I saw him again between half-past 6 and 7 o'clock on the following morning; he was then very low and weak.

In answer to Dr. Browne: There was no patient in the male ward who could be put out to make room for Power; he had all the comforts that were ordered on the diet-sheets; I acted on your instructions right throughout; I do not consider that he was in such a state on Monday or Tuesday night that he required a nurse to sit up with him; failing to get assistance from outside for the nursing on Wednesday night, I instructed the wardman to sit up with him; the wardman wanted to attend to some of the cases in the male ward, but I told him to stay with Power; Power required feeding, and the wardman had to feed him; Power had plenty of nourishment, as much as we could get him to take; there was a lot of extra night-work at the time Power came back to the hospital; I was surprised to hear of the charge of neglect after the treatment that was given him; why I did not like Power coming back to the hospital was because of his excessively filthy habits; he made a water-closet of the male ward; other patients complained muchly of Power's dirty habits; I consider the stench arising from such habits was injurious to the other patients.

Harold Browne stated: I am medical officer of the Molong Hospital; the man was in a very much worse state when I saw him at the lock-up on Monday, 5th August, than when I discharged him on the Friday

Friday previous; he could carry his swag away from the institution on the 29th July, but could not stand without assistance when I saw him on the 5th August; I saw Power again on the morning of the 6th August; I did not examine him then, but I felt his pulse, and inquired into his condition; I believe the man was suffering from exhaustion, or I would not have come to see him, as I do not visit the hospital daily; I ordered his bed to be made on the floor on account of his restlessness and the fear that he might fall out of an ordinary bed; I did not consider it was necessary to have a person sitting up with him all night; I knew he would be seen the last thing at night as well as the first thing in the morning; the matron and wardsman were overworked on account of the unusual number of patients in the hospital at the time; nourishment every three or four hours was quite sufficient for a man in Power's state; I believe he had plenty of bed-clothes; I do not consider that six hours was too long a period to leave a patient at night; the exposure of the patient on Tuesday night probably hastened his death; Power's wrists were not bleeding when I saw them; I did not consider the wounds serious; the flesh was not bitten into; I do not consider the wounds were inflicted with a view to the man killing himself; the attention that Power received was sufficient.

Martha Patrick stated: I washed two blankets which Power used while in the Hospital on the second time; the two blankets belonged to the Hospital; I also washed two blankets which belonged to Power; these were pretty good blankets; the blankets produced were those which belonged to Power.

Samuel Young stated: I am now a patient in the Molong Hospital; I saw Power on the 6th August; he was in the isolated ward; he was dressed and brought into the male ward; he was very bad; the wardsman sat him in a chair by the fire and fed him; he seemed as though he was not right in his head; the wardsman had some difficulty in feeding him; he was dirty in his habits; the wardsman was very kind to him; everything was done for him; there was no difference in the matron and wardsman's treatment of him than any other patient; I have never seen any neglect since I have been in the institution; I think he had plenty of blankets; the place where he was is very comfortable.

Mr. Hamey here addressed the Court, and admitted that he had failed to substantiate his charge, which he withdrew. He also completely exonerated the officers of the Hospital from all blame, and said that he was satisfied the Hospital authorities had done all they could for Power.

Dr. Browne and the President also addressed the Court, and the proceedings terminated.

With the exception of Samuel Young, who was examined by Dr. Browne, the whole of the witnesses gave their evidence in chief in answer to Mr. Hamey.

[We regret that the whole of the space at our disposal having been taken up, we are unable to give the addresses of Dr. Browne, and Messrs. Hamey and Stockwell. They will, however, appear in next week's *Express*.—Ed.]

[Enclosures.]

MEMO.

Police Department, Inspector-General's Office, Sydney, 11 September, 1895.

REFERRED to Superintendent Sanderson for careful inquiry and report.

Was the death reported to the Coroner? Why no inquest held? Was full report made to the Superintendent?

I will have Sykes' statement taken at Parramatta and sent on to Mr. Sanderson.

Probably Inspector Ford might go to Molong and make the inquiry promptly.  
Superintendent Sanderson.

E.F.

MEMO.

Police Department, Superintendent's Office, Western District, 12 September, 1895.

For Mr. Ford's immediate attention, *vide* Inspector-General and Colonial Secretary's minute.

I presume the Hospital doctor gave a certificate as to cause of death.

No report by Police was made to me.

Inspector Ford, Orange.

C. SANDERSON,

Superintendent.

When I receive Sykes' statement I will send it on to Molong, in care of police, for you.—C.S.

*Re* Death of Edward Power at the Molong Hospital on the 7th August last.

Sir,

Police Office, Orange, 16 September, 1895.

I have the honor to forward you the attached statements from Messrs. Stockwell, Mrs. Grace Couch,\* Mr. W. C. Read (the Secretary of the Molong Hospital), Mr. Chippendall (J.P.), Mr. F. J. F. Kinna (J.P. and Coroner), James Haslem (J.P.), A. G. Price, Eason John Hamey†, Sister Superior of St. Joseph Convent School, Miss Leahy (the Matron),‡ and Wardsman Gunn,§ Samuel Young (a patient in the hospital), Henry Windred, Constable Hawkins, Sergeant Fagan, the Rev. Father Hanley,|| and James J. Sykes.

Messrs. Betts and John Black, Justices of the Peace, and Mr. William Cahill speak of the conduct of the matron (Miss Leahy) in strong terms of praise. *Re* the out-house referred to by Dr. Ross, M.P., I consider the same was quite suitable for any patient like the deceased, who, to use the words of the patient "Samuel Young," that he fouled his bed and floor, and the patient "Sykes" said he made water in the fire-place in the ward.

When I visited the Hospital on Saturday last I found everything very clean and tidy.

The information supplied to Dr. Ross, M.P., dated the 9th inst., is in Constable Hawkins' handwriting, and I am perfectly certain that the Member for Molong was misled, but I do not say so intentionally, but I certainly blame Constable Hawkins for being too meddlesome; and I told him so, he then replied, "I have been made a cat's-paw of," in this matter. In answer to the Inspector-General's queries, the death of the deceased (Power) was not reported to the Coroner because the Government Medical Officer, Dr. Browne, gave a certificate of the cause of death. No report was made to Mr. Superintendent Sanderson of the death of deceased having occurred in the hospital in consequence of the necessary certificate having been given by Dr. Browne.

I certainly consider from what I have seen and heard of the matron that she is a good and efficient person, but I think she is hot tempered.

I was shown the two blankets and the quilt belonging to the deceased, they are not "rags," but certainly worn; the matron also showed me two blankets that were supplied for the use of the deceased belonging to the hospital.

\*Exhibit "D,"  
page 30.  
†Exhibit "A,"  
page 37.  
‡Exhibit "M,"  
page 46.  
§Exhibit "J,"  
page 42.  
||Exhibit "F,"  
page 41.

I may here state that I called upon Dr. Ross, M.P., and asked him if he had any suggestions to make to me with reference to the inquiry, and he said "No, but I wish to see the matter fully cleared up." Sykes' statement herewith.

I have, &c.,

MARK E. DYETT FORD,

C. Sanderson, Esq., Superintendent of Police, Bathurst.

Inspector of Police.

Forwarded. No police report was made to me in this matter by S. Fagan.—C. SANDERSON, Sup., 19/9/95. The Inspector-General of Police.

Orange, Sept. 16, 1895.

HAVING been requested by Inspector Ford to give a statement *re* Hospital inquiry held at Molong on Friday, 6th inst., I beg to state that, as one of the committee, I was present, and consider, from the evidence produced, that the man Power received all the attention he required under the circumstances. I may also state that I have been a member of the committee since the institution was opened, and that during the time the present matron, Miss Leahy, has held the appointment, she has given the committee every satisfaction, and has always kept everything scrupulously clean, and has given general satisfaction to the patients.

HENRY S. M. BETTS, J.P., and Ex-Coroner.

Excuse this hurried statement.—H.S.M.B.

This report, forwarded in conjunction with papers posted you on the 17th instant, *re* death of Edward Power in the Molong Hospital. Although Mr. Betts' report is dated the 16th instant, I did not receive it until yesterday, late in the evening.—MARK E. DYETT FORD, Inspector, Orange, 19/9/95. C. Sanderson, Esq., Supt. of Police, Bathurst.

Forwarded in connection with papers of yesterday's date.—C. SANDERSON, Supt. The Inspector-General of Police, Sydney. Forwarded to the Principal Under Secretary in connection with other papers.—E. FOSBERT, 21st Sept., 1895.

9 September, 1895.

MAN, name Power, age 61, native of Ireland; discharged from hospital, 2nd August, 1895; was arrested by Hawkins at the gate of hospital; taken before H. H. Chippendall, J.P.; on the 2nd remanded till 3rd, and so on, waiting pass for Sydney; was very sick; weak when discharged on the 2nd; his food supplied by the police was bread and water for breakfast, same for tea; bread and water and meat for dinner; instead I gave him milk, rolled oats, bread, butter, and jam, tea with milk and sugar, for breakfast; for dinner made beef tea, egg pudding, and gave him fruit, tea cakes, tea with milk and sugar, bread, butter, and jam; the same as constable had himself and family; slept in cell very cold frosty weather; bars in place of windows; I gave him and Sykes all the blankets of the lock-up; I attended to put him to bed each night, and visited him often; gave him a candle.

*Sunday, the 4th.*—Noticed he was getting worse; I put it down to cold cells and weather.

*Monday, the 5th.*—Sent for Father Hanley, who attended him; stayed with him three-quarters of an hour; matron said he was mad (he was not mad); she wanted me to charge him with it; I arrested him on the Vag. Act; sent for Dr. Brown; he ordered him back to hospital; he ordered him into a weatherboard house with iron roof, a house away from main building; also whiskey and milk; coachman Price helped me with him to hospital; when at hospital twice the nurse said *she did not want him there*, and the way she spoke the coachman said, "If it was me I would not go in there;" matron said, "He will have to have his own blankets over him;" they were very dirty and would not keep a dog warm; Hawkins asked matron for the whiskey without milk because Mrs. Hawkins had just given him beef tea; Hawkins went into hospital for it; matron gave him something; he took it to Power; Power would not drink it; he thought something would be in it; Hawkins told him it would do him good and drank it; Hawkins helped Power to the weatherboard house *on top of the hill*; there was only a chair bedstead and a locker, a bed emptied out on the floor, place untidy, cold and cheerless; Hawkins left him there.

*Wednesday 7th.*—From something I heard went to hospital; saw Power in same place; bed on floor; his own *two* blankets, if you could call them such, *very dirty*, one sheet and quilt belonging to hospital over him; *no fire or fireplace*; no glass or cup of any kind; *five large blood stains* on floor about the size of seat of a chair; Hawkins asked the wardman what caused the blood, and he said, "Power got out of bed last night and was found on the floor"; he had bitten his wrists; I looked at them and found them bandaged; I asked who done them up; wardman said, "I did;" I pulled up his bed clothes and only found what I have said in the above; I asked the wardman if doctor had seen him; he said "Yes"; I said, "*Do you call this proper treatment to a poor man?*" "I must admit no, it is not;" I met the Rev. F. Hanley, and he went up at once; Sykes, at Parramatta, would give good account of the *treatment* they got in hospital.

I wish Mr. Latimer to see an old man named Sykes recently sent to Parramatta Asylum from Molong, and take down fully in writing his statement regarding the treatment of a man named Power, since deceased, received when under treatment at Molong. Sykes was with him at the lock-up there, and made certain complaints. Mr. Latimer will see that Dr. Ross moved the adjournment of the House last night in the matter. This to be attended to promptly.—E.F., 11/9/95. Superintendent Brennan.

Forwarded to Mr. Latimer for prompt and careful attention and report.—MARTIN BRENNAN, Superintendent, 11/9/95.

*Re* Statement of James Jabez Sykes as to treatment of — Power at Molong.

Sir,

Police Station, Parramatta, 12 September, 1895.

I have the honor to report that, in accordance with instructions, I visited the Benevolent Asylum, George-street, Parramatta, this day, and took down in writing the attached statement from James Jabez Sykes, which he signed in the presence of the Assistant Superintendent.

I also attach a portion of the *Molong Express*, torn, which I received from Sykes, giving an account of the inquiry as to the cause of death of the man — Power.

I have, &c.,

R. LATIMER,

Martin Brennan, Esq., Superintendent.

Sub-Inspector.

James

*James Jabez Sykes* states:—I am at present an inmate of the Benevolent Asylum, George-street, Parramatta; I came here from Molong on the 9th of August last; previous to my coming here I was in the hospital at Molong under the care of Dr. Brown, suffering from rheumatism; about a week before I left Molong Hospital a man named — Power was admitted, suffering from privation; I was in the same ward with Power all the time until we both left on the same day; during the time Power was in hospital with me he received the same treatment as the other patients; I consider we were all fairly well treated in the matter of food and attendance; Power was between 50 and 60 years of age; he was in the habit of getting out of bed during the night and walking about in the ward and making water in the fireplace, to the annoyance of the matron, who complained of his dirty habits, and she and the wardsman scolded him for his conduct, but, so far as I am aware, Power was not deprived of any of the hospital allowances; I saw him receive what was ordered by the doctor; the matron visited the ward frequently during the day, and up to 8 p.m., and sometimes 12 p.m.; the wardsman was in and out of the ward all day, and, if required, attended to Power as to the other patients; there were six patients in the hospital at the time I speak of; the matron said that Power was insane and not a proper subject for the hospital; she is of a very fiery temper; I don't know of any reason why Power was discharged from the hospital; Constable Hawkins came to the hospital and asked me to go to the lockup and stop with Power until an order arrived for my admission to the Benevolent Asylum; I was at the lockup three or four days with Power after his discharge from hospital; he was a very quiet man; he was more of an imbecile from suffering than a lunatic; whilst in the lockup Power, owing to his being ill, received the greatest attention from Constable Hawkins; he was not supplied with the lockup rations, but received food from the constable's table, also beef-tea and other luxuries necessary for a man in his condition; Dr. Brown visited Power in the lockup, and ordered his removal to the hospital; he was taken there and readmitted a day or two before I left Molong, and I did not see him again; whilst in the hospital with Power he complained to me of the matron being peevish to him, but made no further complaint; from what I saw of the matron I consider she is a frantic woman; Power made no complaint to me as to his treatment at the hospital whilst I was in his company, either at the hospital or lockup, further than I have stated.

Taken before me, at Parramatta, this 12th }  
day of September, 1895,—

JAMES J. SYKES.

R. LATIMER, Sub-Inspector.

Witness,—JOSEPH WING, Assistant Superintendent, George-street Asylum.

Forwarded for the information of the Inspector-General of Police.—MARTIN BRENNAN, Superintendent, 13/9/95. Forwarded to Mr. Ford in connection with other papers in the case sent to him by Superintendent Sanderson.—E.F., 95/532. Inspector Ford, Police Station, Molong.

Molong, 14 September, 1895.

THE Sister Superior states: I am the Superior at the Convent School, Molong. I visited the Hospital in company with other sisters, and was satisfied the way the patients were treated, and have every reason to believe that the patient Power was properly treated.

#### *Re Power's Case.*

Molong Police Station, 14 September, 1895.

CONSTABLE T. HAWKINS, No. 6,352, begs most respectfully to report to the Inspector-General that on 29th July last, the Hospital Matron sent to the lockup for the constable to go up and arrest a madman. He did not go then, but after, while on duty in Bank-street, he met the Matron and he informed her that Sergeant Fagan and Constable Justilius were on duty in Bathurst, and therefore, he could not take action in the absence of the sergeant, and being the only constable in town at the time he could not arrest a person out of any public institution, under similar circumstances, without a warrant. The matron said, "He is a fit case for a lockup, not a hospital, the filthy wretch." The constable then went to Dr. Brown and repeated what the matron had said. Dr. Brown said she had no business to go to the lockup whatever. The constable told the doctor of the absence of the other two officers in Bathurst. On Friday, 2nd August, by order of Sergeant Fagan, the constable went to the hospital. Going in, he questioned the inmates of the ward to try and find out which one was insane, and came to the conclusion none were. The matron showed the constable the man Power, and he told her before he could take him in custody he would have to be put out of the hospital grounds. This was done, and the constable then arrested Power and took him to the lockup. On the way, noticing the man was very weak, the constable carried his swag. The constable then returned to the hospital and arrested another old man, named Sykes. This was about 2.30 p.m. Power was then taken before Mr. H. H. Chippindall, J.P., the same afternoon, and remanded till next day. For his tea that evening the constable gave him tea, with milk and sugar, and bread, butter, and jam. Power eat well. At night the constable made the beds for both men in the wooden cell, using all the blankets at his disposal. The hole in the wall of the cell was only barred. The night was freezing, and very cold. The constable gave them water and a candle, and visited them twice during the night.

*Saturday, 3rd August.*—The constable found Power very cold in the cell, and immediately removed him into the sun, and gave him hot milk and rolled oats and a mug of hot tea, with milk and sugar, bread, jam, and butter. Power was then taken before a magistrate, and remanded until Monday. His dinner consisted of the beef allowed by No. 2 ration made into beef tea, with other seasonings and rice, also bread and tea. He ate well. His tea was similar to that of the night before. Power slept in the cell, and it was a very cold night. Constable visited him during the night.

*Sunday, 4th August.*—In the morning constable found Power very cold and weak, and he removed him into the sun, and gave him hot milk and porridge, and a breakfast similar to day before. Dinner, beef-tea, custard, and fruit. In the afternoon Power was seen by Mr. Haney. His tea was similar to that of the night before with cake. During the night the constable visited the cell and found Power uncovered lying on the boards, made up his bed, and put him back in the blankets. He was very clean in his habits all the time he was at the lockup.

*Monday, 5th August.*—Constable found Power very cold and weak. Got him into the sun, and gave him hot porridge and milk, which he was unable to eat. Reported the matter to the sergeant. Sent for Father Hanley, who came and administered the last rites of the church. The priest conversed with Power for

for nearly an hour. The constable asked Father Hanley if he considered Power sane. He answered, "Yes; only he forgets some things in his past life." Dr. Browne then came and examined Power in presence of the sergeant and constable, and ordered him back to the hospital, giving the constable an order for his admission, adding, "The matron will fly at you; but take no notice of all she will say to you." The doctor ordered whiskey and milk to be given Power when he reached the hospital. When the doctor ordered Power to be taken back to the hospital Mr. H. H. Chippendall, J.P., came from his office to where Power was lying and formally discharged him to be sent to hospital. A buggy was procured driven by a man named Price. Constable lifted Power and then his swag into the buggy and then escorted him to the hospital. The matron was in the garden and called out "Who have you there?" On coming closer, she said "Oh! its that old Power back again, I can't take him in here, take him back?" She repeated this twice, angrily. The constable produced the order from the doctor and told the matron to bring whisky without milk, as Mrs. Hawkins had just given Power beef-tea. The constable then went into the hospital and the matron gave him something in a glass. He took it to Power, who at first refused to take it; but the constable persuaded him, saying, "Take it, Jim; it will do you good." Power then drank it. The matron then said, "He will have to go into that place, and he will have to use his own blankets; we have none here" and she pointed to a detached weatherboard house some considerable distance from the matron's room. The constable helped Power to the place, which had an iron roof, no lining, no fire, nor fire-place, no furniture except chair, bedstead, and an old locker. A bed had been emptied and the floor was covered with flock. It had all the appearance of a lumber-room. The constable sat Power on a chair and then left.

*Wednesday, 7th August.*—The constable saw the matron in the police yard and then received instructions from the sergeant, at 2 p.m., to go to the hospital. On arrival, saw Power in an insensible condition lying on a mattress on the floor with a sheet and his two old blankets (which were so dirty the constable would not admit them into the cell) and a half-dirty quilt over him. Both his wrists for 9 inches up were bandaged. Five (5) lots of blood, each about the size of an ordinary chair seat, were on the floor. The constable pulled the bed-clothes and felt Powers legs and feet, which were very cold. There was no sign of a foot-warmer. The constable asked the wardsman (who was in the garden and no one with Power when the constable arrived) what caused the blood. He said Power had bitten his own wrists during the night, and was found lying on the floor in the morning. He also said he (the wardsman) bandaged the wrists himself. The constable asked if anyone was sitting up with Power, and the wardsman replied, "I don't think so." Asked if he considered it humane treatment, he said, "No, it is not." The constable said, "The man is dying. Has the doctor seen him?" The answer was, "Yes." The constable left, and on his way to the lock-up met Father Hanley and told him Power was dying. The priest went to the hospital. Power was also visited by the nuns. At their day-school the nuns spoke to the children of the shameful treatment of Power at the hospital. Mr. Hamey asked the constable if certain rumours regarding Power's treatment were true, and the constable answered some questions put to him by Hamey. The constable did not make common talk of the case. The only way the facts became public property was through the school children. Dr. Ross asked the constable for some notes in Power's case and he furnished them. Dr. Browne signed a certificate which is now in the possession of the department.

The reason Mr. Stockwell, the President of the Hospital, is somewhat against the constable is that more than once he has had to warn him for being open after hours.

THOMAS HAWKINS,  
Constable.

Molong, 14 September, 1895.

*Algernon Grenfell Price* states:—I am a groom at Millgate's "Royal Hotel," Molong; I remember the deceased, Power, who died at the Molong Hospital; I did not see him in the hospital; I drove him up to the hospital; Constable Hawkins said to the matron, "I brought this man back to you"; she replied "Take him back again, we don't want him here"; Constable Hawkins said, "You will have to have him"; she said, "We have no ward empty, and we have no blankets"; she at last took him in, and she put him into an outhouse off the hospital; Constable Hawkins asked for a glass of whisky, which he got and gave to the deceased; when she was taking him into the ward she said, "Gunn, here is this old man back again"; I did not see his blankets and cannot say if two blankets and a quilt were in his swag; she said to the wardsman, "Gunn, he will have to use his own blankets"; Constable Hawkins nearly carried deceased into the outhouse; she said (twice) she would not take him back again; I said to deceased, "You are getting a pretty warm reception," and deceased replied, "She is a regular old bitch"; she appeared very much annoyed; Constable Hawkins said to the matron, "You treat him very kindly, and I will take him away in a few days."

A. G. PRICE.

Sir,

Court House, Molong, 14 September, 1895.

Hearing that you are holding an inquiry relative to the death of the man named Power, and as it has, according to the newspaper reports of the proceedings in the Legislative Assembly, been asserted that this man Power was remanded by the local Bench to the lock-up cells at Molong in a dying condition, I desire, as the magistrate occupying the Bench when the man Power was remanded, to place the facts as they really occurred before you.

On the 2nd of August last, at the request of the police, I remanded the deceased and another man named Sykes until the following Monday, the 5th of the same month, in order that meanwhile an order might be obtained for their admission into a benevolent asylum. This was done after the men had signed an application for such order, and after the certificate of the Government Medical Officer on the said application. (Blank form enclosed.)

On the Monday mentioned the order had not arrived, and it was therefore necessary to further remand the men until the next day, which was done. Constable Hawkins, who is in charge of the lock-up here, informed me that the man Power had not been well during the previous night. I questioned Power, and he informed me that he had not been well during the night, but was feeling all right then.

On the 2nd instant, the occasion of the first remand, he appeared, as far as I could judge, strong and well, and on the Monday I could not see any noticeable change in him.

Later in the day (Monday), something after 2 p.m., Constable Hawkins told me Power had taken ill. I suggested that if he were ill Dr. Browne should be sent for.

At

At 4 p.m. the same day, upon being shown an order from Dr. Browne for his admission to the hospital, *I ordered his discharge from custody.* I may say that it is to my knowledge, the practice for the past seventeen or eighteen years, to remand destitute old men to the lock-up when an application has been made for admission into an asylum to await the arrival of such order.

If this were not the course adopted many of these old men—they not being a fit subject for the local hospital, as certified in the present case—would have to take their chance in the streets until an order was procured. The application referred to as being made by Power was forwarded to the Secretary, Government Asylums, 289, Cleveland-street, Sydney, at which office I presume it now is.

I have, &c.,

H. H. CHIPPINDALL, J.P.

P.S.—I may add that Power told me in a conversation I had with him at the time of discharging him to the hospital that he had been a very heavy drinker and was the cause of his then sufferings.—H.H.C. Inspector Ford, Orange.

CERTIFICATE of a Medical Practitioner on the within application, for the information of the Department of Charitable Institutions.

189 .

I CERTIFY that \_\_\_\_\_, who is able to *undertake a journey* from \_\_\_\_\_ to the Government Asylum for Infirm and Destitute, is suffering from \_\_\_\_\_, and that he is a *fit subject for admission into the Asylum*, on the following ground:—

1. He is physically incapable of earning a livelihood at present.
2. He states that he is destitute, and has no friends able or willing to support him outside an Institution.
3. His case is not one which should properly be treated in a local general Hospital.

Remarks\* {

Medical Officer.†

\* If physically or mentally incapable of travelling alone, the applicant's conditions should be fully described.

† This certificate should be signed by the Local Government Medical Officer (if any) unless an Hospital or a Gaol transfer.

Application made by\*

\* Here state whether by Hospital, Magistrate, Gaol, &c.

Admission Order and Pass to be sent to {

GOVERNMENT CHARITABLE INSTITUTIONS OF NEW SOUTH WALES.  
APPLICATION FOR ADMISSION INTO AN ASYLUM FOR INFIRM AND DESTITUTE.

*Information to be supplied by Applicant.*

1. Name, birth-place, and religion ... ..
2. Age, and whether married or single ... ..
3. Circumstances of entering Hospital ... ..  
This question can be omitted in the case of Metropolitan Hospitals, or when an applicant is not in any Hospital.
4. Period of residence in New South Wales ... ..
5. Former occupation ... ..
6. Does applicant desire admission into an Asylum?
7. Names and addresses of relatives in full (relationship to be stated) ... ..
8. Has applicant any relatives or friends in any of the colonies willing and able to support him if he is sent to them or admitted into an Asylum; if so, give their names and full addresses? ...
9. Has applicant ever been an inmate of any Charitable Institution in this or any other Colony; if so, for what period and where? ...
10. Is he an Army or Navy pensioner; or has he any other means of support? ... ..
11. Amount of money in possession of applicant, or in the custody of friends? ... ..
12. Has applicant any legal claim to, or is applicant likely to become entitled to any land, investment, or other property? ... ..

*Signature of Applicant*

*Date*

I CERTIFY that I have carefully questioned \_\_\_\_\_ with reference to the information supplied in connection with the foregoing application; and I beg to recommend that

*Signature of J.P. or local Officer in Charge of Police.*

This Certificate is not required in case of Metropolitan Hospitals.

The Director of Government Asylums for the Infirm and Destitute, 289, Cleveland-street, Sydney.

I the undersigned state that from inquiries made from the staff and patients who were in the hospital with the man Power, who it is stated was neglected, I find that he received every attention. I firmly believe that there is no truth in the statements made by Dr. Ross, and that he has been misled by Constable Hawkins who is looked upon by the town's people as a very officious officer.

During the time I have been connected with the hospital I have always heard patients speak in the highest terms of their treatment in the institution. I believe that the matron (Miss Leahy) and the wardman are everything that could be desired, and I know of my own personal knowledge that during the time Power was in the hospital they were untiring in their attention to their duties day and night.

Cottage Hospital, Molong, 14th September, 1895.

W. C. READ,  
Secretary.

Sir,

Molong, 14 September, 1895.

With reference to our conversation this morning *re* hospital and your request that I should write you my opinion as to its management, I have very much pleasure in stating that although not in any way connected with its management, and of my own knowledge know nothing whatever about it, my position in the town as a general storekeeper brings me in contact with all classes of the community; and the impression formed in my mind is that there is no better managed institution of the kind in the Colony; and as to the matron, who I believe has occupied the position for about eighteen months, she appears to be well conducted, highly respectable, and intelligent, and from what I have heard attends to and understands her duties.

*Re* Powell's case, I think on inquiry it will be found that the statements made in the Assembly are gross misrepresentations.  
To Sub-Inspector Ford, Molong.

Yours truly,  
JAS. HASLAM, J.P.

Molong, 14 September, 1895.

DR. HAROLD BROWNE states:—I recommended the removal of the prisoner (Power) from the Molong lockup to the Molong Hospital on account of his being unfit to be detained in the lockup through weakness; I have been in Molong between two and three years; when I recommended the removal of Power from the lockup to the hospital I informed Sergeant Fagan that the ward was full, the isolation ward was unoccupied, and that he was of necessity to be placed there; I most emphatically state that the latter place was more suitable than the lockup on account of the dampness and cold of the latter; the present matron, Miss Leahy, has been matron for the past year and nine months; when she came to Molong she had very good testimonials; I have never seen anything to complain of and consider her an excellent nurse; I visited Power daily until his death; I originally sent Power into the hospital; he did not apply for admission; he remained in the hospital from the 26th July to the 2nd August, and when he left was able to carry away his swag himself.

HAROLD BROWNE, M.R.C.S., Eng.

Molong, 14 September, 1895.

SAMUEL YOUNG states:—I am at present a patient in the Molong Hospital; I was here when the late patient, Power, was received, and from what I saw he was well attended to; I have assisted the wardman to clean and dress him; he was very dirty in his habits; he used to foul the floor and beds; I have been six weeks in the hospital this day, and since being here I have received every attention and kindness.

Witness,—WILLIAM E. JUSTILIUS.

his  
SAMUEL × YOUNG.  
mark.

BEFORE making any statement, I would like to give the names of the gentlemen forming the committee, and who were present at the inquiry held by me at the hospital into the charge laid by Mr. Hamey *re* death of Power, and whom Dr. Ross has designated a clique of "Nobs":—

Chas. Stockwell, hotel-keeper, President.  
D. McCallum, J.P., Council Clerk, Vice-President.  
E. G. Finch, Stock Inspector, "  
John Black, J.P., miller, Treasurer. "  
Andrew Parker, saddler, Committee.  
Caleb Parker, storekeeper, "  
George Garlick, blacksmith "  
George Packham, farmer (Mayor, Molong), Committee.  
W. J. Windred, cordial maker, Committee.  
H. S. M. Betts, J.P., grazier "  
John Cotter, mason "

The other members of the Committee who were unable to be present are—

John Wynne, grazier.  
J. P. Paton, "  
John Neilson, storekeeper.

On reading the local paper you will be able to see the correspondence that led up to this inquiry. The committee were desirous of holding the strictest investigation, and as such I held the inquiry on Friday, 6th inst., lasting from half-past 10 a.m. to 6:30 p.m. After hearing the evidence, the committee could come to no other conclusion than that the cause of all the trouble was the mis-statements made by Constable Hawkins, who is a notorious gossip and scandalmonger. Mr. Hamey, who laid the charge, was perfectly satisfied that everything that could be done by the hospital staff for the unfortunate man was done, and exonerated them from all blame. As to Dr. Ross' statements to the House, I treat them for what they are worth, they being a tissue of falsehoods from beginning to end.

CHAS. STOCKWELL,  
President.

14 September, 1895.

I AM Returning Officer, Coroner, and a Justice of the Peace. I have nothing whatever to do with the conduct of the Molong Hospital, other than a visitor.

I am acquainted with every member of the committee, also the treasurer, president, medical officer, and nurse. The committee comprises the leading men of the town of all branches of life—men who would not tolerate for one moment an act of cruelty.

The Molong Hospital, from my personal observations, is one of the best-conducted institutions in the Colony. The matron is a most capable person, and those who have been inmates of the hospital speak in terms of the highest praise of her and her kindness to them.

The medical officer, Dr. Browne, cannot be too highly spoken of. He is a clever man in his profession, and willing at all hours to render assistance to the afflicted. His attention to the Molong Hospital is most notable, and everyone has a word of praise for his kindness of heart.

Constable Hawkins made a complaint to me as to the man Power, which I informed him, in my opinion, was a fabrication. He then said, "I saw it all." I replied, "If you did, make a complaint in writing, lodge it with the secretary, and do not go about telling every person you meet what I believe to be false." He then saw Mr. Hamey, and I also know he told a different tale to others.

I did not go to the investigation as alleged by Andrew Ross, M.D. What he has stated was a mere fabrication. I was requested as a witness to attend the inquiry, as Constable Hawkins, I was informed, had denied he had spoken to me and others about the subject of Power's death. Whilst at the hospital the secretary asked me how he would take down the different statements. I went into the room turned down some foolscap with margins and directed him, then left the room. I was not seven minutes in the room. I waited outside and was informed at 1 o'clock that Hawkins had admitted the conversation. I have not from the moment I left the room to this hour been in it.

The accusations made are wholly without foundation, a tissue of falsehoods, and a grave scandal upon those who are worthy of all honor.

P. F. A. KINNA.

Molong, 14 September, 1895.

HENRY WINDRED says: I consider the Molong Hospital one of the best conducted institutions in the Colony. Numbers of persons who have been inmates have spoken to me in the highest terms of the kindness and attention they received whilst there from the staff and medical officer.

HENRY WINDRED.

Police Station, Molong, 14 September, 1895.

SERGEANT FAGAN, No. 915, reports that on the 2nd instant he told Constable Hawkins that if Dr. Browne directed him to arrest a man named Edward Power, then in the Molong Hospital, he, Hawkins, should do so. At 10 a.m., same day, Power was arrested and charged with vagrancy, and subsequently remanded by H. H. Chippendall, Esq., J.P., for the purpose of obtaining an order for his (Power's) admission to the Benevolent Asylum. On Monday, the 5th instant, Power was again remanded for the same purpose. Some time afterwards Constable Hawkins reported to the Sergeant that Power had taken ill; the Sergeant at once saw Power, and called in Dr. Browne who ordered Power's removal to the hospital, where he died on the 7th instant. During the time Power was in the lockup the Sergeant saw him frequently every day, and did not notice any change in his appearance from the time he was arrested until a few hours before he was discharged by H. H. Chippendall, J.P.

Inspector Ford.

M. FAGAN, Sergeant.

Dear Sir,

Parliament House, Sydney, 10 September, 1895.

In moving the adjournment of the House this evening *re* the death of one Power in the Molong Hospital on 6 August, the Colonial Secretary (Mr. Brunker) has approved of an inquiry being made into the whole matter, by sending a competent person from Sydney to Molong to investigate the case. In doing so, and for your guidance, the following may be asked to attend as witnesses to give evidence:—

1. E. J. Hamey, bootmaker, Molong.
2. Mrs. Couch, Molong.
3. Nuns, Convent School, Molong.
4. Rev. Father Hanley, Molong.
5. Lockup-keeper Hawkins, Molong.
6. Mr. Price, groom at Millgates, Molong.
7. Mr. Chippendall, J.P., the magistrate who remanded Power from day to day in lockup, pending the arrival of order of admission into Parramatta Asylum.

Matron, Hospital.

Dr. Browne, medical officer.

Wardsman Gunn, Hospital.

And also one old "Sykes," who was with Power when confined in the lock-up at Molong, but who is now an inmate of Parramatta Asylum for Aged and Infirm, and who heard Power complain of the treatment he received at the hospital, and that he refused to go back. Constable Hawkins will, I dare say, give you any further information that you may require.

Yours, &amp;c.,

A. ROSS, M.D.

Mr. Fosbery, J.P., Inspector-General of Police, Sydney.

The Principal Under Secretary to Andrew Ross, Esq., M.D., M.P.

Sir,

Chief Secretary's Office, Sydney, 1 October, 1895.

With reference to your letter of the 10th ultimo, addressed to the Inspector-General of Police, relative to the death of a man named Edward Power, in the Molong Hospital, I am directed by the Chief Secretary to inform you that an investigation has been duly made into the case, and to request that you will be so good as to call at this office for the purpose of perusing the statements and correspondence on the subject.

I have, &amp;c.,

CRITCHETT WALKER,  
Principal Under Secretary.

Andrew

Andrew Ross, Esq., M.D., M.P., to The Chief Secretary.

[Urgent and important case.]

*Re* case death of Power in Molong Hospital.

Dear Sir,

Parliament House, Sydney, 1 October, 1895.

In justice to the institution, the general public, and myself, I do hope, owing to the serious nature of the complaint, that you will see the necessity of at once taking the necessary steps to have all evidence in the case taken on oath before a special Commissioner, before laying the papers on the Table of the House. The receipt of mere bald statements will not satisfy the public until this is done, and I think the serious nature of the case demands that the inquiry shall be on oath. In justice to me and the public, I hope that this will be done without any further delay. No one is more sorry of the occurrence than myself, and it is solely on public grounds that such an inquiry on oath, before a Commissioner appointed for the purpose, should take place, and that too without further delay.

Yours, &c.,

A. ROSS, M.D.

Submitted, 3/10/95. The Minister of Justice will perhaps appoint Mr. Macfarlane to hold the proposed inquiry.—J.N.B., 4/10/95. Inform Dr. Ross that his wish will be complied with.—J.N.B., 4/10/95. The Under Secretary of Justice.—C.W., P.U.S., B.C., 4/10/95. Submitted.—A.C.F., 9/10/95. There will be no objection to the appointment of Mr. Macfarlane.—A.J.G., 10/10/95. The Principal Under Secretary.—A.C.F., B.C., 10/10/95.

The Principal Under Secretary to Andrew Ross, Esq., M.D., M.P.

Sir,

Chief Secretary's Office, Sydney, 5 October, 1895.

In reply to your letter of the 1st instant, having reference to the case of the death of a man named Power in the Molong Hospital, and asking that a special Commissioner might be appointed to inquire into the matter, I am directed by the Chief Secretary to inform you that the Minister for Justice has been requested to appoint Mr. Macfarlane to hold the proposed inquiry.

I have, &c.,

CRITCHETT WALKER,

Principal Under Secretary.

Minute Paper for the Executive Council.

Chief Secretary's Office, Sydney, 11 October, 1895.

Royal Commission of Inquiry into circumstances attending the Death of a Patient in the Molong Hospital.

By virtue of the power vested in me by the "Public Institutions Inspection Act of 1866," I recommend that William Macpherson Macfarlane, Esquire, P.M., Chief Emergency Officer and Inspector of Petty Sessions Offices, Department of Justice, be appointed to make a diligent and full inquiry into the truth of certain charges, which are more particularly set forth in the accompanying papers, against the officials of the Molong Hospital, to the effect that their negligence accelerated the death of one Edward Power, a patient in that institution.

JAMES N. BRUNKER.

The Executive Council advise that Mr. W. M. Macfarlane be appointed to hold the inquiry referred to.—ALEX. C. BUDGE, Clerk of the Council. Approved.—FREDK. M. DARLEY, Lt.-Governor, 11/10/95. Minute 95-54, 11/10/95, confirmed 15/10/95.

The Principal Under Secretary to Andrew Ross, Esquire, M.D., M.P.

Sir,

Chief Secretary's Office, Sydney, 28 October, 1895.

With reference to previous correspondence on the subject, I am now directed by the Chief Secretary to inform you that Mr. William Macpherson Macfarlane has been commissioned by the Government to make a full, diligent, and searching inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of that institution, respecting the case of a man named Edward Power, who died in the hospital on the 7th August last, to the effect that he did not receive the attention due to him, and that his death was hastened by reason of the neglect of the officials thereof.

I have, &c.,

CRITCHETT WALKER,

Principal Under Secretary.

The Principal Under Secretary to William Macpherson Macfarlane, Esq.,  
Police Magistrate.

Sir,

Chief Secretary's Office, Sydney, 25 October, 1895.

I am directed by the Chief Secretary to transmit herewith a Commission under the Great Seal of the Colony appointing you to make a full, diligent, and searching inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the local hospital, respecting the case of a man named Edward Power, who died in that institution on the 7th August last, to the effect that he did not receive the attention due to him, and that his death was hastened by reason of the neglect of the officials, and generally into the circumstances surrounding the case.

2. I am desired to add that the Minister of Justice has been invited to cause the Court-house at Molong to be placed at your disposal for the purpose on Wednesday, the 30th instant, and following days; and also permit Mr. H. H. S. Chippendall, the Clerk of Petty Sessions, to perform the necessary clerical duties in connection with the inquiry.

I have, &c.,

CRITCHETT WALKER,

Principal Under Secretary.

Commission

Dated 25  
October, 1895.

Papers  
forwarded  
herewith.

## Commission.

VICTORIA, by the Grace of God, of the United Kingdom of Great Britain and Ireland, Queen,  
Defender of the Faith, &c., &c., &c.

To Our Trusty and Well-beloved WILLIAM MACPHERSON MACFARLANE, Esquire, a Police Magistrate of  
Our Colony of New South Wales, and one of Our Justices of the Peace of Our said Colony,—

Greeting:—

Know you, That We, reposing great trust and confidence in your zeal, industry, discretion, and integrity, do, by these presents, authorise and appoint you to make a full, diligent, and searching inquiry into certain charges recently made by Eaton John Hamey, of Molong, in Our said Colony, against the officials of the Hospital at Molong, respecting the case of a man named Edward Power, who died in the said hospital on the 7th August last,—to the effect that the said Edward Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials,—and, generally, into all the circumstances surrounding the case in question: And We do by these presents give and grant to you full power and authority to summon before you all such persons as you may judge necessary, by whom you may be better informed of the truth in this matter, and to inquire of the truth of the premises by all other lawful ways and means: And We do give you power at your discretion to procure such clerical and other assistance as you may deem necessary for enabling you duly to execute this Our Commission: And Our further will and pleasure is that you certify to Us, in the office of Our Chief Secretary, within the space of one month after the date of this Our Commission, under your hand and seal, what you shall find touching the said premises: And We hereby command all officers and servants of the Government and other persons whomsoever within Our said Colony of New South Wales, that they be assistant to you in the execution of these presents: And We declare this Our Commission to be a Commission for all purposes of the Act 44 Victoria No. 1, intituled "An Act to regulate the taking of Evidence by Commissioners under the Great Seal."

In testimony whereof, We have caused these Our Letters to be made Patent, and the Great Seal of Our said Colony of New South Wales to be hereunto affixed.

Witness Our Trusty and Well-beloved The Honourable SIR FREDERICK MATTHEW DARLEY, Knight, Our Lieutenant-Governor of Our Colony of New South Wales and its Dependencies, at Government House, Sydney, in New South Wales aforesaid, this twenty-fifth day of October, in the year of Our Lord One thousand eight hundred and ninety-five, and in the fifty-ninth year of Our Reign.

FREDK. M. DARLEY,

Lieutenant-Governor.

By His Excellency's Command,

JAMES N. BRUNKER.

Entered on Record by me, in REGISTER OF PATENTS, No. 17, page 146, this twenty-fifth day of October, one thousand eight hundred and ninety-five.

For the Colonial Secretary and Registrar of Records,

CRITCHETT WALKER,

Principal Under Secretary.

Report *re* Inquiry into Charges against Management of Molong Hospital in  
connection with Death of Edward Power.

Sir,

Department of Justice, 6 November, 1895.

With reference to your letter of the 25th October, forwarding a commission appointing me to make a full inquiry into certain charges recently made respecting the circumstances surrounding the death of a man named Edward Power, on the 7th of August last, at the Molong Hospital, I have now the honor to send you herewith my report, addressed to His Excellency the Lieutenant-Governor, together with depositions taken in the case, the exhibits, and all other papers relating thereto.

I have, &c.,

W. M. MACFARLANE.

The Principal Under Secretary.

Submitted.—7/11/95.

His Excellency.—J.N.B., 7/11/95.

Seen. The Chief Secretary.—

FREDK. M. DARLEY, L.-G., 8/11/95.

Report.

To His Excellency Sir Frederick Matthew Darley, Knight, Lieutenant-Governor of the Colony of New South Wales and its dependencies.

MAY IT PLEASE YOUR EXCELLENCY,—

In accordance with Your Excellency's commands, conveyed to me by Letters Patent bearing date the twenty-fifth day of October, one thousand eight hundred and ninety-five, I have made full, diligent, and searching inquiry into certain charges recently made by Eaton John Hamey, of Molong, in the Colony of New South Wales, against the officials of the hospital at Molong respecting the case of a man named Edward Power, who died in the said hospital on the seventh day of August last, to the effect that the said Edward Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question.

The inquiry, which was open to the public, was commenced at the Court-house, Molong, on Wednesday, the thirtieth day of October last, at ten of the clock in the forenoon, and was continued by adjournment to Thursday, the thirty-first day of October last, Friday, the first, and Saturday, the second, days of November instant, when it was concluded at thirty minutes past eleven of the clock in the forenoon.

Representatives of the press were present and were permitted to take full notes of the proceedings, but I directed that none of the evidence taken should be published until I had forwarded my report and finding to Your Excellency.

At the commencement of the inquiry Mr. P. F. A. Kinna, a solicitor of the Supreme Court, practising at Molong, asked to be allowed to appear on behalf of the matron of the hospital. I suggested that as her interests and those of the committee of the hospital and of Dr. Browne, the medical officer of the institution, were identical it would, in my opinion, assist matters if he appeared for all of them.

Dr.

Dr. Browne having stated that he preferred to be permitted to appear and examine witnesses on his own behalf, his request was acceded to. Mr. Kinna then stated that he would appear on behalf of the Hospital Committee and the matron.

As Mr. Police Inspector Ford was present, and I found he would not be required as a witness, I requested him to watch the case on behalf of Constable Hawkins and the public generally, and to put such questions as he desired by way of cross-examination of the witnesses, and he readily consented to do so.

Thirty-four witnesses gave evidence, their names, residences, and occupations being as follows, in the order in which they were examined, viz. :—

Name.	Residence.	Occupation.
Eaton John Hamey ... ..	Molong ... ..	Bootmaker.
William Henry Couch ... ..	do ... ..	Justice of the Peace.
William Couch ... ..	do ... ..	School-boy.
Richard M'Groder ... ..	do ... ..	do
Haldane Wilberforce Haslam ... ..	do ... ..	do
Thomas Hawkins ... ..	do ... ..	Constable of Police.
George Patrick ... ..	do ... ..	School-boy.
Garnet Fagan ... ..	do ... ..	do
Louis Rudolph Fagan ... ..	do ... ..	do
Michael Hanley ... ..	do ... ..	Roman Catholic clergyman.
John Davoren ... ..	Berihar, Molong ... ..	Station overseer.
John Francis Wynne ... ..	Molong ... ..	Farmer and grazier.
John Anthony Robards ... ..	Larras Lake ... ..	Wool-presser.
Samuel Young ... ..	Amaroo ... ..	Miner.
Thomas Barter ... ..	Cumnock ... ..	Farmer.
Elizabeth Hawkins ... ..	Molong ... ..	Wife of Constable Hawkins.
Charles Jerome Hawkins ... ..	" ... ..	Adopted son of Constable Hawkins.
James Jabez Sykes ... ..	Parramatta ... ..	Inmate of Destitute Asylum.
Algernon Grenfell Price ... ..	Molong ... ..	Groom.
Michael Fagan ... ..	" ... ..	Sergeant of Police.
George Garlick ... ..	" ... ..	Blacksmith.
Daniel Alfred Gilsener ... ..	" ... ..	Wesleyan clergyman.
James Kingsland ... ..	" ... ..	Undertaker.
Martha Patrick ... ..	" ... ..	Cook at hospital.
Henry Harold Septimus Chippendall ... ..	" ... ..	Clerk of Petty Sessions and Justice of the Peace.
Sister Immaculata ... ..	" ... ..	Lady Superior, convent.
Patrick Frederick Augustus Kinna ... ..	" ... ..	Solicitor.
James Ely ... ..	Cumnock ... ..	Gardener.
William Charles Read ... ..	Molong ... ..	Secretary of hospital.
Eleanora Leahy ... ..	" ... ..	Matron of hospital.
Isabella Hamey ... ..	" ... ..	Wife of Eaton John Hamey.
Miriam Sophia Betts ... ..	" ... ..	Wife of H. S. M. Betts, J.P.
Harold Elliott Browne ... ..	" ... ..	Medical officer at hospital.
Andrew Parker ... ..	" ... ..	Saddler.

The depositions taken at the inquiry, covering 252 pages of foolscap, are herewith. A very considerable portion of the evidence contained in the depositions is merely hearsay matter and totally irrelevant, but I considered it desirable to hear all the evidence brought forward with a view of not overlooking any evidence which might in any way assist me in getting at the truth of the matter, and I do not propose to refer to a large portion of it in any way.

Although Eaton John Hamey, who is a member of the Salvation Army, and not in any way connected with the hospital nor a regular subscriber thereto, originally made charges on the 28th August last to the hospital authorities that a man named Edward Power, who was an inmate of the hospital, had not received the attention due to him and that his death was hastened thereby, I found upon examination that Hamey knew nothing about the facts of the charges laid by him except from what he had been told by Mrs. Couch and Constable Hawkins, and all that he knew of Power was that he (Hamey) and his wife had seen Power in the lockup yard on Sunday the 5th August, where they had gone with a view of administering spiritual comfort to Power and another man, at the request of Constable Hawkins. Hamey was very anxious at the inquiry to put questions to the witnesses himself. As, however, he could only be considered nominally to be a party to the inquiry, I informed him that there was no objection to his putting questions to the witnesses provided he did so through Mr. Inspector Ford. Mrs. Grace Couch did not appear, and her husband produced a medical certificate stating that her state of health would not permit her to do so, but a statement made by her on a previous occasion (exhibit "D") shows that she personally knew nothing about the matter, but had heard something from her son, Willie Couch. Willie Couch stated in evidence that he had heard something from a boy named M'Groder; M'Groder stated he heard it from a boy named George Patrick; Patrick stated that Wardsman Gunn had told him about it. Two other boys, Garnet and Louis Rudolph Fagan, sons of Sergeant Fagan, stated that it was Constable Hawkins who had told them about the circumstances of Power's death.

It was attempted to be shown that the reports respecting the circumstances of Power's death emanated from the Convent School through the Nuns talking to the boys about it. The evidence, however, is directly against this.

Although averse to calling upon the Nuns at the Convent School to give evidence, I considered that their evidence might possibly be material. At my request, the Lady Superior, Sister Immaculata, willingly attended the Court, and her evidence shows that she visited Power in the Hospital for the purpose of administering spiritual comfort to him; she saw him four times--twice to speak with him; he did

did not make any complaint to her of his treatment in the Hospital; she heard some childish remark about Power having bitten his wrists, but took no notice of it; she is the only one of the Sisters who had any conversation with Power; she thought Power received every care and attention at the Hospital.

Constable Hawkins, who appears to have been the prime instigator of the agitation respecting the circumstances attending the death of Power, states that he first saw Power on the 2nd August last, when he, under instructions from his superior officer, arrested Power outside the Hospital on a charge of vagrancy, with a view of his being remanded till an order could be procured for his admission to the Asylum for Infirm and Destitute. Power walked down to the lockup—about half a mile away—with him, and part of the way carried his own swag, Hawkins carrying it the rest of the way. Leaving Power in the lockup garden, Constable Hawkins went and arrested another old man named Sykes upon a similar charge. The two old men were then remanded by Mr. Chippendall, J.P., pending the arrival of an order for their admission to a hospital for the infirm and destitute. Pages 19 to 21.

Power remained in the lockup till the afternoon of the 5th August last, and during that time he received the greatest kindness and attention from Constable Hawkins and his wife, who supplied him with many luxuries at their own expense, and for which they deserve every credit. Hawkins states that he noticed a change in Power's condition in the morning of the 4th August, but Power made no complaint. Hawkins noticed a great change in Power on the morning of the 5th August, and he sent for the Rev. Father Hanley and informed Sergeant Fagan that he wanted the doctor. Dr. Browne came to the lockup and examined Power in the garden, and wrote an order for Power's readmission to the hospital. At this period a conversation appears to have taken place between Dr. Browne and Sergeant Fagan, in the presence of Constable Hawkins. The doctor states that he explained to Sergeant Fagan that he was in a considerable difficulty, as the main ward at the hospital was already over full, two beds having been placed in the ward during the last few days, making in all six beds, and that the only place he could possibly put Power into was a detached wooden building some 30 feet away from the door of the male ward, called the isolation or convalescent ward, and that Sergeant Fagan remarked that it would be better than the cell Power was in, as it was damp. This is borne out by the evidence of Sergeant Fagan, who also said that the doctor stated that he could not turn out any of the patients in the male ward to make room for Power. Pages 25-6.  
Page 26.

Constable Hawkins accordingly took Power back to the hospital in a vehicle driven by a man named Price, and upon arrival there the constable alleges that the matron said twice, "I'll not take him in." The matron, in her evidence, states that she said, "I can't take him in, my ward is full;" and that she did not like them bringing him back, on account of his dirty habits. Upon production of the doctor's order the matron admitted him, and he was placed in the outbuilding referred to by the doctor, the only furniture in that building being a chair bedstead, a small locker with a Turkey twill front to it, and a small lamp. The contents of a flock mattress had apparently been emptied out on the floor. Constable Hawkins then left him in that room. On the following Wednesday, the 7th August, Hawkins, by instructions, went to the hospital in the afternoon, when, as he states, he, in company with Wardsman Gunn, saw Power lying in the room previously referred to on a mattress on the floor, with a sheet covering the mattress, another sheet, a blanket, a rug, and a half-dirty quilt covering Power, and this comprised the whole of the clothing. No foot-warmer was there at the time. There were five lots of blood on the floor, on the right hand side of the bed, which had the appearance of having been wiped up with a dry cloth. The patches of blood were about 13 inches in diameter. Wardsman Gunn then stated to him that "The man last night had bitten each wrist and was found lying out on the floor this morning by me." Power had each of his wrists bandaged. Hawkins then made the following remark to Gunn:—"Do you call this human treatment to treat a man like this?" Gunn replied, "I must admit it is not." Gunn further stated, "I saw to him last night before I went to bed, and I found him on the floor this morning either (Hawkins states) between 5 and 6 or 6 and 7 this morning."

Hawkins states that he had not been talking about Power's treatment in the Hospital all over the town, but he admits that he did speak about it to his friends, a lady, and Hamey. He also spoke to Dr. Ross, the Member for this District about it, as he thought it was a disgraceful thing and wanted it brought to an issue; he also spoke to a man named Bowler about it, and he wanted to speak to Mr. Kinna about it, but he alleges that Mr. Kinna would have nothing to say about the matter as he had nothing to do with the Hospital; he also spoke about the matter in Mr. Holland's shop in the presence of Mr. Holland and another person, as well also in Caleb Parker's shop. Hawkins did not make any complaint to the Government Medical Officer, the Secretary of the Hospital, or any of the Committee about the treatment of Power in the Hospital, nor did he make any report about Power's treatment to his senior officer, Sergeant Fagan.

With regard to the character of the treatment of Power in the Hospital from the 25th July, the date of his first admission, till his discharge on the 2nd August, there can, I think, be no question.

From the evidence of several of the witnesses who saw Power in the Hospital during that period, it appears that although he was a man of filthy habits, he received every kindness and attention from the hospital officials.

John Davoron, a station overseer, who was a patient in the hospital when Power was there, states:—"The treatment of Power by the matron and wardsmen at the hospital, as far as I saw, was very good, it could not be better; The habits of Power were very bad; he was by the fire making water all over the place, and exposing his person all the time he was there, and I drew attention to it; it was very disagreeable to the patients in the ward." Page 22.

Samuel Young, a miner, also in the hospital with Power, states:—"I did not hear Power make any complaint about his treatment; I don't think Power was neglected—not in any way I could see; the bed was clean enough when Power went into it, but in the morning the bed was dirty, as he fouled it; he used to make water in the ward where the other patients were." Page 23.  
Page 23.

James Jabez Sykes, now an inmate of the Asylum for the Infirm and Destitute, Parramatta, who had been in the hospital and also in the lockup with Power, states as to the treatment received by Power in the hospital:—"He received the same diet as the other patients, and was treated in the same way; he was sort of light-headed and giddy; the matron did not treat Power unkindly, nor did I see the wardsmen treat Power unkindly; he was better when he left the hospital than when he first went in; the only complaint he made to me about the hospital was that he could have eaten more than he was given." Page 25. |  
Page 25.  
Page 25.

James Ely, a gardener and a patient in the hospital with Power, states:—"He (meaning Power) was, as far as I know, treated as well as I was; he made no complaint about his treatment in the hospital; I never heard Power complain to any other patients in the ward about his treatment." Page 20.  
Page 30.

Page 36. Andrew Parker, a saddler, and member of the hospital committee, states, that he saw Power in the hospital on the 30th July, and had a conversation with him. He asked Power how he felt. Power replied, "Pretty well." He then asked him if he had any complaint, or if he had been neglected in any way. Power replied, "Oh! no, if I had not come here, I would have been dead." In a further conversation he asked Power if he was comfortable, and Power replied, "I am alright."

The evidence of the good treatment of Power up to the date of his discharge is fully corroborated by the evidence of Miss Leahy, the matron, and Dr. Browne, medical officer of the hospital.

Page 35. The questions naturally arise, why was Power then discharged, and was he then in a fit state to be discharged? On these points Dr. Browne's evidence shows that on Power's first admission into the hospital, after careful examination, he found no evidence of organic disease; but that the man was suffering from the effects of exposure and insufficient food. He had lost most of his teeth, was dyspeptic, and was very constipated, Power informing him at that time that he had had sunstroke several years ago, and had been a heavy drinker. He was placed upon spoon diet and given stimulants. Four days after this he was much better and placed on full diet. On the 29th July he (the doctor) instructed the matron to take steps to secure his removal by the police, with a view to his being sent to the asylum for old men, as he considered his case a fit one for an asylum of that nature. He considered then, that in the course of forty-eight hours he (Power) would be able to take a trip, say, to Parramatta by rail. On 1st August last he (Power) was quite well enough to go to Sydney, and he had seen men removed from there to Sydney in a similar state. His (Power's) was a case for removal to an asylum for the aged and destitute as soon as he considered him fit to travel, as Power's was a chronic case. There was nothing organically wrong with him, and he was a man of disgusting habits not due to the loss of physical control. This is corroborated by the evidence of the matron, who admits that on her part there was a strong desire to get rid of the man on account of his dirty habits, especially as she did not consider it beneficial to the other patients, particularly those undergoing surgical operations, to have him in the hospital.

Taking these circumstances into consideration, I am of opinion that the reasons for Power's discharge from the hospital were good ones, and that he was at the time in a fit state of health to be discharged for the purpose of being sent to the asylum.

Page 35. From the time of his discharge on the 2nd August till the time of his readmission on the 5th August, Power was not in any way connected with the hospital. On his readmission he was placed in the isolation ward, for, as previously stated, the male ward was over full, there being six cases in there instead of four, each of which was of too serious a nature to permit of transference to the isolation ward to make room for Power. The female ward could not at this time be used for a male patient, as there was a female in it. Power, by the doctor's directions, was placed on a bed upon the floor as a precaution against his falling out of bed. The matron states this was a clean straw mattress covered with a sheet, and for a covering Power had one sheet, two hospital blankets, his own two blankets, and a counterpane. He also had two pillows for his head, and along the wall, at its intersection with the floor, bags were placed to keep out the draught. He also had a foot-warmer placed at his feet, and this was kept there constantly, except when being refilled. Power was undoubtedly in a weaker state of health on his readmission to the hospital than he was at the time of his previous discharge. Power was again placed on spoon diet and ordered four ounces of whisky per day, which the matron states was faithfully given to him. The doctor next saw him on the 6th August, sitting by the fire in the male ward. From inquiries made of the matron and observations made of the patient, he judged it safe to leave him on the night of the 6th without special attendance, which he judged would be leaving him alone for about six hours. As a matter of fact the matron, accompanied by the wardsman, saw him between ten and eleven o'clock that night (6th August) and, as the matron states, he then seemed very quiet and comfortable in his bed, and he had at his feet a hot water tin, which had just then been filled with boiling water. She asked him how he was, and he mumbled something. She gave him some whisky and water which he took readily. She did not then think that it was necessary for anyone to sit up with him, nor did she give the wardsman instructions to see him during the night. The matron saw him again at six o'clock the next morning (7th August) when the wardsman told her that he had seen him at five that morning, and that he had scratched his wrists, and was sitting in the corner of the ward. The matron found him sitting on the floor in the corner of the ward. She noticed that the floor was wet, and that fœces and spots of blood were on the floor. She examined Power's wrists and saw a patch on the back of each wrist with the skin rubbed off, about the size of a shilling or a two-shilling piece. They were what are termed abrasions. Power's wrists were then bandaged by the wardsman. There were about half a dozen blood spots on the floor, and she did not think any of them were the size of half-a-crown. They were more like smears than spots. There were other stains on the floor, but they were not like blood, which had been there since she was at the hospital. By the matron's direction Power was dressed, and put in a chair by the fire in the male ward, and his bed and bed-clothes put out to dry, and about 10 o'clock that morning he was put out in the sun in a chair in the garden with a blanket round him. He remained there till 2 o'clock, when he was taken back to his bed in the isolation ward, where he died at a quarter to 12 o'clock that night. At 11:30 that morning the doctor saw him sitting in the sun outside the entrance to the male ward. The doctor had the bandages removed from Power's wrists, and wounds of a trifling nature and extent were discovered in both wrists. They appeared to have been caused partly by scratches and partly by teeth. The wounds did not extend through the skin. The doctor stated that it was not likely a man in his condition would bleed much from such wounds. Power was in a weaker condition than the day before, but nothing very marked. The doctor told the matron that Power would probably die that night as he considered he was sinking, and he instructed the matron, as Power might not die, to go to the president of the hospital with a view of securing special attendance for Power; there being quite as much work in connection with other cases as she and the wardsman could attend to, and if they could not get anyone the wardsman was to remain up all night with Power. The matron accordingly saw the president, who was agreeable to assistance being obtained, but it was found impossible to obtain any competent assistance, and the wardsman was, by her direction, with Power till he died.

Page 33. It is unfortunate that Wardsman Gunn, who would, no doubt, have been a material witness, died previous to the holding of the inquiry by me. A statement [*exhibit I*] was made by him before the hospital committee which generally corroborates the evidence of the matron. With regard to the blood-stains upon the floor, I do not think, after due consideration, that the evidence respecting them affects in any way the question at issue. After a careful consideration of all the circumstances of the case as disclosed

disclosed by the evidence before me, I think, perhaps, that the only matter that might be considered to indicate neglect or want of attention on the part of the officials of the hospital in connection with the case, is that Power was left to himself from between 10 and 11 o'clock on the night of the 6th August till about 5 o'clock on the morning of the 7th August; but in view of the evidence generally as to the matter, and particularly having regard to the evidence of the doctor and of the matron, who, under the circumstances, were the proper judges of the condition and requirements of Power, I do not think that the fact of Power being so left can be construed into neglect or want of attention.

It appears to me that the unnecessary agitation respecting Power's death originated through the action of Constable Hawkins, in gossiping to different persons, especially Hamey, instead of reporting his suspicions to his superior officer. Hamey, who was one of the persons to whom Hawkins spoke of the matter, and who originally formulated the charges to the hospital committee, appears to have fomented the agitation more from a desire of notoriety than anything else.

I therefore find—

That Edward Power did receive the attention due to him from the officials of the hospital at Molong during the time he was a patient in that institution, and I am of opinion that there was no neglect on the part of the said officials which hastened his death.

Given under my hand and seal at Sydney, in the Colony of New South Wales, this 6th day of November, 1895.

W. M. MACFARLANE,  
Commissioner.

Depositions taken at inquiry held at Molong into the circumstances surrounding the case of a man named Edward Power, who died in the Hospital at that place on the 7th August, 1895.

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New South Wales, }  
to wit.

THE examination of *Eaton John Hamey*, of Molong in the Colony of New South Wales, taken on oath this 30th day of October, in the year of our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question.—And this deponent on oath states:—I am a bootmaker, residing at Molong; I am not a regular subscriber to the hospital, nor connected with it in any way; I made a complaint to the hospital authorities at Molong on the 28th of August last; the nature thereof was that a man named Power, who was an inmate of the hospital, had not received the attention due to him, and that his death was hastened thereby; from something I heard I made that complaint; in the first place I heard it from Mrs. Couch, secondly from Constable Hawkins; I did know the man Power; I had a conversation with him on the Sunday previous to his being readmitted to the hospital; I met him on that day in the lockup yard; hearing that there were two old men in the lockup at Molong who were about to be sent to the poorhouse, my wife and myself came to see them on spiritual matters; I am a member of the Salvation Army; I saw Power sitting in the stable at the rear of the court-house with a man named Sykes; he was evidently ill from his appearance; I had no conversation about his treatment in the hospital or about his health; that is the only occasion upon which I saw him; on a previous occasion I attended an inquiry made by the committee of the hospital; I heard all the statements made thereat; this inquiry was held on the 6th of September last; I made a statement on that occasion to the effect that the evidence given on that occasion was conflicting, but as the quantity was in favour of the hospital I was satisfied; I made a statement to Inspector Ford on a later occasion; I don't know that I used words that would convey the meaning that I was not satisfied with the treatment Power had received; I don't think I did; I cannot say that I inferred that in what I said to Inspector Ford.

To Inspector Ford: I made a statement which was put in writing by Inspector Ford, which was read over to me and signed; I believe that statement to be correct; the statement produced, marked *Exhibit A*, is the one I made to Mr. Ford.

*To Mr. Kinna:* At the conclusion of the inquiry held by the hospital authorities I did say I was satisfied that Power had received proper treatment at the hospital; I then said I withdrew the charge. The speech by me, as reported in the *Molong Express* of the 14th of September last, produced, marked Exhibit B, is substantially correct.

*To Mr. Ford:* I made the remark to someone that Power was weak in the lockup yard; the man was in a weak state.

E. J. HAMEY.

Sworn at the Court-house, Molong, on the 30th }  
day of October, 1895, before me,— }  
W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit. }

THE examination of *William Henry Couch*, of Molong, in the Colony of New South Wales, taken on oath this 30th day of October, in the year of our Lord, 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace of the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question: And this deponent, on oath, states:—I am a Justice of the Peace and the husband of Grace Couch; my wife is in a very precarious state of health at present, and I produce a certificate, marked Exhibit C, which I received from Dr. Browne; I was present when Inspector Ford and Constable Justellius saw my wife, and she made a statement in writing; the statement produced, marked D, is the one; I signed it for her at her request.

*To Mr. Kinna:* I heard every word that my boy Willie said to my wife respecting the death of a man who died in the hospital.

Taken and sworn at Molong, the 30th day of }  
October, 1895, before— }  
W. M. MACFARLANE, Commissioner.

New South Wales, }  
to Wit. }

THE examination of *William Couch*, of Molong, in the Colony of New South Wales, taken on oath this 30th day of October, in the year of our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question: And this deponent on oath states:—I am a son of William Henry and Grace Couch; the day after Power died in the hospital I made a statement to my mother; I told my mother that I had heard that a man at the hospital had died, and that he bit his arm; I was told this by boys named Richard McGroder and Haldane Haslam when I was coming from school; those were the only boys I spoke to about it at that time; I know nothing of the facts of the case myself.

Taken and sworn at Molong, the 30th day of }  
October, 1895, before— }  
W. M. MACFARLANE, Commissioner.

New South Wales }  
to wit. }

THE examination of *Richard McGroder*, of Molong, in the Colony of New South Wales, taken on oath this 30th day of October, in the year of our Lord, 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorized in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question: And this deponent on oath states:—I am a son of John McGroder and go to school at the Convent; I told a boy named Couch about a man who died in the hospital had bitten his wrist; I was told by George Patrick, a boy at the hospital; I did not know anything about it myself beyond that.

*To Mr. Ford:* Patrick goes to the Convent School.

Taken and sworn at Molong the 30th day of }  
October, 1895, before— }  
W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit. }

THE examination of *Haldane Wilberforce Haslam*, of Molong, in the Colony of New South Wales, taken on oath this 30th day of October, in the year of our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances

circumstances surrounding the case in question: and this deponent on oath states:—I am a son of Mr. James Haslam, and go to the Molong Public School. I know a boy named Willie Couch. I said something to him about a man, whom I have since found out to be Power, dying in the hospital. I said to Couch, "Did you hear about a man dying in the hospital?" He said, "No!" I said, "I wonder what he died from?" I said, "Very likely we will see it in the paper to-night." This was the Friday after the man died. I said nothing to him about the man having bitten himself. I had only heard at school that a man had died in the hospital.

Taken and sworn at Molong the 30th day of }  
 October, 1895, before— }  
 W. M. MACFARLANE, Commissioner.

H. HASLAM.

New South Wales, }  
 to wit. }

THE examination of *Thomas Hawkins*, of Molong, in the Colony of New South Wales, taken on oath this 30th day of October, in the year of our Lord, 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorized in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question: And this deponent on oath states:—I am a Constable of Police, stationed at Molong; I have been stationed in Molong for six months; I have been in the Police Force on and off for about eleven years, and have just done four years service since last joining; I knew the man Power; I first knew him on the 2nd of August last; the matron of the hospital, Miss Leahy, on the 29th of July last, reported that a man was mad in the hospital; this was in Bank-street; she asked me to arrest him; I said, in the absence of Sergeant Fagan and Constable Justillius in Bathurst on duty; moreover, if they wanted the man arrested they must get a warrant, as under the circumstances no man could be arrested out of a public institution without a warrant; she said, "The filthy wretch, he is a fit subject for the lockup, not the hospital"; we parted; I went off to Dr. Browne's and spoke to him; I told him the matron had been applying for the removal of the man to the hospital; Dr. Browne said, "She had no business to go to the lockup at all"; I told him Sergeant Fagan and Constable Justillius were away and it would be attended to as soon as they returned; on the 2nd of August last Sergeant Fagan requested me to go to the hospital with instructions to arrest the man Power outside the institution; I went to the hospital and saw the matron; I was shown into the men's ward; there were three men in the ward; I had a conversation with them to test their sanity; Power was washing his trousers in a bucket outside the ward; it was very cold; after speaking to the matron I told her she had better put Power outside if she wanted me to arrest him; the man Power very feebly walked across the yard to the side gate of the institution and went outside, and I then arrested him; the matron was at the gate when I arrested him; he had the blanket and rug produced as a swag; they were then dirty and dusty with mud and filth; they have apparently been washed since; he also had a pair of wet trousers, which he had been washing in the bucket, and a billy-can; after he got a little way down, noticing he was weak, I carried the blankets for him; the hospital is about half a mile from the lockup, and down hill nearly all the way; I left Power in the garden; I arrested Power under the Vagrant Act on a charge of vagrancy; I arrested the man named Sykes the same day on a similar charge; they were entered in the charge book and then taken before H. H. Chippindall, J.P., who remanded them until next day for the production of an order for their admission into an asylum for the infirm and destitute; I left them remain in the warm sun in the garden; the ration consisted of a pound of steak and a loaf of bread for each man for the whole day; that day, in addition to that, I gave them jam and butter, and tea, with milk and sugar in it, at dinner time; at tea time I gave them jam and butter and bread, and tea, with milk and sugar: I put them in the large wooden cell, the two together; I gave them all the blankets at my disposal; the bed consisted of six Government blankets on the bare boards. They had two blankets under them each and four blankets over them; one of them slept on one side of the cell and one on the other side; there were no windows to the cell with barred openings; I gave them a candle, candlestick, and matches, also water to drink, and other necessaries; I covered them over in bed; they went to bed about a quarter to 6; I visited them twice during the night, once at 8 o'clock, and asked them if they were warm; Power said he was all right; I visited them again just on 12 o'clock the same night; they were comfortable then; Power made no complaint; I saw them next at about half-past 7 the next morning; they were both in bed; Power said nothing then; it had been a very cold night; about 8 o'clock I gave them some porridge with milk and sugar, and I gave them tea with milk and sugar in it, also some bread and butter for breakfast; I got them out into the sun just after 8 that morning; about 12:30 the same day I gave them beef tea, some more bread and butter and tea; Power also had some beef for his dinner that day as well; tea the same as the night before; Power was still very weak; I did not notice any alteration in him; they retired to bed at about 6 o'clock, and treated them the same way; I looked at them at 8 o'clock the same evening; Power seemed all right, and made no complaint; I again saw them at 12 o'clock and they seemed all right; Power made no complaint; the next morning, the 4th instant, I again saw Power about 8 o'clock; it had been a very cold night, and I then noticed a change in Power—he was very cold; he made no complaint; I gave him the same diet for breakfast, and he did not eat so well; I again placed them in the garden about 9 o'clock; the same morning I asked him how he was, and he said, "All right; if I had got that treatment up at hospital for a month I would have been all right"; towards noonday he seemed to rally a bit; he went to bed about the same time; I covered him up; about a quarter past 7 I again went to the cell, and found Power had rolled over and was lying with nothing on him but his trousers; I covered him up again and left him; I again visited him that night about half-past 10, and he appeared to be asleep; I visited him next morning again about 7; I noticed a great change in him; I gave him the same breakfast, but he ate very little of it; about 9 o'clock that morning I sent for the priest, Father Hanley, who came and stayed with Power for nearly fifty minutes; I told Sergeant Fagan that I wanted the doctor; Dr. Browne came and attended to the man, Power, in the garden; after Dr. Browne examined him he wrote an order for Power's re-admission into the hospital; he told me that the man was to have milk and whiskey in the hospital upon his arrival, and that it was in the order; Dr. Browne said, "When you

you go to the hospital the matron will fly at you, but she will cool down very soon. Take no notice of her"; my little boy was present when this was said; about midday on Monday, the 5th, I partly lifted Power into Millgate's buggy, and wrapped him in a Government blanket, as his own were too dirty; Algernon Price drove the buggy; I took Power's swag with him; we arrived at the hospital; the matron was in the front garden; she called out, "Who have you there?" I made no reply; on coming close she said, "You have that old Power here, take him back again, I'll not take him in"; she repeated this twice; I said, "There is an order here from the doctor, and in it is that you have to give me some whisky and milk; you had better bring me the whisky without the milk, for my wife gave him some beef-tea just before we left the lock-up"; the matron gave him something; I assisted Power out of the buggy with one arm under his arms, took him to the side building or outhouse with an iron roof, no fire-place, no furniture except a chair bedstead, which was shut up, and a small locker with a turkey-twill front to it, and a small lamp hanging on the wall; a flock bed had apparently been emptied out on the floor; the room had the appearance of a lumber-room; I sat Power on the chair and left him; there were no linings to the ceiling or walls; the following Wednesday, about 2 p.m., I went to the hospital; just prior to that I had seen the matron in the lock-up yard; Sergeant Fagan sent me to the hospital to look at Power to see if he were mad; when I arrived at the hospital I saw Wardsman Gunn; two patients were sitting close by; I walked into the house where Power was lying; he was lying on a mattress on the floor, with a sheet covering the mattress, another sheet covering the patient, and the blanket and rug belonging to Power over the sheet, and on top a half-dirty quilt; this comprised the whole of the clothing; no foot-warmer was near the patient, nor was there any sign of any having been there; there were five lots of blood on the floor on the right-hand side, and at the foot of the bed, which had the appearance as if they had been wiped up with a dry cloth; the patches of blood were about 13 inches in diameter; I spoke to Wardsman Gunn, referring to the blood on the floor, "What means this?" he said, "The man last night has bitten each wrist, and was found lying out on the floor this morning by me"; Power had each of his wrists bandaged up to the height of 9 inches; I felt his legs and they were cold; I said to the wardsman, "Do you call this humane treatment, to treat a man like this?" He said, "I must admit no, it is not"; I said, "Poor fellow," and I left; I said to Power, "Jim, do you know me?" and he mumbled, and I could not understand what he was saying; I asked Wardsman Gunn who bandaged Power's wrist, and he said, "I did"; I asked if the doctor had seen him; Gunn said, "Yes, he had, that morning"; I asked Gunn who had been attending Power during the night; he said, "I saw to him last night before I went to bed, and I found him on the floor this morning"; he mentioned the time as between 5 and 6, or 6 and 7 o'clock; I then left the hospital; I did not see the matron on that occasion, nor did I see Power alive again; on the night of Wednesday, the 7th, from instructions received from Sergeant Fagan, I went round the town to find someone to sit up with Power that night; I did not find any person to sit up with him; the same afternoon I saw Father Hanley, and told him of Power's condition, and he said he would go and see him; on the Sunday previous, the 4th of August last, Mr. and Mrs. Hamey saw Sykes and Power in the lock-up garden, but I had no conversation with them; I do not know whether Power was visited by the nuns at the hospital; I was told by Sergeant Fagan's two sons, Dolph and Gregory Fagan, that the nuns had said that Power had been badly treated; Gregory Fagan said, "That man is dead, Mr. Hawkins, the sisters gave it out in the class about him biting the flesh off his wrists, and what a cruel thing it was to treat a man like that"; later on in the day Dolph Fagan told me about same thing respecting Power; I have not been talking about this man's treatment in the hospital all over the town; I spoke to a man named Cady, a blacksmith, who is a friend of mine; I also spoke to Mr. Hamey about it; Mr. Hamey is another friend of mine; Mr. Hamey asked me some questions about it, and I told him all about it; I spoke to Dr. Ross, who is the Member for the district, as I thought it was such a disgraceful thing; I wanted it brought to an issue; I also spoke to Bowler, who provides the provisions for the lock-up; I also was going to mention it to Mr. Kinna, when he said he had nothing to do with the hospital, and he left me; on the Tuesday before the inquiry at the hospital by the Committee, Dr. Browne and Sergeant Fagan came to my house; I asked Dr. Browne in as it was raining; he declined to come in; I walked with him towards the office; Sergeant Fagan was on ahead; Dr. Browne said, "What have you said about the hospital? There is to be an inquiry on Friday, and I want you to be there. Will you be there?" I said, "What have you got to say about my character? My character is as good as yours"; I said that lately I had wanted to go and see him, but that he had passed me; he said, "If I had known your character, you should not have come into my house; will you be at the hospital?" I said, "No"; he replied, "I command you, as the Government Medical Officer"; I asked, "What right he had to command; that was for my superior officers"; Dr. Browne said, "I have written to Mr. Fosbery, and will do so again, to see if you won't come"; I said "Do so"; Dr. Browne left; from a conversation I had with Sergeant Fagan, I went and saw Dr. Browne about 4 p.m. the same day; I said I wanted to ask him two or three questions before I went to the inquiry; I said, "In the interests of the general public I have made up my mind to go"; I said, "There is one thing I will say that I have said to no one else, and that is that Power was dying when he was turned out of the hospital"; he said, "Will you say that on Friday?" I said, "I will"; he said, "Oh! bosh," and went in and shut the door in my face; Dr. Browne had given a certificate that Power was in a fit state to travel; this was given at the police court; Power was of cleanly habits during the time he was in the lock-up; I have learned that Wardsman Gunn died three or four weeks ago.

*To Inspector Ford:* Deceased Power was in my custody from the 2nd of August to the 5th of August last; no inquest was held on deceased, on account of, as I believe, the Government Medical Officer giving a certificate of the cause of death; when I made the statements referred to by Doctor Ross, I honestly and conscientiously believed them correct; I am sure the room in which Power was put upon his re-admission into the hospital was not lined at all.

*To Mr. Kinna:* I do not remember saying to you that it was rather hard I should have to provide necessaries for these men; I do not remember saying what was the lock-up diet allowed; the statement produced marked \*Exhibit E was made by me at the hospital inquiry; my memory was then quite fresh as to the circumstances; I do not think that my statement to-day is different, only I left out about what the matron said about Power being covered with his own blankets; I also left out that the matron informed me that the hospital was full; this was upon the re-admission of Power to the hospital; I spoke in Mr. Holland's shop in the presence of one other person besides Holland; I won't say there were not more than the two present; I did not speak to Mr. Davis, of the *Express* office,

office, about this case at the hospital in the presence of several others at the School of Arts; I spoke about the matter in Mr. Caleb Parker's shop to Miss McGee; I might have said to Mr. Finch that Hamey was a fool to take the matter up the way he did; after the hospital inquiry I went to Mr. Black, treasurer of the hospital, and said to him that I would like to have the matter settled, as I was full up of it; I made the statement to Dr. Ross before the inquiry took place; the Sunday after the inquiry at the hospital I saw Dr. Ross; my reason for so doing was that Dr. Browne had told me that I would not live in the town to make another complaint; it was because of this and other reasons that I determined to go on with the matter; I did not make any complaint to the Government Medical Officer or to the secretary of the hospital or to any of the committee-men as to the treatment Power had received; I was ignorant as to who comprised the committee; neither did I make any complaint to the matron.

*To Dr. Browne:* I arrested Power at the hospital on the 2nd of August last at 9:30 a.m.; I do not consider a temperature of 63° very cold in mid-winter; if my superior officer was away, I would, in the event of medical attendance being required at the lockup, call in the Government Medical Officer on my own responsibility; I reported the fact that Power was getting weaker on the Sunday to Sergeant Fagan; I do not know that Power had been camped for weeks in the bush with only the covering referred to; I believe that such was the case; I heard you tell Sergeant Fagan that the only place for Power at the hospital was the isolation ward, and I heard Sergeant Fagan say that the isolation ward was better than the cells; I heard you say the hospital was full; I knew the matron had no power to refuse or admit; I never read the order that you sent to the matron to admit Power; I counted the blankets covering Power on the Wednesday afternoon; I will swear Gunn had not gone to fill the foot-warmer whilst I was there on the Wednesday afternoon, as he was talking to two patients at the time; you said just outside the lockup on the Tuesday before the inquiry that I would not live long enough in the town to make another complaint; I definitely refused at first to attend the hospital inquiry; I did not know that the inquiry was held for the purpose of getting at the bottom of the affair.

Taken and sworn at Molong, the 30th day }  
of October, 1895, before—

THOMAS HAWKINS,  
Const.

W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit.

THE examination of *George Patrick*, of Molong, in the Colony of New South Wales, taken on oath this 30th day of October, in the year of our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question. And this deponent on oath states:—I am a son of Martha Patrick, at the hospital; I did not say anything to Richard McGroder about a man who died in the hospital; the sisters at the Convent asked me how the man at the hospital scratched himself; I told them that he scratched himself with his teeth; Sister Geneva asked me; she was the only one; Wardsman Gunn told me, and that is all I knew about it.

Taken and sworn at Molong, the 30th day }  
of October, 1895, before—

GEORGE PATRICK.

W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit.

THE examination of *Garnet Fagan*, of Molong, in the Colony of New South Wales, taken on oath this 30th day of October, in the year of our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question. And this deponent on oath states:—I am a son of Sergeant Fagan, and go to the Convent school; I remember hearing of the death of a man named Power, and his doing something to himself; it was a couple of days after he died; Mr. Hawkins told me about it; he was the only one; the sisters never mentioned it to me; I did not hear of it from a boy named Patrick.

*To Inspector Ford:* I did not tell Constable Hawkins that the nuns had given it out in the school about Power biting himself; I did not make a statement to that effect to Constable Hawkins in the presence of his son Charley.

Taken and sworn at Molong, the 30th day }  
of October, 1895, before—

GARNET FAGAN.

W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit.

THE examination of *Louis Rudolph Fagan*, of Molong, in the Colony of New South Wales, taken on oath this 30th day of October, in the year of our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question.—And this deponent on oath states:—I am a son of Sergeant Fagan, and go to the Convent school; I remember hearing of a man named Power dying in the hospital; Mr. Hawkins told

told me when I was going through the recreation ground with my brother about a month after his death ; that is the only time I heard of it ; I never heard of it at the school, nor from a boy named Patrick ; the sisters never said anything to me about it on any occasion.

*To Inspector Ford :* I do not remember Constable Hawkins saying to me, "Take notice of what Read and Stockwell say as I pass."

*To Mr. Kinna :* Constable Hawkins did say to me, "Watch Stockwell, and see if there is anything going on that you can get hold of." This was about a fortnight ago—a fortnight after he told of the man dying in the hospital.

Taken and sworn at Molong, the 30th }  
day of October, 1895, before— }

LOUIS R. FAGAN.

W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit. }

THE examination of *Michael Hanley*, of Molong, in the Colony of New South Wales, taken on oath this 30th day of October, in the year of our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question.—And this deponent on oath states:—I am a clergyman of the Roman Catholic Church ; I know of a man named Edward Power ; I saw him on Monday, the 5th of August last, at the police station, Molong ; I merely saw him as his spiritual adviser solely ; I had no conversation with him about his treatment in the hospital at Molong ; I saw him again that day, and he made no complaint about his treatment ; I saw him in a wooden building apart from the hospital on the 7th of August last ; he was in a comatose state ; I could hold no communication with him then as to his treatment in the hospital, as he was not able to hold any ; the place he was in appeared to be fairly good, and the bed appeared the same from a cursory glance ; the bed was on the floor and the covering appeared to be good enough ; as far as I can judge from the hasty glance I took at things he did not appear to be neglected when I visited him at the hospital.

*To Inspector Ford :* The statement produced, marked *Exhibit F*, was made by me to Inspector Ford and is true.

Taken and sworn at Molong, the 30th }  
day of October, 1895, before— }

MICHAEL HANLEY.

W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit. }

THE examination of *John Davoren*, of Beri, near Molong, in the Colony of New South Wales, taken on oath this 30th day of October, in the year of our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question. And this deponent on oath states:—I am overseer of Beri Station ; I was ill in the hospital at Molong about two months ago ; a man named Edward Power came as a patient to that hospital whilst I was there ; I saw him in the same ward as myself ; I only saw him once, I believe it was the day he first came in ; he was sitting at the fire in the ward and the wardsmen was feeding him ; I think he was in the ward all the afternoon ; I am sure he was ; he was in a very low state when I saw him there ; he was in a very dilapidated looking state ; I was perfectly conscious that afternoon but very ill ; all the beds in the ward were full at the time.

*To Inspector Ford :* I did not sleep in the same ward with Power ; I did not hear Power make any complaint as to his treatment ; he appeared to be too far gone.

*To Mr. Kinna :* The treatment of Power by the matron and wardsmen at the hospital, as far as I saw, was very good—it could not be better ; the habits of Power were very bad ; he was by the fire making water all over the place and exposing his person all the time he was there, and I drew attention to it ; it was very disagreeable to the patients in the ward ; I saw the matron and wardsmen attending to him.

*To Dr. Browne :* He was helped into the ward and put in a chair by the fire, and cushions put in the chair ; the matron showed due anxiety about Power ; I have heard the patients complain about his habits ; the matron sat up with me all night and poulticed me ; Power was coaxed to take nourishment ; I consider Power was well attended to, as well as I was myself, and I could not be better done by.

*To Mr. Commissioner Macfarlane :* I saw him exposing his person three or four times, and he was making water nearly all the time ; I paid a pound a week whilst I was in the hospital.

Taken and sworn at Molong, the 30th day }  
of October, 1895, before— }

JOHN DAVOREN.

W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit. }

THE examination of *John Francis Wynne*, of near Molong, in the Colony of New South Wales, taken on oath this 30th day of October, in the year of our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due

to

to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question: and this deponent on oath states:—I am a farmer and grazier, and am a member of the Hospital Committee; I do not know Power, nor have not seen him to my knowledge; I was on the visiting committee of the hospital; on the morning of the 8th August last I visited the hospital and saw the matron, and asked her how things were going, and she told me that Power died the night before; she told me that he died in the outer ward, and she led the way towards the ward, and told me the wardman was cleaning the ward up where this man died; I saw the wardman coming from the direction of this room with his arms round a large bed, as much as he could carry; there may have been bed-clothes in it; I did not examine it; the matron told me it was the bed that Power had been using; I saw the wardman was cleaning the ward up.

*To Inspector Ford:* This ward is a detached one; I did not see the blankets produced before.

*To Mr. Kinna:* The bed did not appear to be in a filthy state; it appeared fairly clean; to the best of my recollection, I saw but two patches of blood on the floor; I did not see five or six stains like blood; if there had been any more I think I would have noticed them; the patches I refer to were a little larger than a five-shilling piece.

Taken and sworn at Molong, the 30th }  
day of October, 1895, before— }

J. F. WYNNE.

W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit. }

THE examination of *John Anthony Robards*, of Molong, in the Colony of New South Wales, taken on oath this 30th day of October, in the year of Our Lord, 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question: And this deponent on oath states:—I am a labourer, and am now wool-pressing at Larras Lake, near Molong; I remember a conversation taking place between a man named Samuel Young and George Garlick, in Garlick's blacksmith's shop, about Power; I don't remember much about it; Young said that if he were crippled in an arm or leg, that he would go into an hospital; but if he had to go to bed he would not go into any bloody hospital, but would rather die in his camp.

Taken and sworn at Molong, the 30th }  
day of October, 1895, before— }

J. A. ROBARDS.

W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit. }

THE examination of *Samuel Young*, of near Amaroo, in the Colony of New South Wales, taken on oath this 30th day of October, in the year of our Lord, 1895, at Molong, in the Colony aforesaid, before the undersigned, one of her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question: And this deponent on oath states:—I am a miner; I saw Edward Power at the hospital; I was a patient at the hospital at the time; I went in on a Saturday, and Power came into the hospital on a Tuesday, I think; he did not come into the same ward, but went into the wooden house; the beds in the ward that I was in were full; I used to help Power to put his clothes on; I used to steady him whilst the wardman dressed him, and we used to put him out in the sun in an easy chair; the wardman dressed his wrists, one of which had a little skin off; Power used to lie on a mattress on the floor; he had a sheet on him, but whether he had a double white blanket on him I could not tell; I had no conversation with him; I did not hear Power make any complaint about his treatment; he would not take his food; I never said to Garlick that Power was badly treated at the hospital; I did say to Garlick that the last night I saw Power alive that the matron said he was not in the middle of the bed, and caught him by the middle and lifted him into the middle of the bed; I said before I would die in a hospital among patients I would rather die in my humpy in the bush; that meant any hospital.

*To Mr. Kinna:* I know the wardman attended to the man Power well, but as to the matron I only saw her with him twice; I don't think Power was neglected—not in any way I could see; the blankets Power had on him were white; the bed was clean enough when Power went into the bed, but in the morning the bed was dirty, as he fouled it; he used to make water in the ward where the other patients were; I only saw him make water once in the ward close to the fire.

*To Dr. Browne:* The wardman attends to the men as a rule; the matron had a great deal to do attending patients Davoren and Healey, who were well attended; after a bit the ward was full again, and you had to ask for volunteers to sleep in the outside ward, and I went and slept there; I had no objection to do so; I was comfortable in it; for a man who had been camped in the bush I consider it was as good as a camp in the bush; I would like to have a camp like it in the bush.

Taken and sworn at Molong the 30th }  
day of October, 1895, before— }

his  
SAMUEL x YOUNG.  
mark.

W. M. MACFARLANE, Commissioner.

Witness to mark—H. H. CHIPPENDALL, C.P.S.

New South Wales, }  
to wit.

THE examination of *Thomas Barter*, of Eurimbla, Cunnock, in the Colony of New South Wales, taken on oath this 31st day of October, in the year of our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question. And this deponent on oath states: I am a farmer; I did not know a man named Power who died in the Molong Hospital some time ago.

Taken and sworn at Molong, the 31st }  
day of October, 1895, before,—

THOS. BARTER.

W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit.

THE examination of *Elizabeth Hawkins*, of Molong, in the Colony of New South Wales, taken on oath this 31st day of October, in the year of our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question. And this deponent on oath states: I am the wife of Constable Thomas Hawkins, who is lockup-keeper at Molong; I remember a Friday morning—I cannot say what the date was—when my husband brought a man named Power to the lockup from the hospital; it was, I think, about 11 o'clock in the morning; Power was then, in a very feeble condition; he was so weak he could scarcely walk along; upon his arrival at the lockup he was allowed to sit in the grounds on his swag on a stool; a man named Sykes was brought to the lockup about half an hour after Power; Power tried to walk about, and sat in the stable out of the sun; Power had his dinner and tea; I gave him egg-pudding, beef-tea, bread, butter, jam, fruit, tea, milk, and sugar; Power went to bed about 5 o'clock in a cell with Sykes; I did not see Power during the night; I saw Power again on the next morning, Saturday, about 9 o'clock; he was coming out from the cell; he seemed about the same as he was the day before; he sat about the grounds that day until evening, and walked about as well as he could; he went to bed that night about the same time; each day I gave him these luxuries; I next saw him on the following Sunday about dinner-time; I brought him his dinner in the yard; that day he seemed a little weaker; he said he felt very bad, and could not hold the basin containing beef-tea; he also said, "I would not like to go back to the hospital, as I would get as much food here in a week as in a month there, and if I stayed here I would soon be strong"; I also gave him rolled oats and milk and sugar every morning for breakfast; on the Sunday he went to bed about 5 p.m.; I next saw him about 8 o'clock on Monday morning; he was very weak that morning, and said he felt very bad, and at dinner-time when I took him his dinner, he said, "I'm done"; between 2 and 4 o'clock in the afternoon of Monday he was taken to the hospital by my husband and a man named Price; during the time he was at the lockup he was visited by Mr. and Mrs. Hamey; Dr. Browne came to see him about 2 o'clock on the Monday afternoon; Power said to me while in the lockup, that was on the Sunday, "I would rather die anywhere than go back to the hospital where that wretch is"; I asked whom he meant by "that wretch"; he said, "the matron"; I think it was on the Monday he said this; I had no further conversation about the matter; I never saw Power after he left the lockup.

*To Inspector Ford*: I had a conversation with Garnet Fagan on the 8th of August last; my husband and adopted son, Charles Hawkins, were present; Garnet Fagan said, "The old man is dead"; and my husband said, "Who told you?" he said, "The sisters told us at school"; he also said that he (Power) had bitten the flesh off his arms nearly to the elbows; when my husband took Power up, upon his return he told me how he had been received there, and also told me of the condition he found Power in when he visited him the day after; I do not remember exactly what my husband told me.

Taken and sworn at Molong, the 31st }  
day of October, 1895, before,—

ELIZABETH HAWKINS.

W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit.

THE examination of *Charles Jerome Hawkins*, of Molong, in the Colony of New South Wales, taken on oath this 31st day of October, in the year of our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question. And this deponent on oath states: I am the adopted son of Constable Hawkins, and go to the public school; I first saw the man Power when he came from the hospital to the lockup at Molong; I cannot remember the day; Mr. Hawkins brought him to the lockup; a man named Sykes also came there that day after Power; Power looked very delicate; he was an old man; I saw him each day he was in the lockup, and appeared to get worse whilst he was there; he was treated very kindly in the lockup; he was not treated the same as other prisoners; he left the lockup on the Monday with the groom at Millgate's and with Mr. Hawkins in the trap to the hospital.

To

*To Inspector Ford:* I have been adopted by Constable Hawkins going on four years; I had a conversation with Sergeant Fagan's two sons about the hospital, about three months ago, after Power's death; Garnet Fagan said to Mr. Hawkins, "The man is dead"; Constable Hawkins said, "How do you know"; Garnet Fagan said, "The nuns gave it out in the school to us"; when Doctor Browne came down when Power was going to the hospital he said to Constable Hawkins, "She will fly at you, but she'll cool down, don't take any notice of that."

*To Mr. Kinna:* Mondays and Fridays I stay at home and don't go to school; Mr. Hawkins has not been refreshing my memory; I recollect everything distinctly; I was at the big well, about 5 yards away from Dr. Browne and Constable Hawkins, when the remark I have mentioned as having been made by Dr. Browne to Constable Hawkins; I am sure Dr. Browne did not say, "The matron will very likely be vexed at having this man back, but it will be alright, here is a note for you."

*To Dr. Browne:* You were standing at the fence between Sergeant Fagan's place and the lockup when the remark was made to Constable Hawkins, and that spot is only 5 yards from the well.

Taken and sworn at Molong, the 31st }  
day of October, 1895, before.— }

C. HAWKINS.

W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit. }

THE examination of *James Jabez Sykes*, in the Colony of New South Wales, taken on oath this 31st day of October, in the year of our Lord, 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question. And this deponent on oath states:—I reside at present in the asylum at Parramatta; I am 72 years of age; I was for nearly three months in the Molong Hospital suffering from rheumatism and an ulcerated leg; while I was there a man named Edward Power came into hospital as a patient; he was put in the same ward with me—the male ward; there were only about two beds between our beds; he was in a weak state from privation and hardship; he received the same diet as the other patients and treated in the same way; he was sort of light-headed and giddy; he would get up at night and crawl about the ward; the wardsman, Gunn, told me he (Power) made water in the fire-place; passing the lavatory one morning I saw Gunn with Power stripped, and he was in a filthy condition; he was being bathed; I heard the wardsman speak to Power about his dirty habits; the wardsman told me that matron was in a terrible temper about his dirty habits; the matron was very particular about the beds being clean, and if they were messed she would be very vexed; the matron did not treat Power unkindly, nor did I see the wardsman treat him unkindly; he could not have been in the hospital more than six or seven days until he went out; he was better when he left the hospital than when he first went in; I think he left the hospital on a Friday; I think about the 4th of August last; Constable Hawkins took him from the hospital, and in about half an hour afterwards he came for me and I saw Power in Hawkins' yard; it was before dinner that I came to the yard; I was with Power all that day, and slept in some weatherboard quarters at the lockup—very good quarters; Power was at the lockup for four days before going back to the hospital; he was very feeble when he came to the lockup, and got wonderfully better there; he got worse after he had been a day or two in the yard; he commenced to get weak and feeble; he and I myself were well treated; full and plenty of good food, and Mrs. Hawkins gave us beef-tea, pudding, and vegetable; Power said if he could only eat as he ate then he thought he would get better; the only complaint he made to me about the hospital was that he could have eaten more than he was given; Power said when he was ordered back to the hospital that he was so well taken care of by Hawkins that he was contented to remain there; in the yard in the lockup he said he would like to die, that he was tired of his life knocking about; whilst I was in the hospital the matron came through the ward during the day and up to as late as 12 o'clock at night to administer medicine that the doctor ordered; Gunn told me that both himself and the matron thought Gunn made ; Power was very quiet in the lockup; he would get up at night and go about on his knees; he was very clean at the lockup; I had nothing to say to Power at the hospital; he did remark to me that the matron was very peevish to him; she got frantic and ill-tempered with me sometimes; I could not account for her reason in becoming so; I never saw Power after he left the lockup to go back to the hospital.

*To Inspector Ford:* The matron never had a conversation with me at the lavatory; no one has frightened or intimidated me over this matter; I have nothing to complain about Power's treatment at the hospital.

*To Mr. Kinna:* The matron was frantic with me for taking my leg off the chair when the doctor ordered it to be kept up.

*To Dr. Browne:* Power told me he was ordered stimulants; I know that Power passed his motion into his trousers; Power had light puddings in the hospital that I did not get; Power told me that he had been ordered eggs by you, but that he did not get them.

Taken and sworn, at Molong, the 31st }  
day of October, 1895, before.— }

JAMES SYKES.

W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit. }

THE examination of *Algernon Grenfell Price*, of Molong, in the Colony of New South Wales, taken on oath this 31st day of October, in the year of our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power,

Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question. And this deponent on oath states: I am a groom at Millgate's "Royal Hotel"; I remember a man named Edward Power; I first saw him about the beginning of August last, on a Monday; I was requested by the sergeant of police to take him to the hospital; Constable Hawkins brought out a man whom he called Power, assisted him into my 'bus, wrapped a blanket round him; Power seemed to be very weak, and had to be assisted into the trap; I drove him and Constable Hawkins to the hospital; the matron was in the hospital grounds, and Hawkins called out, "I have fetched this man back to you again"; she replied, "You can take him away; we don't want him here"; Hawkins said, "But you must take him"; the matron said, "No, we can't," and also said either "We have no beds" or "We have no blankets"; I cannot be sure which; Hawkins handed the matron a letter from the doctor, and she then consented to take him in; before Power got out of the vehicle Hawkins said, "The doctor has ordered a glass of whiskey and milk for him," and Hawkins then brought out a glass of something which the man eventually drank; as far as I remember, Constable Hawkins then assisted Power out of the 'bus and put him into a wooden structure at the hospital; Power had a swag, but I cannot say what it contained; I heard the matron say to one of the men there, "Gunn, they have fetched this man back again"; she said to Hawkins, "Sergeant Fagan and you are regular nuisances"; I said to Power when the matron was refusing him admission, "You are getting a warm reception"; Power said, "Yes; ain't she an old bitch?"

*To Inspector Ford:* The matron said Power would have to use his own blankets; I met Mr. Kinna, solicitor, of Molong, in the street yesterday morning; he and I only were present; he said, "The hospital will be shut up now through people not holding their tongues, especially you; I have known you a long while, and I gave you credit for more sense"; I asked him why—what yarns were there; he said, "Oh, never mind now, I'll let you see; let us say no more about it"; Mr. Kinna told me this morning not to be frightened, that he would not hurt me in any way; I did not tell Constable Hawkins that Mr. Kinna had asked me not to say anything about what he said to me yesterday."

Taken and sworn at Molong, the 31st }  
day of October, 1895, before— }

A. G. PRICE.

W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit. }

THE examination of *Michael Fagan*, of Molong, in the Colony of New South Wales, taken on oath this 31st day of October, in the year of our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamcy, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question. And this deponent on oath states: I am a sergeant of police stationed at Molong; the man Edward Power first came under my notice on the 2nd of August last; I directed Constable Hawkins to take him from the hospital to the lockup if directed to do so by Dr. Browne; he was charged with having no visible lawful means of support, with a view to his protection until an order for Benevolent Asylum could be procured; I saw him every day from the 2nd August until he was returned to the hospital; he appeared to be a worn-out old bushman; he walked about the yard; he appeared to be able to walk; I first noticed a change in him on Monday, the 5th of the same month, some time after he was remanded by H. H. Clippindall, J.P.; I think Constable Hawkins brought the matter under my notice; I noticed no change in his appearance from the time he came there until about 2 o'clock on the Monday; I sent for Dr. Browne as the result of my own observations; Hawkins on the Sunday told me that Power had a change last night, but he was all right then; Power told me every day, as I spoke to him, that he was treated well and wanted for nothing; the doctor examined him and gave an order for his admission to the hospital on the Monday, and I directed Constable Hawkins to have him discharged; I never saw Power after that; on the 6th of August, I think it was, Constable Hawkins reported to me that he had seen Power at the hospital, and that he had bitten his arm; Hawkins may have told me of his death; he made no official report of the circumstances surrounding this man's death any further than I have stated; if there was any suspicion of foul play, or that the death was caused by bad treatment, it would be his (Hawkins') duty to report the matter to me if the facts were within his knowledge; it would be his duty to report to me as his superior officer; I am not aware that Constable Hawkins had any conversations about the matter with me; I did hear rumours going about the town, but I had no conversation with Hawkins as the part he was taking in it.

*To Inspector Ford:* Dr. Browne asked me if I would direct Hawkins to be present at the hospital inquiry, and I said, "No, he could if he liked"; I told the constable he could go if he liked; all the evidence given at the inquiry was published in the local papers, I believe; I gave evidence at the inquiry at the hospital.

*To Mr. Kinna:* The President of the hospital, I think, on the 6th of August last, asked me if I could get a man in the town to look after Power; this was, I think, before I had heard that Power had bitten himself; I believe I mentioned the matter to Hawkins, and asked him to look after a man for the purpose.

*Dr. Browne:* You told me in the lockup yard that you had no place at the hospital for Power; this was on the day Power was removed back to the hospital, and that the only place available was the outside ward; I said, "Better there than the lockup"; you told me the hospital was overfull, and I believe said you could not turn out any of the patients to the outer ward to make room for Power; you reported to me that Constable Hawkins was talking about the death and treatment of Power, and asked me to check him; this may have been three or four days after the death; I may have said I could not check him, and may have made a remark about his gossiping habits; I heard Hawkins definitely refuse at first to attend the hospital inquiry.

*To the Commissioner:* After Dr. Browne made the complaint to me I did speak to Hawkins, and told him to go and see Dr. Browne; Hawkins denied having talked about the matter; a few days before  
the

the hospital inquiry, Dr. Browne called to see Constable Hawkins, and saw him in my presence; they both became excited, and I said it was no use bandying words over the matter and walked away; the doctor threatened to report the matter to the Inspector-General; Dr. Browne said Hawkins would have to go to the inquiry, and that he would get the Inspector-General to order him to do so.

Taken and sworn at Molong, the 31st }  
day of October, 1895, before— }

M. FAGAN.

W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit. }

THE examination of *George Garlick*, of Molong, in the Colony of New South Wales, taken on oath this 31st day of October, in the year of our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question: And this deponent on oath states:—I am a blacksmith; I did not know Edward Power; I have been one of the hospital visiting committee; I did not visit it at any time that Power was an inmate; I know nothing whatever about the case of Power.

Taken and sworn at Molong, the 31st }  
day of October, 1895, before— }

GEORGE GARLICK.

W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit. }

THE examination of *Daniel Alfred Gilsean*, of Molong, in the Colony of New South Wales, taken on oath this 31st day of October, in the year of our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question: And this deponent on oath states:—I am a clergyman of the Wesleyan Church, stationed at Molong: I do not belong to the hospital in any way; I did not know a man named Power; I do not think I ever saw him in the hospital; I know nothing of my knowledge respecting the death of Power.

Taken and sworn at Molong, the 31st }  
day of October, 1895, before— }

D. A. GILSEAN.

W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit. }

THE examination of *James Kingsland*, of Molong, in the Colony of New South Wales, taken on oath this 31st day of October, in the year of our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question: And this deponent on oath states:—I am an undertaker; I buried the body of Edward Power; I first saw his body about half-past 10, on the 7th of August last, in the dead-house at the Molong Hospital; that is a special building for keeping dead bodies; the body was covered with calico, except the head and hands; the calico would just about come to the wrists; I did not see any bandages on the wrists; I never to my knowledge saw Power alive.

*To Mr. Kinna:* It was the morning he was buried that I saw Power's body; I saw the back of his hands from the wrists to the fingers; I saw no marks on them; I am not sure it was the 7th or the 8th of August last.

Taken and sworn at Molong, the 31st }  
day of October, 1895, before— }

JAMES KINGSLAND.

W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit. }

THE examination of *Martha Patrick*, of Molong, in the Colony of New South Wales, taken on oath this 31st day of October, in the year of our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question: And this deponent on oath states:—I am cook at the hospital at Molong, and am a married woman; I knew a man named Edward Power; I saw him the first day he came to the hospital the first time; he seemed to be very low and very weak; I did not see him at all in the ward; I saw him the day he left the hospital with Constable Hawkins; he was able to walk away and carry his swag; I had no conversation with him whilst he was in the hospital; I do not know what day he left; I did not see him during the time he was at the hospital; on the 5th of August last Constable Hawkins brought him back to the hospital in a buggy

buggy; I did not see him out of the buggy; I saw him next the evening before he died between 6 and 7 o'clock; I was in the garden with the matron; I went to the door of the room he was in; he was in bed; I did not go into the ward, only to the door; he was alone at that time; he was asleep; I never saw him again; I did not go into this ward at any time while he was in it; I knew the then wardsman, Branxton Gunn; I had no conversation with him respecting this man Power; I had no conversation with the matron regarding the man Power; I learnt that he had grazed his wrists, or scratched his wrists, with his teeth; the wardsman told me that Power had bitten his wrists; before 8 o'clock the morning before he died Gunn came out for some warm water to dress his wrists, and he said Power had bitten his wrists; I asked him if he had bitten them much; he said, "Nothing to speak of—more like a scratch;" he did not say the man had bitten pieces out of his wrists; no one else was present when this was told me by the wardsman; this was in the kitchen; I never mentioned to anyone what the wardsman had told me about Power; I did not mention to my son George what the wardsman had told me; on the Monday after Power's death, I washed two blankets belonging to Power, two white blankets and a blue and white counterpane belonging to the hospital; Power's own blankets were very dirty; these blankets and counterpane had been used to my knowledge in covering Power; the hospital blankets and counterpane were not soiled, but his own blankets were very dirty; there were red stains on the counterpane—one end of it—from, I believe, a Turkey-twill covering a locker in the room Power occupied; I could tell they were not blood stains; from the time of Power's death up to yesterday I have not been in the ward that he was in.

*To Inspector Ford:* I have had sufficient experience to tell stains from Turkey-twill from blood stains; the colours of some Turkey-twill are not fast, some are; I did not notice any blood stains on the floor of the ward Power was in—the outer ward; the blankets produced were Power's blankets; the other blankets produced, I believe, are the same I washed; what were over Power were as good; the counterpane produced is like the one which was over Power; it is of the same pattern and same quality, but the one which was over Power may have been lighter in colour; there are, I think, eight quilts in the hospital with a Turkey-twill border: there are a better quality Turkey-twill than that on the locker, and they don't run, but the twill on the locker does run; I have washed Turkey-twills which are on lockers; they will run when they are new, but after they are washed a while they will not run; I have had no conversation with the matron about the death of Power.

*To Mr. Kinna:* Neither you nor any of the committee have had any conversation about this matter with me; I have had considerable experience in washing clothes containing blood stains after operations at the hospital, so I would know the stain of dye from blood stains; the Turkey-twill on the locker in Power's ward was new; it had never been washed; the counterpane over Power was of the same weight as the one produced; I heard the matron say to Constable Hawkins when he brought Power back to the hospital, "Both you and Fagan are a bright pair to bring me a man back in that state."

*To Dr. Browne:* I was told to prepare special beef tea on the occasion of Power's first admission, and to the best of my knowledge it was for him; I was told it was for him; I have seen the matron prepare egg-flip for Power and tell Gunn to take it to Power, and take it to him herself sometimes; I know Power was on spoon diet, and the articles mentioned were extra to that diet; I cannot say whether there was any special diet upon his readmission; I made corn-flour and bread and milk since his readmission; egg-flip was made for him on the Wednesday after his readmission.

*To the Commissioner:* I have seen Sergeant Fagan at the hospital two or three times, and Constable Hawkins twice.

Taken and sworn at Molong the 31st }  
day of October, 1895, before— }

MARTHA PATRICK.

W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit. }

THE examination of *Henry Harold Septimus Chippendall*, of Molong, in the Colony of New South Wales, taken on oath this 31st day of October, in the year of Our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question: And this deponent on oath states:—I am Clerk of Petty Sessions, &c., and a Justice of the Peace; on Friday, 2nd August last, I went, at the request of Sergeant Fagan to the receiving room in the lockup and there saw Edward Power; I then saw an application for the admission of Power to the Asylum for Infirm and Destitute; I produce a certified copy\* of the application I then saw, the only difference being that the doctor's name is shown as Henry Browne, whereas it should be Harold Browne; I questioned Power, filled in the certificate in reference to the questions, and signed it; I then remanded Power till the following Monday so that an order could be obtained for his admission to the asylum; I straightaway gave the application to Constable Justilius to post; when I saw him, Power struck me as being an old and feeble man; I should not say that he was very weak; I saw him later on in the afternoon walking about the yard; his gait was certainly feeble; he did not make any complaint to me; he answered the questions I put to him about his application quite intelligently; I saw him the next morning, Saturday, but did not notice any change in him; I next saw him about 10 o'clock on Monday morning, the 5th August, when he was brought before the Bench and further remanded till the next morning; I did not at that time notice any particular change in him; about 4 o'clock the same day, from something Constable Hawkins told me, I saw Power again, when he appeared to be in a considerably worse condition than he was before; I also saw an order from Dr. Browne authorising his admission to the hospital; he did not make any complaint to me about his treatment; I discharged him from custody where he was; I said to him, "It will be better for you to go back to the hospital and remain there till you get better, and proceed to the asylum;" he said, "Very well, sir," or something to that effect; Power said something to me to the effect that grog had been the cause of his trouble, and that he had been a heavy drinker; he made no complaint whatever to me; I did not see him after that occasion; I do not know that a magistrate has

\* Exhibit G.

has power to order luxuries or stimulants in cases of emergency to confinees in a lock-up or a gaol; I was not aware that Power was in need of luxuries or stimulants; from eighteen year's experience I can state that it is usual to charge infirm and feeble men with vagrancy, merely for their protection, until an order can be obtained for their admission to an asylum; when an order is obtained they are discharged from custody.

*Mr. Inspector Ford*: It was in the cause of humanity I discharged Power at the lock-up instead of having him brought to the Court-house; I have not the slightest doubt but that Constable Hawkins and his wife treated Power with the greatest kindness; I know there was a certificate given by Dr. Browne as to the cause of death of Power; I produce a duplicate of the certificate of death; I know that the power of granting luxuries or stimulants rests with the Government Medical Officer in cases connected with lock-ups; Power was a very thin man with a drawn face.

Exhibit H.

H. H. S. CHIPPENDALL.

Taken and sworn at Molong, the 31st day of }  
 October, 1895, before,— }  
 W. M. MACFARLANE, Commissioner.

New South Wales, }  
 to wit. }

THE examination of *Sister Immaculata*, of Molong, in the Colony of New South Wales, taken on oath this 31st day of October, in the year of Our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question. And this deponent on oath states:—I am lady superior of the convent at Molong; I knew a man named Power; I made his acquaintance in visiting the patients at the hospital; when I first saw him he was with the patients in the ward; I visited him for the purpose of administering spiritual comfort to him; he did not seem to be very well; he seemed weak; as far as I recollect I saw him four times; twice to speak with; twice in the ward with the other patients; once in the garden; and once in the detached ward at the hospital; he seemed to be very near death when I saw him in the detached portion; he was able to speak to me; he did not on any occasion make any complaint to me as to the treatment he had received at the hospital; when I saw him in the detached ward I did not notice if his wrists were bandaged; he was on a kind of mattress on the floor; he appeared to have sufficient covering blankets and quilt and sufficient pillows; I do not know what number of blankets he had on him; I did not notice if he had a foot-warmer in the bed; I simply heard some children's remarks upon the subject of Power biting his wrists, but treating them as such I took no notice of them; I think Sister Theresa and Sister Genevieve accompanied me on my visits to the hospital when I saw Power; sometimes one sister and sometimes another; I am sure I am the only sister who had any conversation with Power; I teach at the Convent school; I did not myself, nor to my knowledge did any of the other sisters say anything respecting the death of Power at the hospital in the school; I think Power received every care and attention at the hospital.

*To Inspector Ford*: To my knowledge nothing was said at any class meeting relative to the death of Power or his treatment in the hospital; I did not notice any blood stains on the floor when I visited Power in the detached ward; I did not see him receive any food whilst I was there.

*To Mr. Kenna*: When I went to see Power in the detached ward a wardman was attending to him the whole time I was present; I said a few passing words on the first occasion; I was with him from five to seven minutes in the detached ward; he seemed to have comfortable pillows, and, as far as I could see, he had every comfort as to bed-clothing.

Taken and sworn at Molong, this 31st day of }  
 October, 1895, before,— }  
 W. M. MACFARLANE, Commissioner.

SISTER M. IMMACULATA.

New South Wales, }  
 to wit. }

THE examination of *Patrick Frederick Augustus Kinna*, of Molong, in the Colony of New South Wales, taken on oath this 31st day of October, in the year of our Lord, 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justice of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question; and this deponent on oath states:—I am solicitor of the Supreme Court practising at Molong; I am a life member of the Molong Hospital through being the founder of the hospital; I did not know a man named Edward Power; whilst Sykes and I believe Power were in the lock-up Constable Hawkins and myself were speaking just outside the Land Office door at Molong; he made a remark about his two pensioners, meaning Sykes and Power; he said, "It is very hard lines I should have to get necessaries for them out of my own pocket"; I said, "Surely you have not to do that? The Government will allow you for anything like that surely?"; he said, "No, only the ordinary rations"; I said, "What are the rations"; he said, "Bread and water for breakfast, meat for dinner, and bread and water for tea"; he said, "You know my heart would not let me give that to old men like these, I could not do it, so I have provided them with little things out of my own pocket"; he said, "I went up and got some beef, and my wife has made some beef-tea"; I got some fruit and other little things which I thought would nourish the old men; I said, "Surely the Government will allow you for that"; he said, "I don't think so"; I said, "If I were you I would send a voucher in for it"; about a week after this I met Hawkins close to Donaldson's stationer's shop; he said, "This is a nice thing, Mr. Kinna—this man Power, who died in the hospital"; I said, "What is that?" he said, "The man was cruelly treated; he had bitten pieces out of his arm,  
 and

and there were several pools of blood in the place"; I said "Hawkins, if old Sykes has been running you to that don't mind it as I have known him fifteen years and he is one of the biggest liars unhung"; he said "It wasn't Sykes, I saw it"; I said "If you saw it make out a complaint in writing, hand it to the secretary, Mr. Read, for there are men on that committee who would never allow that thing to exist for a moment"; he said "But ain't you one of the committee"; I said I was not; Hawkins then went into Mr. Eaton John Hamey's shop.

*To Inspector Ford:* On one occasion, after a case against a boy by Constable Hawkins for throwing stones, Hawkins said to me, "Those boys committed perjury to-day, everyone of them"; I said, "No, Hawkins, I think the perjury was on the other side; I appeared for the defence, in that case, I said to Mr. Gilsevan at the hospital that I did not think Constable Hawkins was in his proper senses; I never took up a case against Hawkins without a fee; I am not an interested party because my father-in-law is the President of the Hospital Committee; I never made use of the word conspirators with reference to the police.

P. F. A. KINNA.

Taken and sworn at Molong, the 31st day of }  
October, 1895, before— }

W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit. }

THE examination of *James Ely*, of Cumnock, in the Colony of New South Wales, taken on oath this 31st day of October, in the year of our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question. And this deponent on oath states:—I am a gardener; I recollect Edward Power in the Molong Hospital; I was a patient in the hospital; Power was also a patient at the time; he was in the same ward as I was; he was at the opposite side of the ward; he was one or two days there while I was there; he was in a weak state and did not appear to be right in his head; he was, as far as I know, treated as well as I was; I was well treated; I got whiskey; I don't know if he did; I remember he got whisky one day in the yard; he made no complaint about his treatment in the hospital; he said to me on one occasion it was a pity that they did not give him a little more food; I do not remember him saying anything about the matron or wardman; I think Power was taken to an out place in the garden; I noticed that Power attempted to make water in the fireplace; I did not see him exposing himself in any way.

*To Inspector Ford:* I was never in the outside ward; I went to the door of the same; I saw patches of blood in there whilst Power was occupying it; I do not remember what day it was I saw the blood patches there; I don't think the blood patches were near the bed; not very near, but it appeared as if the man had been dragging himself about; I don't remember making any statement at Crook's shop at Cumnock about Power's treatment; I may have passed a remark about the blood on the floor, but I really don't remember; I think Power was in the yard on a chair when I noticed the blood patches on the floor; I don't remember telling the matron or wardman about the blood patches on the floor; I never made a statement either way, that Constable Hawkins statements as appearing in the newspapers were true or false about Powers treatment in the hospital.

*To Mr. Kinna:* Whilst I was in the hospital with Power I have known the matron come into the ward as late as 12 and 1 o'clock at night, attending to the patients; her manner to us all was kind and considerate; two or three of the blood patches were as large or larger than a person's hand, and were like as if they had been wiped over; I never heard Power complain to any other patients in the ward about his treatment.

*To Dr. Browne:* I think the wardman was attending to Power when I saw Power in the chair.

*To the Commissioner:* I do not remember hearing the matron on any occasion using any bad language to Power.

JAS. ELY.

Taken and sworn at Molong, the 31st day of }  
October, 1895, before— }

W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit. }

THE examination of *William Charles Read*, of Molong, in the Colony of New South Wales, taken on oath this 31st day of October, in the year of Our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question. And this deponent on oath states:—I am the Secretary of the Molong Hospital; I know nothing of the man Power, only as regards the burial; the credit balance of the hospital account on the 7th of August last, the day Power died, was £183 15s. 6d.—a net credit; the hospital is a cottage hospital, two wards, a male and a female, four beds in each ward; the only other accommodation is the outer ward, or convalescent or isolation ward; there are two paid officials apart from the medical officer, a matron, and wardman, and also a general servant; the matron is in charge of the hospital; the wardman is under the control of the matron and medical officer; there are no fixed duties for the matron, only to supervise generally and to do the nursing; she is to nurse male and female; now I think of it, I am not sure that the matron's duties are not laid down in the by-laws; during the time Power was in the hospital, namely, on the 7th of August, application was made by the matron for a man to sit up with Power; she had on no other previous occasion while Power was in the hospital made application for extra

extra assistance; the first complaints I received were contained in letter dated 16th August last from E. J. Hamey; no complaint had been made to me officially respecting the treatment of Power prior to that date; when the matron applied for assistance to look after Power her request was granted; the president and myself endeavoured to obtain assistance, but we could not get any; the matron apparently failed to procure extra assistance herself.

*To Inspector Ford:* I have been over three years connected with the hospital; I know the police endeavoured to procure extra assistance on the 7th of August last on account of Power; they were unsuccessful.

*To Mr. Kinna:* The President and myself visit the hospital once a week; I was present at an inquiry held by the Hospital Committee respecting the death of Power; I took the statements in writing from the different witnesses; the wardsman, Branxton Gunn, who is now dead (he died on the 25th of September last) made a statement which I took in writing; I produce the statement marked "Exhibit I"; Mr. E. J. Hamey was present when this statement was taken; before Gunn signed that statement it was read over by me to him; he then signed it; I believed he said it was correct before he signed it; Mr. Hamey, Dr. Browne, the matron, and Constable Hawkins were present, and had the right of asking any questions they wished; I believe Constable Hawkins asked his questions through Mr. E. J. Hamey, who had lodged the complaint.

*To Dr. Browne:* I am aware you courted every possible inquiry into the case when you first heard of Mr. Hamey's complaint, and that you said you wished the inquiry a public one; with the exception of Mr. Hamey and one or two of his friends none of the public put in an appearance at the inquiry.

*To the Commissioner:* I am not aware that the Committee objected to Constable Hawkins asking questions; he was putting his questions through Mr. Hamey.

Taken and sworn at Molong, the 31st day of October, }  
1895, before,—

W. C. READ.

W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit.

THE examination of *William Charles Read*, of Molong, in the Colony of New South Wales, taken on oath this 1st day of November, in the year of our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the Hospital at Molong, respecting the case of a man named Edward Power, who died in that Hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question. And this deponent on oath states:—The Molong Hospital is subsidised by the Government pound for pound; on March the 12th, 1895, the Hospital received from the Government £229 7s. 4d. from 1st January to 31st December, 1894, and on 24th August last, £147 3s. 11d., that was for the half-year ending the 30th of June, 1895; in addition to that subsidy the Government pay nothing for patients in the hospital; many patients who are in the hospital pay; from the 1st of January, 1894, to 30th June, 1895, the hospital received £65 5s. from patients; no subsidy was received from the Government upon that amount.

*To Mr. Kinna:* I produce a copy of the hospital by-laws, (marked exhibit J); the duties of the matron are defined therein.

*To the Commissioner:* There were two paying patients when Power was re-admitted to the hospital named John Davoren and James Ely.

Taken and sworn at Molong, the 1st day of November, }  
1895, before,—

W. C. READ.

W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit.

THE examination of *Eleanora Leahy*, of Molong, in the Colony of New South Wales, taken on oath this 1st day of November, in the year of our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question. And this deponent on oath states:—I am matron and female nurse at the Molong Hospital; I have held that position one year and ten months on the 3rd instant; previous to coming to the Molong Hospital I had five years experience in private nursing in Australia, besides eleven years nursing in England, and I was in three hospitals during that time, namely, the London Temperance Hospital, York Road Lying-in Hospital, and Miss Pollock's Private Hospital, 50, Weymouth-street, Cavendish-square, West London; in the last-named institution I nursed in the institution, and had also private nursing in connection therewith; I hold diplomas of efficiency from the London Temperance Hospital, and York Road Lying-in Hospital, and from the Nurse's Home, 140 Philip-street, Sydney; I first saw Edward Power on the twenty-fifth of July last; Mr. Hebden's groom brought him to the hospital, and in the absence of Dr. Browne I admitted him; he appeared very low and exhausted; he was put to bed in the bed at one side of the fireplace away from the window in the male ward; facing the mantel-piece it is on the left hand side of the fireplace; there were five other patients then in the ward besides Power; Dr. Browne saw the man Power the following day, the 26th July, 1895; he on account of the man's condition ordered him spoon diet and extra diet also, four ounces of whiskey, special whiskey, three-star whiskey; I produce the card\* showing the diet ordered by the doctor on that day; the doctor's instructions in regard to diet were faithfully carried out, and Power received the amount of stimulant ordered by the doctor; Power remained in the hospital until the second of August last; during that time he was excessively dirty in his habits; he passed his urine in the bed and bed clothes, and he passed his faeces in

\* Exhibit K.

in the bed and sheets, and his urine in the fireplace; I told him he must not be so dirty in his habits, that it was bad for the other patients as well as for himself; he made out he could not help it; I did not express any annoyance with him beyond telling him that he must not be so dirty in his habits; he was not in full possession of his senses; he told Dr. Browne in my presence that he had had sunstroke; he was not right in the head, but he was very quiet; he would sit in a moody manner all day; he wandered about the ward during the day and once during the night, I know; he improved in health after he had been in the hospital a few days and was able to digest his food better; on the 2nd of August last he had improved so much in health that he was a fit subject for discharge from the hospital, in my opinion; what led to his discharge from the hospital was really his dirty habits; if he had not been a man of these habits he would not have been discharged from the hospital for some time; I never heard him express any wish to be discharged from the hospital; Dr. Browne gave instructions on Monday, the 29th of July last, in my presence, to the wardsman to go and ask Sergeant Fagan to remove him, that he was not fit to be in the hospital, that he ought to go to the place for old men at Parramatta; Dr. Browne endeavoured to keep Power at the hospital as long as he could, but he found the smell of him was injurious to the other patients; on my part there was a strong desire to get rid of the man on account of his dirty habits, especially as I did not consider it beneficial to the other patients—especially those undergoing surgical operations—to have him in the hospital; at that time, when Power was first admitted, there were no patients in the convalescent ward; I don't think it would have been better for him to have been placed in the convalescent ward than turn him out, as I thought he was fit to go out and would be sent straight away to Parramatta; in his then state of health, I consider the convalescent ward a fit place for him to be in; on Friday morning, the 2nd of August last, I heard Sergeant Fagan tell Constable Hawkins to arrest Power; he (Fagan) said to me, "You will have to put him outside the gate"; I had no conversation with Constable Hawkins about Power then; when I got back to the hospital Hawkins was waiting for me; he said to me, "You had better put Power outside the gate again so that I can arrest him"; the wardsman put Power outside the gate and laid his swag on the ground for him, and Constable Hawkins took him away; I saw them going down the hill, and when I saw them Power was carrying his swag; between that date and the 5th of August I have no recollection of seeing Constable Hawkins, nor did I see Power; on the afternoon of the 5th of August, between, I believe, 3 and 5 o'clock, Power was brought to me by Constable Hawkins in Millgate's buggy, driven by Price; I said, "You have brought back Power, or old Power"; Hawkins said, I think, "You must take him in, or I have an order from the doctor to take him"; I said, "I can't take him in, my ward is full"; I may have said this more than once; I said to Hawkins, "You and Fagan are a bright pair to bring him back in that state," or something to that effect; I did not like them bringing him back; my objection was on account of his dirty habits; Hawkins said, "You must take him in," and produced an order from Dr. Browne; I think Hawkins said that the doctor had ordered milk and whiskey for him; Hawkins said to me, "Don't mind the milk, but give me the whiskey for him as my wife has just given him some beef-tea before he left the lock-up." I put about an ounce of whiskey into a medicine glass, and I saw Hawkins give it to him just outside the gate; Power was put sitting in a folding-chair in the convalescent ward; the contents of a kapok mattress were spread over a portion of the floor being disinfected; there was a locker with turkey twill over it; there was an iron bedstead, but no mattress or paliasse on it; there were a few other things in the room at the time; he was not more than a half-hour left sitting there until a clean straw mattress was put on the floor of the ward, a sheet on that; the covering on that was another sheet, two hospital blankets, his own two blankets, a blue-and-white counterpane, and he had two pillows for his head; along by the skirting-board bags were placed to keep out the draught; Power was placed in that bed; he was then very low and weak; he appeared to be in a worse state the day he came back than the day he left the hospital; I saw him that day about three times up to nine or half-past at night; the doctor did not see him at the hospital on the day of re-admittance; the doctor told me in his note to put him on spoon diet and extra diet, and to give him four ounces of whiskey a day; he got on that day the diet ordered, and he had the four ounces of whiskey in less than twenty-four hours in addition to the ounce he got when he came in; he received the four ounces of whiskey up to 8 o'clock the next morning; I gave instructions to the wardsman to see Power the last thing before he went to bed, which was between 10 and half-past 10, but not to visit him during the night; on the morning of the 6th, I saw him at half-past 6 or 7 in the same ward; the wardsman told me he had passed his urine in the bed, and upon that I told him to get the man dressed and move him into the general ward; I did not notice any particular change in him; he still seemed weak and low; he was from the male ward to the verandah during the day until after tea time; he could not walk very well, and had to be assisted; when he was in the ward I noticed he had passed his urine in his clothes on to the floor of the ward; he would sit and mope all day, and if I asked him how he was, would sit and mumble something, and would say he had a bad pain "there," pointing to his chest; he made no complaint to me of his treatment that day; he went to bed that day between 7 and half-past 7; he got his food regularly that day, and received the full quantity ordered by the doctor; I only saw him once that night between 10 and 11; he then seemed very quiet and comfortable in his bed; I asked him how he was, and he mumbled something; it was not easy to understand what he said as he had lost nearly all his teeth; I at that time gave him some whiskey and water which he took readily; at that time he had the same covering as I put on him the day before, and had a hot water tin at his feet; the wardsman was then with me; I did not think that from his then state of health that it was necessary for anyone to sit up with him, as he seemed quiet and harmless, and I knew there was nothing he could injure himself with; I did not give the wardsman instructions to see him during that night; I don't consider that he required anyone to see him in the night; as a matter of fact, I was up during the night attending to several patients, namely, John Davoren, Samuel Young, and James Ely; if the water is put in the warming-pans boiling they will keep warm from eight to ten hours; the warming-pan in Power's bed had been put in his bed by the wardsman at between 10 and 11 o'clock that night; it had been filled with boiling water at that time; a little after 6 the next morning I saw Power again on account of the wardsman (who said he had seen him about 5 o'clock), telling me that he (Power) had scratched his wrists, and was sitting in the corner of the ward; I went to the ward and saw him, and he was out of bed and sitting up in the corner of the ward; he was sitting on the floor, and he had either a counterpane or a blanket round him; he was from 1½ to 2 yards away from the bed; I noticed the floor was wet, that faces were on the floor, and that there were spots of blood on the floor; I examined his wrists, and saw a patch on the back of each wrist with the skin rubbed off of about the size from a shilling to a two-shilling piece; they were what are termed abrasions; I told the wardsman

to bathe his wrists and do them up ; I suppose there were half-a-dozen blood spots on the floor, more or less ; I do not think any of them were the size of half-a-crown ; they looked more like smears than spots ; there were stains other than I have mentioned, but not like blood, which have been there since I have been at the Hospital ; I did not notice any stains near the locker ; the floor was wet ; I looked at the bed ; the bed-clothes were turned down ; the bed was wet ; the pillows were there, and the bottom sheet, but I cannot say what covering was on it then ; I ordered the wardsman to dress him and put him into the male ward, and put his bed and bed-clothes to dry ; he was dressed and carried into the male ward, and put into a chair by the fire ; he remained there until about 10 o'clock the same morning ; he was then put out in the sun in a chair in the garden, a blanket put around him, and he remained there until half-past 1 or 2 o'clock ; he was then taken back to bed in the convalescent ward, and remained there until he died at a quarter to 12 that night ; the wardsman remained with Power that night at my direction ; Power, during that day, was offered his food, but we had great difficulty in getting him to take anything ; he had the stimulants ordered by the doctor during that day, and I put out extra whisky for him the night of his death, but he did not drink it all ; I do not think the door of his ward was locked at night ; he could only procure assistance by calling from the door of his ward to the patients in the male ward ; Power could call out, but he may not have been able to call out very loud, but there was a patient in the male ward at the time who got very little sleep who might have heard Power if he called out ; I should say the distance from the ward in which Power was to the male ward is between 6 and 8 yards and during the night previous to the death in fact every night a window of the male ward looking towards the side where the convalescent ward is was open ; the distance from the wardsman's bedroom to the convalescent ward is about 30 yards ; the nights of the 5th, 6th, and 7th of August last, were moonlight they may have been a little frosty ; the convalescent ward consists of a raised wooden floor, walls boarded, and a roof of corrugated iron, with a window and door and a ventilator over the door ; it is not lined or ceiled inside ; there is an opening all round between the roof and wall plates ; there is no fireplace in the room ; from my experience as nurse if I had a better place to put Power in I would have done so ; I do not consider the place he was put in was a proper place—that is the convalescent ward—for him to be put in if there was a better place available ; during the hot weather I have a canvas fly for putting over the roof of the ward to keep it cool in the hot weather ; I have never used that fly in the winter to protect the ward from frost, I have never used the fly on any occasion ; I did not think about the fly when Power was in that room ; I produce the bed card, Exhibit L. showing the diet, &c., ordered by the doctor during Power's second term at the hospital ; the dietary scale set out on that was faithfully carried out ; I did not treat Power unkindly ; to the best of my belief I treat all patients with what I call kindness ; there were in the hospital when Power returned to the hospital, on the 5th of August, six male patients in the male ward, and one female patient in the female ward ; all these patients remained during Power's stay on the second occasion ; their names were:—John Davoren, pneumonia of right lung ; James Ely, pleurisy on the right side ; Charles Williams, since deceased, cancer of the liver and stomach ; George Shephard, Senior, loss of eye, and he was receiving hot applications to his eye day and night—he had lost the other eye years before ; Samuel Young, abscess in his hand and having hot applications thereto day and night ; Adolphe Petit, congestion of liver, frequent linseed poultices or hot flannels ; I did not consider any of these patients fit to be removed to the convalescent ward ; I do consider it would do more harm to Young to go out to that ward, as he was having hot applications to his hand, as his arm was all inflamed than it would do to Power ; there was no room in the male ward for another bed at the time Power returned there ; the ward is only for four beds, and during the last two winters it has been occupied by six patients ; the only other place Power could have been put in was the female ward, and that was occupied ; there are four beds at present in the male ward ; in winter we put six beds in the male ward ; at present there are three beds in the convalescent ward ; I think at this time we had sufficient staff to do the work ; on the Wednesday morning I saw the President of the hospital and the Secretary, and asked for assistance, and they were quite agreeable to me having the assistance, but we were unable to get any competent assistance ; this was on Wednesday, 7th of August last ; whenever I have put any request before the officials of the hospital they have always been ready to meet me in any demand in reference to the hospital.

*To Inspector Ford :* To my knowledge I have not sworn at any of the patients during the time Power was in the hospital ; I do not swear at the patients ; I made a statement to Inspector Ford in the presence of Constable Justellius at the hospital ; that statement was given of my own free will ; I believe the blankets produced are the ones I showed Inspector Ford ; I remember Inspector Ford calling Wardsman Gunn into the female ward and reading over my statement in his presence, and was signed by him in my presence ; I produce the statement made by me, and signed by Gunn as well as myself ; I am Exhibit M. aware that the blankets produced which were used by deceased have been washed since his death ; I generally get up between 1 and half-past 2 in the morning to attend to patients who require it ; the teeth marks or scratches were a little above the wrist, and not up to the elbow ; Sergeant Fagan has never been a nuisance at the hospital, and I never said so, nor did I ever say that I recollect that any of the police were a nuisance to me ; I produce a bed-quilt which I brought from the hospital, a blue and white, and the colour will not run when washed ; the Turkey-twill cover produced I brought from the hospital ; it is from off the locker ; some Turkey-twills will run when washed, and we have counterpanes with turkey-twill borders ; so far as I have seen of them since I have been in the hospital they have not run ; when they are washed once or twice they are not so liable to run as when first washed.

*To Mr. Kinna :* Turkey-twill is not likely to run, I think, if it is put in cold water ; the turkey-twill cover produced has been washed once only ; on the night of the 6th of August last I was up during the middle of the night attending to patients and I heard no disturbance in Power's ward, although the window of the male ward was up ; I did not call at the Molong lock-up on the 29th of July last ; the first time I spoke to Constable Hawkins was in Bank-street, Molong, when we spoke about Power ; Gunn had told me that when Hawkins came to see Power after his re-admission that he had just taken away the foot-warmer from Power's feet to refill it ; I never put a hand to Power when he was leaving the hospital to go to the lockup ; I was not rude and unkind to the man ; it is not a fact that he was only covered with one blanket, nor was he placed on the floor with only one blanket to cover him ; the man never bit the flesh out of his arms and spat it on the floor ; Power's blankets were used to help cover him because the blankets for the men's use were all in use, and I took the white blankets and counterpane off one of the beds in the female ward for Power. To

*To Dr. Browne*: On the 1st of August Power went for a walk on his own account from the hospital down the rocks about 200 yards, and I went after him; he walked up again fairly strongly; Dr. Browne put Power upon fluid diet on admission because he was suffering from dyspepsia; he was discharged, partly because chronic cases, according to the hospital rules, are not admissible; to the best of my belief, I made several applications, between the 29th of July and the 2nd of August, to the police to have him removed at Dr. Browne's order; I have no power whatever to refuse admission or to admit a patient; I do consider that his dirty habits were due to his mental condition; the mattress was being disinfected upon account of a typhoid patient having used it; the wardman was extra busy attending these sick men by day; I do not think he could have sat up all night in addition to his day duty; I generally take the night nursing; when the wardman is not on duty I do not consider it matters how far he is from the ward sleeping; in bad cases when there is room he has sometimes slept in the men's ward; the days were bright and sunny, and as I remained in the building all day I could not tell the actual temperature during the night; Doctor Browne ordered Gunn to sit up with Power on the night of the 7th of August.

*To the Commissioner*: I cannot say whether Constable Hawkins left the inquiry meeting at 3:30 p.m.; I can say positively that the Turkey-twill off the locker has been washed.

Taken and sworn at Molong the 1st day of }  
November, 1895, before,— }

ELEANORA LEAHY.

W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit. }

THE examination of *Isabella Hamey*, of Molong, in the Colony of New South Wales, taken on oath this 1st day of November, in the year of our Lord 1895, at Molong, in the colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question: And this deponent on oath states:—I am the wife of Eaton John Hamey; I know nothing about the man Power whilst at the hospital; I never saw him; I saw him at the Molong lockup on Sunday afternoon, in the lockup yard there; he made no complaint to me, only that he felt very ill; he made no complaint to me about his treatment in the lockup; he appeared to be very weak; my husband told me that Constable Hawkins had requested us to come and see the two poor men in the lockup; I believe one of those men was named Sykes; Sykes, in the presence of Power, said he (Power) was silly, and not to take any notice of him; I have used a good deal of Turkey-twill, and I have not found it run upon being washed.

*To Mr. Kinna*: I do not know whether inferior quality of Turkey-twill will run; the Turkey-twill produced is of fair quality; it is not extra good.

*To the Commissioner*: It was through Mr. Hawkins asking my husband that we went to the lockup to see the old men; Hawkins was not present when my husband told me that he (Hawkins) had asked us to come to the lockup.

Taken and sworn at Molong, the 1st day of }  
November, 1895, before,— }

ISABELLA HAMEY.

W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit. }

THE examination of *Miriam Sophia Betts*, of Molong, in the Colony of New South Wales, taken on oath this 1st day of November, in the year of Our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question: And this deponent on oath states:—I am the wife of Henry Samuel Marsden Betts, of Molong, I was formerly matron of the Molong Hospital, and have certificates for nursing; the Turkey-twill produced has, I consider, been washed; it is not the best quality of Turkey-twill; it is a medium quality; the colour in that I consider has run.

Taken and sworn at Molong, the 1st day of }  
November, 1895, before,— }

MIRIAM S. BETTS.

W. M. MACFARLANE, Commissioner.

*Miriam Sophia Betts*, recalled on her former oath, states:—In the presence of Mrs. Hamey, Mrs. Hawkins, Miss Leahy, Inspector Ford, and Constable Hawkins, I washed portion of the Turkey-twill locker cover in hot water, with common soap, and the colour has run out of the twill into the water.

*To Inspector Ford*: If that water were thrown on the floor, it would not leave blood stains.

*To the Commissioner*: When the twill was newer the colour would run out stronger, and would be more likely to stain if thrown on the floor.

Taken and sworn at Molong, the 1st day of }  
November, 1895, before,— }

MIRIAM S. BETTS.

W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit.

THE examination of *Harold Elliot Browne*, of Molong, in the Colony of New South Wales, taken on oath this 1st day of November, in the year of our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question. And this deponent on oath states:— I am a legally qualified medical practitioner practising in Molong; I am Government Medical Officer and Surgeon to the Molong Hospital; I have been surgeon of the hospital two years ten months and one day; I was physician to the Hospital for Women and Children at Lewisham, near Sydney, and was Assistant Medical Superintendent to the St. Pancras Workhouse Infirmary, Highgate, London, and House Surgeon, University College Hospital, London; I am a Member of the Royal College of Surgeons, England, and Licentiate of the Royal College of Physicians, London, registered in the United Kingdom and in the Colony of New South Wales, and have been practising my profession between ten and eleven years; I knew a man named Edward Power; I first saw him on the 26th July last at the Molong Hospital; he was there as a patient, and had been brought there; I saw him on the occasion of my usual visit; he was in bed in the male ward; I examined him; after carefully examining him I found no evidence of organic disease, the man was weak and suffering from the effects of exposure and insufficient food; he had lost most of his teeth; was dyspeptic and very constipated; he told me that he had had a sunstroke several years ago, and acknowledged to having been a heavy drinker; I then placed him upon a diet set out in *Exhibit K*; the order for that diet is in my own handwriting; I ordered him stimulants—four ounces of Robertson's three-star whisky a day; Power was admitted to the hospital on my order as Government Medical Officer, and not through the police; I saw Power daily up to the day of his discharge on the 2nd August last, with two exceptions; four days after his admission, the man told me he felt much better and hungry (he had previously had no appetite); on July the 30th I therefore placed him upon the full diet of the hospital, which is also set out on *Exhibit K*, continuing the whisky, four ounces, and egg flip as extras; he continued to improve in health; on the 29th of July I requested the matron to take steps to secure his removal by the police, with a view to his removal to the asylum for old men; I considered at that time that his case was a fit one for one of those asylums; I considered then that in the course of forty-eight hours he would be able to take a trip, say, to Parramatta by rail; on the 1st of August last he was quite well enough to go to Sydney; I have seen men removed from here to Sydney in a similar state; his was a case for the removal to an Asylum for the Aged and Destitute as soon as I considered him fit to travel, as his was a chronic case, nothing organically wrong with him, and he was a man of disgusting habits, not due to the loss of physical control; I distinctly noticed the smell of urine about his bed, and I was asked by the matron and wardsman to remonstrate with him about his filthy habits; I was told that on one occasion he stood up and passed water into the fire, that on another occasion he had left his bed and passed a motion upon the floor; patients complained to me of the stench; it was with my instructions that he was handed over to the police with a view to his immediate removal to an asylum; I am not aware that it is usual for patients to remain in the hospital until an order for admission into an asylum is obtained; I have not had much experience in these matters; I next saw Power on the 5th of August at the lock-up at the request of Sergeant Fagan; I then found Power in an extremely exhausted condition; he was lying on the ground in the lock-up yard resting on his swag at the dividing fence between Sergeant Fagan's and the lock-up yard; I examined him carefully, and came to the conclusion that he was in far too critical a condition to be left longer at the lock-up; I explained to Sergeant Fagan who was present with Constable Hawkins, that I was in a considerable difficulty as the main ward at the hospital was already overfull, two extra beds having been placed in during the last few days, making in all six beds; the only place I could possibly put the man into was a detached wooden building, some 30 feet from the door, into the male ward, which we call the isolation or convalescent ward; Sergeant Fagan remarked that that would be better than the cell he had been in, as the cell was very damp; in the sergeant's office I wrote a letter to the matron, directing her to receive Power, giving her directions as to diet, ordering 1 oz. of whisky in hot milk upon his arrival at the institution, and directing her to prepare the isolation ward for his reception; I ordered his bed to be made up on the floor, as he had been sleeping on the floor in the cell, and for no other reason; I ordered plenty of blankets, and a hot water-can to be placed to his feet when he was in bed; I told Hawkins on that occasion that the matron would no doubt be vexed at his bringing Power back, but he must not mind that; to produce my letter to her, and it would smooth all difficulties; I have no recollection of saying to Hawkins that the matron would fly at him; I should like to have had a room with a fire in it to send Power to, but I had no other option but to send him there, and I made arrangements for making him as comfortable under the circumstances as possible; I saw him next at noon on the 6th of August; he was, to the best of my recollection, sitting in the male ward by the fire; I did not go in that day to the isolation ward; I ordered to the matron that he was to be seen the last thing at night, and the first thing the following morning; on the 6th, I asked the matron what kind of night he had; when I spoke to the man he never made a complaint about his treatment at the hospital; he never volunteered a remark; from the inquiries made of the matron, and observations of the patient, I judged it safe to leave him on the night of the 6th without special attendance, which, I judged, would be leaving him for about six hours; I was loth to add to the work of the matron or wardsman, as the work was very arduous by day, and the matron was, by my orders, getting up at night and renewing the poultices and some of the fomentations for some of the patients in the male ward; there was not one patient in the male ward who could safely have been put into the isolation ward to make room for Power, and room could not have been made at that time in the ward; Young was the least dangerously ill of any of the patients in male ward; he was suffering from diffuse suppuration of the hand and much swelling of the arm; this suppuration was due to blood poisoning following a wound from something unclean; he had been in the Orange Hospital, and discharged himself after operation, and applied to me for admission into the Molong Hospital, where I operated upon him again; I feel sure he would have run the risk of losing his whole hand if he had been placed in the isolation ward for the night; he was very weak, and his case caused me some anxiety; the days were clear warm sunny

sunny days but the nights were bright and frosty; I again saw Power at 11:30 a.m. on the 7th of August; he was sitting in a deck chair propped up with pillows in a warm sunny corner outside the entrance to the male ward; I was informed that he had been placed there because it was so warm and bright; the matron told me he had injured his wrists during the night, that the wardman had told her there had been a little bleeding from the wounds; I saw his wrists were bound up; the wardman removed the dressings by my orders, and showed me the wounds which were upon both wrists of trifling nature and extent; they appeared to have been caused partly by scratches and partly by teeth; the wounds did not extend through the skin; having finished my examination, and approved of the dressings, I ordered the wardman to put the dressings on again; it is not likely that a man in his condition would bleed much from such wounds, as no vessel was injured; I dare say he could smear any surface with which his wrists came in contact with blood; he was in a weaker condition than the day before, but nothing very marked; I told the matron that he would probably die that night, as I considered he was sinking; I instructed the matron, as he might not die, to go to the President of the hospital with a view to securing special attendance for him, there being quite as much work in connection with other cases as she and Gunn could attend; if they could not get anyone Gunn was to remain up all night by Power; Gunn told me that he found Power that morning huddled in the corner with his clothes off the bed; if the man Power laid naked on the floor all night it would have accelerated his death, but if he were wrapped up in his blankets I do not think it would have done so; the marks on the wrists would do him no harm; on the occasion of his second admission I put him upon a diet as set out in *Exhibit L*, which diet is ordered in my own handwriting; I did not after the 7th of August again see Power; his death was reported to me in the usual way, and upon his death being reported to me I gave the certificate, of which *Exhibit H* is a duplicate; I can not say whether after Power's readmission I went into the isolation ward; I am satisfied that during this man's stay in the hospital that he was treated with great kindness; I have seen the wardman feeding him with a spoon; while under my care the man showed no suicidal tendencies; he was quiet and contented it seemed; cases of self-mutilation are not unknown in persons of unsound mind.

*To Inspector Ford:* Young's arm was swelled as far as the elbow; Wardman Gunn died some considerable time after Power's death; I saw no ill-treatment of other patients during the time Power was at the hospital by the matron; I did not speak offensively to Constable Hawkins in reference to Power's matter; I did not know that Inspector Ford was going to the hospital on the morning that I saw him at the hospital; to my knowledge there was no preparation made at the hospital for the reception of Mr. Ford on the occasion mentioned.

HAROLD BROWNE.

Taken and sworn at Molong, the 1st day of }  
November, 1895, before— }  
W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit. }

THE examination of *Eaton John Hamey*, of Molong, in the Colony of New South Wales, taken on oath this 2nd day of November, in the year of our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question. And this deponent on his former oath states:—I was present at the hospital inquiry respecting the death of Power; I was allowed to examine witness at the inquiry; Constable Hawkins was there part of the time; he put questions through me; Constable Hawkins left the inquiry about half-past three o'clock, I think; upon an application made by Sergeant Fagan, Constable Hawkins left the inquiry.

*To the Commissioner:* I cannot remember whether other witnesses put questions through me; possibly Price may have done so.

E. J. HAMEY.

Taken and sworn at Molong, the 2nd day of }  
November, 1895, before— }  
W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit. }

THE examination of *Andrew Parker*, of Molong, in the Colony of New South Wales, taken on oath this 2nd day of November, in the year of our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question. And this deponent on oath states:—I am a saddler; I am one of the Committee of the Molong Hospital; I saw the man Power at the Molong Hospital; I had a conversation with Power at the hospital while he was an inmate on the 30th of July last; I think Power was in the male ward at the time sitting in a chair close to the fire; I think there was only one patient in the ward besides Power at the time; the name I think of that patient was Ely; I asked Power how he felt and he said, "Pretty well"; I asked him if he had any complaint, or if he had been neglected in any way; he said, "Oh no, if I had not come here I would have been dead"; after I had a conversation with the Wardman Gunn; I went again to Power and asked if he was comfortable; I had to repeat the question twice before he answered, and he then said, "I am all right"; as far as I saw, I believe he was properly attended to; he did not seem to be neglected in any way.

To

*To Inspector Ford*: I was present at an investigation held by the hospital committee respecting the death of Power; I did not give evidence at that inquiry, as I did not think it necessary.

*To Dr. Browne*: Power struck me as a man of weak intellect; I was one of the persons holding the inquiry referred to as a committeeman; every facility was given to persons to ask questions at that inquiry; by a ruling of the President, Mr. E. J. Hamey acted as counsel for the public; the hospital officials, namely, Dr. Browne, the matron, and the wardman, readily answered any questions asked them; Constable Hawkins frequently interrupted the proceedings with interjections.

*To the Commissioner*: I don't think Constable Hawkins asked to be allowed to ask questions at the inquiry and was refused; I believe I objected to Constable Hawkins asking questions at the same time with Mr. Hamey; it had been previously arranged that all questions at the hospital inquiry were to be put through Mr. Hamey.

ANDREW PARKER.

Taken and sworn at Molong, the 2nd day }  
of November, 1895, before,— }

W. M. MACFARLANE, Commissioner.

New South Wales, }  
to wit. }

THE examination of *Michael Fagan*, of Molong, in the Colony of New South Wales, taken on oath this 2nd day of November, in the year of our Lord 1895, at Molong, in the Colony aforesaid, before the undersigned, one of Her Majesty's Justices of the Peace for the said Colony, who has been duly authorised in that behalf to make inquiry into certain charges recently made by Eaton John Hamey, of Molong, against the officials of the hospital at Molong, respecting the case of a man named Edward Power, who died in that hospital on the 7th August last, to the effect that Power did not receive the attention due to him, and that his death was hastened by reason of the neglect of such officials, and generally into all the circumstances surrounding the case in question. And this deponent on his former oath states: Constable Hawkins never made any official report to me either in writing or verbally of the death of Power; on the 6th of August I had directed him to go to the hospital to see what the matron wanted, and when he returned I asked him what she wanted, and Hawkins said Power has bitten his arm; after Power's death I had a conversation with the doctor, and I was quite satisfied then, and I am quite satisfied now, that no foul play had taken place; I did not consider, in my position as senior officer of police on the station, that there was any necessity for an inquest being held; I am satisfied that Power would be better off in the isolation ward at the hospital than he would have been in the cell at the lockup; I would sooner be there myself; I am giving this as my opinion; the lockup cell is very cold in winter, and slightly damp; the isolation ward is not cold and damp; I did not see the certificate of death given by Dr. Browne in the case of Power.

*To Inspector Ford*: I do not consider it my duty to interfere in cases of death at the hospital where a legally qualified medical practitioner is engaged, unless the matter is brought under my notice by the hospital officials; if it had been reported that Power's death had been occasioned by the neglect of the doctor, the matron, or wardman, I would have at once taken steps in the matter; I believe it was the 6th of August or the 7th when the matron called to see me; when the Reverend Father Hatley saw Power on the 5th of August, he told me, I believe, that Power answered all his questions in a rational manner; it is the duty of any subordinate to report in writing to the officer in charge of police any suspicious circumstances coming under his notice; as far as I remember, the constable did not report to me verbally that Power had died in the hospital.

*To Mr. Kinna*: Ever since I have been in the Police Force I have been very particular in reporting any deaths of a suspicious circumstance to the Coroner.

*To Dr. Browne*: When I came to see you on the 5th of August about Power you expressed surprise that he was still at the lockup, and said you thought he was in Parramatta by then.

Taken and sworn at Molong, the 2nd day }  
of November, 1895, before— }

M. FAGAN.

W. M. MACFARLANE, Commissioner.

#### EXHIBIT "A."

Molong, 14 September, 1895.

*Eaton John Hamey* states:—I made a complaint against the hospital with reference to the death of Power; since my complaint, an investigation has been made at the hospital, and I am of opinion, with reference to the death of Power, that the evidence given was conflicting, but that the weight of evidence was that Power had been treated properly, so far as circumstances admitted; I have been a resident of Molong for nine years; I do not belong to the hospital committee; I have visited the hospital on three or four occasions lately; during those visits I have seen nothing incorrect; Constable Hawkins made a complaint that Power had not been properly treated while in the hospital; from what I have seen and what came out in the evidence, I have reason to believe that there was some truth in Constable Hawkins' statement; Constable Hawkins did say that the matron refused to receive him (twice); I have seen the matron on two or three occasions since she has been here; during that time no complaints were made to me; I did not ask for an inquest to be held on Power's death; I had a conversation with Power in the court-house enclosure; I cannot say if the deceased Power was properly treated at the hospital or not; my wife stated, when leaving the court-house yard, she did not think Power would live long.

E. J. HAMEY.

#### EXHIBIT "B."

THE DEATH OF POWER.—A VERY SERIOUS CHARGE.—INQUIRY AT THE MOLONG HOSPITAL.—THE CHARGE WITHDRAWN.—OFFICERS FULLY EXONERATED.—THE ADDRESSES.

OWING, as we stated in our last issue, to the space at our command having been utilised by the evidence taken at the inquiry into a charge of negligence on the part of the officers of the Molong Hospital, through which the death of a man named Power was alleged to have been hastened, we were unable to give the speeches of the three gentlemen who addressed the Court after the whole of the evidence had been heard. In accordance with promise, we now give below the addresses delivered by Mr. E. J. Hamey, Dr. Browne, and Mr. Chas. Stockwell on that occasion.

Mr.

Mr. E. J. Hamey (who lodged the charge) said the position he occupied was not a nice one, but he had brought that inquiry about, not with any desire to injure the hospital, but simply to prove the truth or otherwise of certain reports which had been freely circulated about town. He did not think any of the committee would regret the investigation, for it would be the means of clearing away a suspicion which existed for weeks. He did not state in evidence that he had heard complaints of neglect towards Power from other sources than those already mentioned, but he had heard them. The affair was common talk. Even the children at school talked about it, and hearing that the matter had been mentioned at the nuns' school he went to the convent to interview the Sisters regarding it. Only one of the Sisters was present; the other was away attending to school duties. The lady he saw assured him that she did not think the other Sister mentioned anything about the matter in school to the children. It was probably through the children talking about it that the parents became aware of the affair, and this very likely would account for it spreading so much. However, from the reports he had heard about town, he thought there was a *prima facie* case, and he determined to ask the committee to hold an investigation. If the committee had shirked this inquiry, the public would have had reason to believe that there was something in the report that the man Power had been neglected. Until hearing the evidence taken that day he had every reason to believe that the man did not receive the treatment he should have had. He was told that there was a spare bed in the male ward when Power was taken back the second time.

Dr. Browne: You were told by Mr. Read in plain black and white that there was not.

Mr. Hamey: I had reason to believe that there was.

Dr. Browne: In other words, then, you say that Mr. Read is a liar?

Mr. Hamey (continuing) said he did not wish to convey any such thing. He also heard on the best authority that the man had tried to destroy himself.

Dr. Browne: You were told that was not true.

Mr. Hamey (continuing): Yes, he knew that; but when it was said that Power bit pieces out of his wrists, a man could draw his own conclusions as to what deceased's intentions were. He thought it peculiar, if true, that a sick man should be allowed to roll about the floor and suffer exposure, especially in such frosty weather as they experienced about the time Power was in the hospital.

Dr. Browne: You have no evidence that there was a frost the morning deceased was found out of his bed.

Mr. Hamey: They knew it was very cold.

Dr. Browne: You have brought nothing forward to show that it was. I remember some very nice warm days just at the time you speak of.

Mr. Hamey (continuing): On the reports that there was a spare bed in the main ward when Power was put in an outbuilding, and that deceased had tried to destroy himself, he felt that he was justified in asking for an investigation. He admitted that the evidence called by him in substantiation of the charge was conflicting. The evidence given in favour of the institution was the far more weightier of the two, and he therefore freely admitted that he had failed to substantiate his charge right through.

The President: You should never have made it.

Mr. Hamey: I consider I was justified in the face of the reports I heard.

The President: Nobody but Hawkins circulated them.

Mr. Hamey (continuing) said he had heard so much from different people that he fully believed the deceased had been ill-treated; but he did not think so now. There was no doubt the investigation they had held would benefit the institution.

The President: I can't see where the benefit comes in.

Mr. Hamey (continuing) said he was satisfied Power received every attention, and the officers had done the best they could under the circumstances; if he were permitted, he would suggest that a small stove be placed in the isolated ward for use during cold weather.

Mr. A. Parker: Put down a pound and we'll purchase it.

Mr. Hamey: You don't expect me to put it there, do you?

Mr. A. Parker: Well, you don't expect us to put our hands into our pockets to buy it—especially after losing a whole day here.

Mr. Hamey: I've lost the day, too.

Dr. Browne: But it's us who have had to suffer.

Mr. Hamey: So have I.

The President: You should have been prepared to prove the charge before you made it, and not brought us here to-day for nothing.

Mr. Hamey: I admit I did not prove my charge.

The President: Do you withdraw it, then?

Mr. Hamey (continuing) said he supposed it was as good as withdrawn, as it wasn't proved. However, he withdrew it, and desired to fully exonerate the officers of the institution from all blame, and to state again that he believed Power was treated as well as the hospital authorities could treat him. He again expressed the belief that he was justified in making the charge.

Dr. Browne: I don't think you were.

Mr. Hamey: It's a matter of opinion, then, Doctor.

The President: Your action, caused through a meddlesome policeman, will probably do an injury to the poor travelling sick people.

Mr. Hamey expressed the belief, and hoped, that it would not, and then resumed his seat.

Mr. A. Parker: Hawkins and a few others have made a common catspaw of you.

Dr. Browne said that perhaps after a few weeks time, when he had seen the irreparable harm he had done the institution, no one would be more sorry of this charge having been laid than Mr. Hamey, for, as the evidence had shown, the accusation was as unfounded as it was cruel. He was sorry beyond mention for the sake of the hospital that ever anything should have been said of the affair, for there was really nothing in it from beginning to end but annoyance to the committee and officers, and danger to the institution. He ventured to say that no business man, no man, or men, connected with the management of any company or public concern came in for more censure and abuse than those connected with the control and conduct of a philanthropic institution. Everywhere it was alike. Mischief-making, unprincipled people took advantage of any tittle-tattle to pick holes in the work of men who had no earthly end to serve as far as they were personally concerned, but who were working in the interests of

suffering

suffering humanity. Not a word was mentioned, though, of cases successfully treated in such institutions. As far as he was concerned he had always done his best for the patients, and in cases where he had any doubt at all as to the cause of death he always advised the holding of an inquiry. No matter how much neglect was shown on the part of private people nothing scarcely was said. Almost daily cases occurred where the death of some one was caused through carelessness or malpractice, yet no notice was taken of them. Only last week there were three deaths in the Cudal district through child-birth; but there was no one to take up the matter and advocate the registration of midwives. There was no Mr. Hamey to draw attention to things of this kind. The deceased man Power had received every comfort and attention during the time he was in the hospital, yet after receiving this he was taken to the lockup, put in a cold cell, and given bread and water. There was no wonder he grew worse. If the lockup-keeper had sent for him (the Government Medical Officer) he could have ordered him (the deceased) the same dainties that he had been getting at the hospital; but he was not sent for until the man was completely prostrated. As for the isolated ward, he maintained it was a good building—especially for a man, such as deceased, who had camped out all the winter under no shelter, and with only a couple of blankets to cover him. The nursing staff of the institution was a good and efficient one. He pointed out that the hospital had everything to lose by neglecting a patient, and everything to gain by giving him or her every possible attention and good treatment. They always endeavoured to restore a patient's health as quickly as possible. Those who were sick liked to get right quickly, and the expenses of the institution were lessened the sooner the patients got well. He considered it was a wrong thing to lodge the charge after the questions Mr. Hamey had asked had been so explicitly answered by the Secretary. If little or no notice had been taken of the reports in circulation, the affair would simply have been a nine days' wonder, and nothing more would have been heard of it. As it was, he had mentioned the matter to several people in town, and nine out of ten to whom he had spoken did not know what he meant. It was just those whom Hawkins mentioned it to that knew anything at all regarding the case. He was sorry Mr. Hamey took up the case on the authority of such an unreliable man, for he had dealt a blow to the institution from which he (the speaker) felt that it would not recover. This was the second time that such a charge had been preferred against the hospital, and as it had not fully recovered from the first, he felt that the second trouble would be too great for it to withstand. Why Mr. Hamey should concern himself so suddenly in the management of the hospital he did not know. He had never seen him display any interest in the institution before, either by attending its annual meetings or desiring to become a committee-man. His conduct now was, therefore, all the more extraordinary. As far as he was personally concerned, the charge was a blow which he would not overlook, let alone forget. He was only sorry to find that there were people in this town who appeared despicable enough to delight in the discovery of a puddle of dirty water, and then wade in it until they made it worse.

Mr. C. Stockwell (President) said no one was more pleased than himself at the conclusion arrived at by the holding of that inquiry. If anyone deserved censure over the matter it was Constable Hawkins, and when the committee met again he would see if he could be censured, for his conduct in this affair was most reprehensible. He regretted that Mr. Hamey should have lent himself to such a man, and allowed himself to take up the matter on his behalf. There was no doubt whatever that it was Constable Hawkins who spread the news about. No one else outside knew of what had taken place as far as Power was concerned after he entered the institution, and therefore who was there to circulate the malicious and lying reports that had been made but Hawkins? There was no one else. If one went outside the circle that Hawkins moved in he would find no one that knew anything about the matter. He (Constable Hawkins) had evidently gone from street corner to street corner to spread the scandal which he seemed to delight so much in. No doubt Constable Hawkins felt proud of such a thing, but no person who had a heart for the sick and helpless would go about endeavouring to damn the institution which afforded them every comfort in their afflictions. He was pleased Mr. Hamey was satisfied with the result of the inquiry, and he hoped that in future he would keep clear of men like Mr. Hawkins, and before making a similar charge again he trusted he (Mr. Hamey) would first see that he had some reliable foundation on which to base his accusations.

Mr. Hamey here admitted that he had made a mistake in lodging the charge, and expressed regret that the matter had gone so far; but the way things were put to him, he felt, before the inquiry was held, that he was justified in taking the course he had pursued.

The President thanked the Committee for their attendance, and the proceedings terminated.

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EXHIBIT "C."

Molong, 29 October.

THIS is to certify that Mrs. Couch has been under my care for some weeks past, suffering from a serious and painful internal complaint. She is very weak, and quite unable to leave her house. Any excitement or worry would have a most prejudicial effect on her.

HAROLD BROWNE, M.R.C.S., Eng.

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EXHIBIT "D."

Molong, 14 October, 1895.

MRS. GRACE COUCH states:—I am the wife of W. H. Couch, Esq., J.P.; I have not the least complaint against the hospital, matron, warder, or Dr. Browne, *re* the death of Power; I know nothing at all about it, but my little boy Willie, aged 14 years, told me a man died in the hospital, and that he was found dead on the floor, and had bitten pieces out of his arm; I had a conversation with Mr. Hamey, and asked him if he had heard about the death of a man in the hospital, and he said "No."

G. COUCH.

Witness—W. H. COUCH, J.P.

## EXHIBIT "E."

*Thomas Hawkins*, Police Constable, stationed at Molong, states:—I remember Power being in the hospital; the matron came down to the lockup on Friday, in the absence of Sergeant Fagan and Constable Justillius, and stated that there was a man in the hospital mad and wanted him arrested; I met the matron in the street on Monday, the 29th July; I told her that it was impossible for me to come up and take the man in charge as Sergeant Fagan was away in Bathurst, also Justillius; she said that it was a case for the lockup and not the hospital; I told her that it would be attended to as soon as the sergeant returned; I then called on Dr. Browne and told him about the sergeant being away, and also about the matron coming to the lockup; the doctor passed a remark about her coming to the lockup, as she had no business to go there; on Friday, the 2nd August, from information received from the sergeant I proceeded to the hospital; I came into the ward and spoke to two patients to test their sanity, not knowing which one was mad; I was told that he was outside; from the appearance of the man I came to the conclusion that he was not mad; I told the matron that it was illegal for me to arrest him in the institution—that she must put him outside the grounds; she done so and I arrested him; I took him to the lockup; he walked down very feebly; I believe that day they were taken before the Court before Mr. Chippendall; they were remanded awaiting pass from Sydney; they were remanded to Monday; on Sunday Power showed signs of weakness and could not take his rations; the ration consisted of bread and water for breakfast, bread and meat for dinner, tea same as breakfast; I put him in a large cell, barred windows; the frosts were very heavy; I gave them all the blankets, also a candle in case it should be wanted; my bedroom was close by, so that I could hear them knock; I visited twice during the evening and covered him when I found the blankets off him; the man was cleanly in his habits in the cell; I took Power to the hospital on Monday, the 5th August, by Dr. Browne's orders; with the assistance of a man named Price, and Mr. Millgate's buggy, we brought Power to the hospital with his swag; he protested, but I brought him; when we arrived at the side gate to the institution the matron was in the garden; she asked, "Who have you there? It is that old Power back again—we cannot take him in—there is no room for him"; she repeated it twice; I said, "You must take him in as it is the doctor's orders"; I said, "The doctor has ordered him whiskey and milk, but bring the whiskey without the milk, I do not think that he could take the milk as he has just had beef tea;" I came into the institution, and the matron gave me something in a glass; I took it to Power, who was still sitting in the buggy at the side gate: I offered it to Power to drink; he refused; I said, "Drink it, old man, it will do you good"; then Price advised him, and he took it; I helped Power out of the buggy, and placed one arm around him after I was shown the place to put him, on the right-hand side of the garden; there was no furniture but a chair-bedstead, and box with a piece of Turkey-twill around it, acting as a small cupboard; I left Power sitting on the chair bedstead; I said, "Cheer up, old man, and in a day or two you will be able to travel"; on Wednesday, the 7th, I came up to the hospital about 2 o'clock p.m. from something I heard; I had seen the matron in the yard at the police station just before dinner; I came up here and went to the side house spoken of; Power was lying on the floor on a mattress; a bedstead was standing against the wall; there were five distinct places where blood had been lying, and wiped up with a dry cloth; I spoke to Power, but he seemed to be unconscious; I looked at his wrists, and both wrists were bandaged up; I asked the warder who bandaged it; he said, "I did"; I said, "Has the doctor been here?" he said, "Yes"; I asked if the doctor had unbandaged it; he said, "Yes"; I pulled up the quilt that was covering Power, and found only two old blankets the property of Power, and sheet belonging to the hospital; he was very cold; I felt his feet and legs; when I brought Power up first the matron said that he would have to use his own blankets; they were so dirty that I would not admit them into the police cell, but kept them in the stable; I said to the wardsman, whom I believe is named Gunn, "Do you call this proper treatment for a man? Do you not consider this inhuman—not even a glass or a pot to drink out of?" He said, "I must admit, sir, it is not"; I left, and sent the priest up; I met Father Hanley coming home near Charter's; I sent him up; the wardsman said, "I asked him what was the matter with his wrists"; he said, "Yesterday afternoon he became light-headed and restless; he was very restless all the afternoon, and during the night he must have got out of his bed, which was on the floor, and bit his wrists, which caused the blood about the room"; I pointed to a place near the box and said, "Look at the blood all down there"; he said, "I do not think that is all blood"; I said, "Yes it is"; he said it is the dye out of that stuff there" (meaning the covering of box); I said, "I believe that is Turkey-twill, and the colour will not move."

*Cross-examined by Mr. Hamey*: When I brought Power the matron did not want to receive him, there being no room; if I should have been the man I would not have come in, as the matron received him very unkindly; I did not consider the out-building a fit and proper place to put a dying man in; it has only the iron over head; there was nothing to protect Power from water dropping off the iron; I believe that water would freeze in the building; I do not consider that the covering that Power had was sufficient to keep him warm; they were very old blankets, and very light; the blood-stains all about the floor were as if he had crawled out of bed; the covering on box was not wet; I consider from appearances that the man was neglected.

*Cross-examined by Dr. Browne*: I believe that I was first sent for to take Power on the 29th July; I refused, owing to the absence of my superior officers, and it being illegal to arrest, from a public institution, similar cases; the arrest took place on Friday; I did not know that he would be put outside of the gate; I consider that he was not fit to be turned out; he was seen by Mr. Chippendall; he answered all questions put to him; he was worse on the Saturday and Sunday; I reported to the sergeant as to his condition; he was out in the open air on Sunday; it is usual to let spiritual advisers in to see prisoners; he was lying on the ground when the Government Medical Officer visited him; the Government Medical Officer stated that there was no bed vacant in the male ward—that he would have to be put in an out-building; the sergeant remarked that the cell was damp; I believe that you told the sergeant that the building was a wooden one; the matron definitely refused to receive Power, but admitted him upon my explaining that I was the bearer of a note from the medical officer; he was given something on arrival; I knew that whiskey was ordered; I have no reason to suppose that it was not whiskey; I saw the man placed in the ward; I did not see him put to bed; he could only walk with assistance; he was not dirty in his habits at the lockup; he was worse when I returned him to the hospital than when I took him from there four days before; the cell was too cold to be sent to; I would be prepared to swear that the covering over him was not sufficient, and that the wardsman had made statements to me; to the best of my belief it was blood on

the

the floor; I do not think that the bed on the floor amounted to neglect; his bed was made up on the wooden floor in the cell; the man was cold when I saw him; I would not expect a dying man to feel warm; the wardman did not tell me that he was dying; I did not go into the male ward; he was in an extremely exhausted condition when seen by the doctor at the lock-up, on the 5th; I reported the state in which I found Power to my superior officer verbally; he gave me no instructions; I spoke to Messrs. Cady and B. Bowler; I did not visit Mr. Kinna at his office, but met him in the street; I asked him if he was a member of the committee; he refused to receive a complaint; I may have spoken about this in Mr. Holland's shop; I have not said anything about the hospital; I consider that the wardman treated Power in a kind manner; I know nothing from my own knowledge as to his treatment.

*Cross-examined by Hamey:* I cannot say how far he carried his swag, but I believe that I carried it the better half of distance; the wardman stated that the stains on the floor were blood, and caused by Power.

*Cross-examined by Betts:* The man was remanded from day to day awaiting pass from Sydney.

*Cross-examined by A. Parker:* I did not state that it was the dampness of the cell that hastened the death of Power, but I might have said the coldness.

*Cross-examined by Hamey:* When Power came back the matron said that he would have his own blankets.

THOMAS HAWKINS,  
Constable.

EXHIBIT "F."

Molong, 16 September, 1895.

*The Rev. Father Hanley states:* On the 5th August I received a message from the barracks to come and attend a man that was dying, and I attended him as discharging my duty, and again, on the 7th August, at the hospital; I did not ask him anything about the hospital, neither did he make any statement about the hospital; I have nothing to complain about the management of the hospital; the matron was always civil, and assisted me in carrying out my duties; I did not authorise my name to be mentioned, and do not want to be mixed up in it.

MICHAEL HANLEY.

EXHIBIT "G."

CERTIFICATE of a Medical Practitioner on the within application, for the information of the Department of Charitable Institutions.

2 August, 1895.

I CERTIFY that Edward Power, who is able to undertake a journey from Molong to the Government Asylum for Infirm and Destitute, is suffering from debility, and that he is a fit subject for admission into the Asylum on the following ground:—

1. He is physically incapable of earning a livelihood at present.
2. He states that he is destitute, and has no friends able or willing to support him outside an Institution.
3. His case is not one which should properly be treated in a local general hospital.

Remarks.—Mentally incapable; dirty in habits, and likely to wander away unless watched. Physically, no reason why he should not travel to Sydney.

HENRY BROWNE, M.R.C.S., E.,  
Medical Officer.

Application made by H. H. CHIPPENDALL, J.P.

Admission Order and Pass to be sent to H. H. CHIPPENDALL, J.P.

GOVERNMENT CHARITABLE INSTITUTIONS OF NEW SOUTH WALES.

APPLICATION FOR ADMISSION INTO AN ASYLUM FOR INFIRM AND DESTITUTE.

*Information to be supplied by Applicant.*

- |   |     |  |
|---|-----|--|
| 1. Name, birth-place, and religion  | ... | Edward Power; Ireland; Roman Catholic.     |
| 2. Age, and whether married or single   | ... | 61 years; single.                          |
| 3. Circumstances of entering hospital   | ... | Not in hospital; now in custody of police. |
| 4. Period of residence in New South Wales   | ... | Forty years.                               |
| 5. Former occupation  | ... | Labourer.                                  |
| 6. Does applicant desire admission into an asylum?  | ... | Yes.                                       |
| 7. Names and addresses of relatives in full (relationship to be stated)...  | ... | No relations in the Colony or elsewhere.   |
| 8. Has applicant any relatives or friends in any of the Colonies willing and able to support him if he is sent to them or admitted into an asylum; if so, give their names and full addresses?... | ... | No.  |
| 9. Has applicant ever been an inmate of any charitable institution in this or any other Colony; if so, for what period and where?...  | ... | No.  |
| 10. Is he an Army or Navy pensioner; or has he any other means of support?  | ... | No.  |
| 11. Amount of money in possession of applicant, or in the custody of friends  | ... | None.                                      |
| 12. Has applicant any legal claim to, or is applicant likely to become entitled to any land, investment, or other property?   | ... | None.                                      |

2nd August, 1895.

EDWARD POWER.

I CERTIFY that I have carefully questioned Edward Power with reference to the information supplied in connection with the foregoing application; and I beg to recommend that he be admitted into a Charitable Institution.

H. H. CHIPPENDALL, J.P.

The Director of Government Asylums for the Infirm and Destitute, 289, Cleveland-street, Sydney.

EXHIBIT

## EXHIBIT "H."

Inquiry *re* death of Power.*Medical Certificate of the Cause of Death.*

I HEREBY certify that I attended Edward Power during the last illness; that such person's age was stated to be 61 years; that I last saw him on the 7th day of August, 1895; that he died on the 8th day of August, 1895, at Molong Hospital, and that to the best of my knowledge and belief the cause of his death was as hereunder written.

Cause of Death.				Duration of Disease in Years, Months, Days, or Hours.
Primary ...	...	...	...	Chronic starvation.
Secondary...	...	...	...	Exhaustion. (?)

Witness my hand, this 8th day of August, 1895.

HAROLD BROWNE,  
M.R.C.S., Eng., Molong.

## EXHIBIT "I."

*Branaxton Gunn*, wardsman, Molong, states:—

*Examined by Mr. Hamey*: I put Power to bed in the outside ward by the matron's orders; I made him a clean bed on the floor and covered him with two hospital blankets, his own blankets, a pair sheets, a pair pillow slip, and a quilt; I saw Power at 10 o'clock on Tuesday night, the 6th August; he had a vessel containing drink for the night left within his reach; I saw him again at 5 o'clock on Wednesday morning, the 7th; I found him out of bed; his wrists were abraded by his teeth; I do not think that he tried to destroy himself; he was in a melancholy condition; the floor was smeared with blood; the floor was soiled with blood in five or six places; the places were merely marks; there were no veins or arteries severed, I dressed his wrists with carbolic; I was present when Hawkins came on the 7th; Hawkins asked if they were blood-stains on the floor and caused by Power; I answered, "Yes"; Hawkins did not ask me if I thought that was proper treatment; Hawkins said, "God help us when we are poor"; there is no stove or fire-place in the room; the matron did not give me any instructions to visit Power during the night of Tuesday; there were six beds, all occupied, in the male ward at the time; the nights were cold; I consider that Power had sufficient clothing to keep him warm.

*Examined by Dr. Browne*: I know you ordered the bed to be made on the floor; the bed was a new straw bed, and two sacks were laid under it with a view of keeping out a draught; the quilt was a double one, and clean; he was asleep at 10 o'clock on Tuesday night; he had nourishment; he had beef-tea at 8 o'clock, and whiskey and water at 9:30; he had a hot water-can to his feet, and bag over the foot of the bed; I do not think that the wounds were serious; the stains on the floor were not in drops; when I put him to bed in the morning I gave him whiskey and water; he was quite quiet; I will swear that there were not pieces of flesh on the floor; you saw him on the Tuesday morning; the diet is correct; he spent the chief part of the day in the ward; he made water into his trousers as he sat in the chair; he did not pass motion in his clothes; he had to be fed every three or four hours; on Monday night he had a quiet night; I think that he was weak-minded; passing water into his clothing is a sign of a weak mind; he did not know when he was doing it; he had smeared his motion about the floor, and his bed was wet; I washed it up; the turkey-twill on the locker was new; he had made water over it, and the stain had run on the floor; the matron saw him every three or four hours; the matron fully realised his serious condition, and told me that he would probably die that night; I got patients to help me look after him; the door was left open as it was very warm; I know that you had ordered him to sit out in the sun; I was sent down to Mr. Stockwell to see if one could be got to sit up with him, as you did not consider him safe to be left by himself; there was extra work for the usual staff; as no one could be got, I sat up with him to the end from 10 o'clock p.m.; he had every attention.

*Examined by President*: He seemed pleased to get back to the hospital.

*Examined by Dr. Browne*: He had stimulants frequently; I will swear that it was whiskey.

*Examined by A. Parker*: There were no large spots on the floor; he was in a dirty state when he came back to the hospital.

*Examined by Mr. Hamey*: I gave him the blanket when he was put to bed and left until he died; the hot water-can was put to his feet on admission, and while in bed was kept warm until death; the matron gave Hawkins the whiskey to give to Power in the trap; I remember Hawkins examining the clothing; Hawkins turned up the clothes and felt his feet and said they were cold; the can was not then at his feet as I had taken it away to be filled; the stains could not be traced now.

*Examined by C. Parker*: It is usual for a dying patients' feet to be cold so close to death.

B. GUNN.

Witness,—JOHN BLACK, J.P.,  
Molong, 6th September, 1895.

## EXHIBIT "J."

RULES, Regulations, and By-laws of the Molong Hospital.

*Rules and Regulations.*

I. The object of the Molong Hospital shall be to afford shelter, food, medical and surgical attendance, and medicine to the destitute sick of the district of Molong.

II. The affairs of the hospital shall be under the control of a president, two vice-presidents, treasurer, and committee of twelve subscribers, in addition to the clergymen of all denominations resident in the district (if subscribers), and the medical officers, who shall be members of the committee *ex officio*.

III. The treasurer and trustees shall be elected in accordance with the Act of Council, 11 Vic. No. 59, and, in the event of a vacancy occurring, at a special general meeting of subscribers. The president, vice-presidents, auditors, and committee shall be elected at the annual general meeting of subscribers to be held in the month of January in each year. In the event of an extraordinary vacancy occurring in the committee during the year, the committee shall have power to elect a subscriber, or one of their own number, to fill the vacancy for the unexpired portion of the year.

IV.

IV. The President shall preside at all general and other meetings in connection with the Institution. In his absence one of the Vice-Presidents shall perform his duties as chairman. Should neither of these officers be present the meeting shall elect its own chairman. The President, or his substitute, shall have a casting vote in addition to his own vote.

V. The Committee, of which five shall form a quorum, shall meet on the first Monday in each month, or oftener if circumstances require it, due notice of such meetings to be sent by the secretary.

VI. All annual subscribers of £1 or more shall be entitled to vote at all annual or special meetings of subscribers, and may recommend for admission to the hospital one patient each year for every pound subscribed, such recommendation to be subject to the by-laws bearing upon the admission of patients, and to the certificate of the medical officer for the month, that the state of health of the applicant warrants his admission to the institution. In recommending patients, subscribers will be guided by the following considerations:—

(a) The following cases are inadmissible:—Such as are, upon due examination, deemed incurable; chronic cases, such as inveterate ulcers of the legs, &c.; pregnant women, or persons suffering under mental derangement; persons having small pox, itch, or who are in a state of confirmed consumption, and those whose malady is traceable to their own indiscretion.

(b) Subscribers in giving recommendations are requested to act in conformity with the following Regulations:—

To ascertain that the person desirous of obtaining an order is without means.

That he is entitled by residence in the district to admission.

That no moribund (or dying) patient will be admitted unless the funeral expenses (in case of death) are guaranteed.

Persons who have been discharged from other hospitals as incurable cannot be received.

VII. A donation of £10 shall constitute a life membership of the Hospital, and entitles to all the privileges of an annual member of £1.

VIII. No alteration of the Rules and Regulations shall be made except at an annual or special general meeting of subscribers. Seven days' notice must be given, in writing, of the intention to move any alteration or amendment.

#### *Hospital By-laws.*

##### Appointment of Paid Officers.

The General Committee shall appoint all paid officers required for the proper working of the Institution.

##### Medical Staff.

The medical staff shall consist of one or more duly qualified medical practitioners, who shall have the power to admit patients on presentation of subscribers' tickets, after satisfying themselves that the case is a suitable one for admission.

The medical men connected with the hospital shall act as admitting officers.

Should either of the medical officers be called away for any length of time, he shall, before leaving, notify his intended absence to his colleague or colleagues, who shall in that case attend to his patients in the hospital.

In the event of an operation being necessary, or if the administration of anæsthetics is required, the attending medical officer shall notify the same to one of his colleagues, who, if possible, will be required to attend. In all such cases it is desirable that the attendance of two medical men should be secured if practicable.

The medical officers shall alternately, at each quarterly meeting, prepare and present to the Committee, a report respecting the state of the patients, the general condition of the hospital, and containing any suggestions which may present themselves for the better government of the Institution.

##### The Matron

Shall engage and discharge all the domestics of the Institution. She shall also have the power to suspend any nurse, reporting the same to the President. She shall appoint any nurse temporarily, with the sanction of the President. She shall be responsible that the nurses strictly carry out the directions of the medical officers relative to the treatment of patients. She shall visit each ward frequently, and take care that the wards and patients are in a proper state of order and cleanliness, as likewise the Institution generally.

She shall submit to the President such minor rules as she may deem necessary for the efficient discipline of all persons placed under her control. She will see that the nurse of the ward accompanies the medical officers and visiting committee in the course of their visits, and give whatever assistance and information is required by those officers.

She shall act as house stewardess, keeping an inventory, and taking proper care of all provisions and other property belonging to the Institution.

She shall see that the wards, passages, and staircases are thoroughly scrubbed out with soap and water, and afterwards well dried twice a week, and that the bed linen is changed once a week, or oftener if required, care being taken that the linen is well aired.

She shall take care that the wards are properly aired every day, in such a manner as may be directed by the medical officers. She shall not suffer any dirt or rags, or remnant of victuals to remain in the wards, or under the beds, or any clothes to hang, or dust to be thrown out of the windows. She shall see that the chambers, or close stool pans, are scalded every morning, and scoured when necessary, and kept out of the wards during the day, except in case of necessity.

She shall see that the wards are properly cleaned by 8 o'clock in the morning from October 1st to March 31st, and before 9 o'clock during the remaining period of the year, and that all foul clothes and dressings are removed from the wards by 10 o'clock every morning.

She shall see that the medicines and diet, as prescribed by the medical officers are punctually administered, and that all instruments are properly cleaned, and carefully put away after each operation.

She shall be attentive to the state and symptoms of the patients, especially when they appear urgent or uncommon, in order that she may be able to report to the medical officer under whose charge the patient may be.

She

She shall pay particular attention to the bedding of the patients, especially when they labour under contagious diseases. The mattress shall be exposed to the open air; in all cases the blankets, bed linen, and coverlets shall be properly washed before they are again used, nor shall they be again used in the hospital, under any circumstances, without the sanction of the Medical Officer being first obtained.

On the admission of a patient whose condition is considered critical, she shall send notice to the Minister of the denomination to which the patient belongs.

#### Duties of Wardsman.

He shall be appointed by the Committee and be under the control of the Medical Officers and Matron.

To bath, shave, and assist with the male patients.

To clean male wards, tent, lavatory, bath-room, and verandahs.

Attend to and keep mortuary in order.

Help clean windows and empty the buckets from the W.C.s daily, if necessary. Sweep the hall.

Attend to garden and outdoor premises.

Bring in wood and coal for kitchen and ward use, and assist the Matron in keeping the rules of the hospital.

Must be civil and kind to the patients and neat and tidy in his appearance at work.

To sit up at night with patients when necessary, and must be sober.

#### Control of Patients.

There shall be special by-laws with reference to the conduct of patients, which shall be hung up in the wards, and must be enforced by the Matron and Nurses, and may be altered from time to time, as may be desirable. The Matron shall report to the Visiting Committee any cases of insubordination or misconduct, which Committee shall have power to discharge any patient so complained of, reporting the same to the General Committee.

#### Visiting Committee.

At each quarterly meeting of the General Committee, three of its members shall be elected as a Visiting Committee for the ensuing quarter. The duties of the Visiting Committee shall be:—To visit the hospital once each week, or oftener if occasion requires; to visit the patients, and have regard to the state of cleanliness of the premises, and general order of the institution; to ascertain the comfort and well-being of the patients, and to inquire into any complaints which may arise, and if of sufficient importance, to report the same to the General Committee, always providing that such complaints must be made in writing. The Visiting Committee shall have the power to authorise expenditure for repairs, or any necessary purpose, to the extent of £5, reporting the same to the General Committee at its next meeting.

#### *Special By-laws for the conduct of Patients.*

Every patient will be required to take a bath, and submit to proper cleansing before entering the wards, unless it is apparent that his condition would render the process injurious to his health.

Patients able to do so, will be required to wash themselves in the lavatory belonging to their ward regularly every morning before breakfast, and in all other respects to pay strict attention to personal cleanliness.

On admission patients shall give up to the Matron any money, papers, clothing, or other property in their possession, for safe keeping during their stay in the hospital, receiving a record of the same if required.

Patients must submit to the regulations of the institution, and obey all lawful orders and requirements of the Medical Officer under whose charge they may be, the Matron, and the Nurses.

They shall abstain from quarrelling, loud talking, swearing, and making use of any indecent or improper language.

They shall not engage in card-playing, throwing dice, tossing, or any gambling or unlawful game, nor in any amusement calculated to disturb other patients.

No patient will be allowed to smoke or chew tobacco inside the wards, or outside if prohibited.

No patient will be permitted to go out of the hospital without the permission of the Medical Officer, under whose charge he may be; nor remain out at night; nor bring in any visitor; nor go into any room, ward, or outbuilding of the hospital, except the ward he or she is appointed to, unless by order or permission of the Matron.

No patient shall bring in, send for, or receive, any kind of provisions or liquors, except through the Matron.

Convalescent patients, pronounced by their medical attendant able to perform light work, will be expected to make themselves useful in any way the Matron may require.

Patients are forbidden to give, or offer, any gratuity to any of the servants of the institution.

Any reasonable complaint, regarding diet, attendance, want of comfort, conduct of Nurses or other patients, should be made as soon as possible after occurrence to one of the Medical Officers or the Matron, who will take the same down in writing, and report to the Visiting Committee for investigation. Complaints not made in conformity with the rule cannot be entertained.

All patients received into the hospital, if discovered to possess means, will be required to pay for their maintenance at the rate of £1 per week. Patients desirous of availing themselves of the advantages of the hospital in preference to lodgings can do so upon making necessary arrangements as to charges with Medical Officer and President. (Under the amended Hospitals' Act, the Treasurer is empowered to sue for the recovery of debts so incurred.)

Any patient wilfully infringing any of these rules will be liable to be expelled from the hospital, and will not be again eligible for admission.

#### Visitors.

All persons wishing to visit the institution may be admitted on Tuesday, Friday, and Sunday in each week, between the hours of 2 o'clock to 5 o'clock p.m. The friends of patients may be admitted on any day between the hours of 10 a.m. and 4 p.m., or in cases of danger at any hour day or night.

Ministers of religion, and other persons having written authority from any such Minister, shall have free access to any sick persons of their respective denominations, and any Minister may attend any patient at any time when requested by such patient.

The

The Medical Officer or Matron may refuse admission to any visitor for sufficient reason, which shall be reported to the Visiting Committee.

Visitors shall not offer any gratuity to any of the servants or patients, nor give to any patient any provisions, tobacco, or drink, or indulge in the same themselves whilst in the institution, but may leave anything they wish for an individual patient with the Matron.

Visitors are to be asked to sign the visitors' book before leaving, and to make any remarks therein they may wish, whether of a favourable character or otherwise, which will be submitted for consideration at the next Committee meeting. No verbal remarks or complaints will be attended to.

The by-laws under the head "Visitors," shall be separately printed, framed, and hung up in the entrance hall, or in some other conspicuous part of the building, where it may be seen and read by persons visiting the hospital.

Power to repeal, &c.

These by-laws may be repealed, altered, or amended, or any additional by-laws may be passed, at any General or Special Committee meeting, provided one week's notice in writing of any proposed repeal, alteration, or amendment, or additional by-laws, be given to the Secretary, who shall state the same in the circular notices for the next General or Special Committee meeting.

Standing Orders for the Conduct of Committee Meetings.—Days of Meeting.

The General Committee shall meet on the first Monday in every month at the hour of 8 p.m. Five shall form a quorum. If, at the time fixed for meeting, a sufficient number to form a quorum be not present, fifteen minutes' grace shall be allowed; when, if a quorum be not present, the Secretary shall adjourn the meeting for a week, and shall send out notices for the adjourned meeting; if a quorum be not then present, the meeting shall lapse, and the business shall stand over to the next General Committee meeting.

In all cases of adjournment for want of a quorum, the Secretary shall record the same in the minute-book, and enter the names of the members present.

The Secretary shall send written notices to the members of the Committee, at least two clear days before the day of meeting, in which notices he shall state shortly the business to be considered.

Order of Business.

The business at the monthly General Committee meetings shall be conducted in the following order:—

First.—The minutes of the previous meeting shall be read, and confirmed, if correct, and signed by the Chairman, no alteration or discussion to be allowed, except of wrong entry or inaccuracy.

Second.—The Visiting Committee's monthly report shall be received. Motions thereon may be made, discussed, and disposed of.

Third.—Correspondence to be read and discussed, if required, and orders made thereon.

Fourth.—1. Receiving reports from special or sub-committees. 2. From officers of the institution.

3. Hearing complaints.

Fifth.—Ordinary business.

Sixth.—Notices of motion to be called on in their turn as received by the Secretary, discussed, and disposed of.

Seventh.—Any other business which, by the rules and regulations, by-laws, or standing orders, can be properly brought before the Committee: Provided that in cases of emergency the standing orders may be suspended by a majority of not less than two-thirds of the members of the Committee present, with the view of entertaining any business out of its order, or which, by the standing orders, would not then be admissible; or the Committee may direct that any motion or business shall take precedence at any adjourned or future meeting. Meetings may be adjourned from day to day.

Conduct of Business.

First.—The Chairman shall conduct the business in accordance with the standing orders.

Second.—Any member of the Committee may rise to order, discussion allowed, and rule made by the chairman, which shall be binding, unless a motion be then made, and carried against the Chairman's ruling.

Third.—No member of Committee shall speak more than once on any question (except in explanation), except the mover, who shall then have the right of reply, provided that an amendment shall be treated as a separate question.

Fourth.—Only one amendment shall be discussed at one time; and upon the adoption of an amendment the original motion shall be rejected, and the amendment so carried shall be acted upon.

Fifth.—Every member, when rising to speak, shall address the chair.

Sixth.—The Chairman shall put all questions, and declare the result. Any member may call for a division, in which case the votes shall be recorded in the minute-book.

Seventh.—The Secretary shall enter in the minute-book the business transacted at each meeting.

Eighth.—Any motions, business, or debates may be adjourned to a later hour, or to another day.

Ninth.—No notice whatever shall be taken by the Chairman of any motion or amendment, unless it be seconded.

Tenth.—Notice of motion of any business to be brought before the Committee, not included in the "order of business," must be given to the Secretary in time to enable him to include it in the notices for the meeting, otherwise it cannot be entertained except under clause 7 in the order of business, or the proviso following.

Eleventh.—At special general meetings of Committee, no business shall be transacted except that for which the meeting has been called, or of which notice shall have been given.

Twelfth.—Sub-committees may regulate their own proceedings, but must not transact any other business than that they have been specially appointed for, or which may be afterwards referred to them. The mover of every sub-committee shall be entitled to take the chair at its meetings, if present, and to bring up the report of the sub-committee to the General Committee, and move its adoption, and speak to the same without notice.

Thirteenth.—These standing orders may be repealed, altered, or amended, at any General or Special Committee meeting, provided one week's notice, in writing, be given to the Secretary, who shall state the same in the notices for the next meeting.

EXHIBIT "K."  
MOLONG HOSPITAL.—Bed Card.

Number.	Name.	Age.	Residence.	Occupation.
.....	Edward Power .....	61	Traveller .....	Labourer.
Date of Admission.		Native Country.		Religion.
July 25, 1895.....		Ireland .....		Roman Catholic.
Time in Colony.		Disease.		Recommended by
.....		Debility, Starvation .....		Government Medical Officer.
Date.	Diet and Extras.		Treatment.	
July 30 .....	Full diet; whiskey, $\bar{s}$ iv; still egg flip .....		.....	
Date of Discharge or otherwise from Hospital :—Discharged, 2nd August, 1895.				

EXHIBIT "L."  
MOLONG HOSPITAL.—Bed Card.

Number.	Name.	Age.	Residence.	Occupation.
.....	Edward Power .....	61	Traveller .....	Labourer .....
Date of Admission.		Native Country.		Religion.
August 5, 1895 .....		Ireland .....		Roman Catholic.
Time in Colony.		Disease.		Recommended by
.....		Chronic Starvation ; Dyspepsia.....		Government Medical Officer.
Date.	Diet and Extras.		Treatment.	
August 5.....	Broth and beef-tea; whiskey, $\bar{s}$ iv. Tea—Eggs, milk and bread.		.....	
Date of Discharge or otherwise from Hospital :—Died, 7th August, 1895.				

EXHIBIT "M."  
Inquiry re Power.

Molong, 14 September, 1895.

Miss Leahy states Power had the two blankets and counterpane produced, besides two hospital blankets like the one produced. I pledge my word that I treated Power kindly when in the hospital, and he received all the nourishment and stimulants according to the doctor's instructions; he was also attended by a wardsman named Gunn.

ELEANORA LEAHY.

I have heard the statement read, and it is correct.—B. GUNN, Wardsman.

1895.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

## NEWCASTLE HOSPITAL DISPUTE.

(CORRESPONDENCE RESPECTING.)

*Ordered by the Legislative Assembly to be printed, 24 September, 1895.*

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 29th August, 1895, That there be laid upon the Table of this House,—

“Copies of all papers in connection with the Newcastle Hospital dispute.”

(Mr. Dick.)

Mr. J. F. Kerr to The Chief Secretary.

Sir,

44, Hunter-street, Newcastle, 11 February, 1895.

At a large and influential public meeting held at the Islington Reserve on the 10th instant for the purpose of taking into consideration the extraordinary manner that the committee for the Newcastle Hospital were elected here on Friday evening last, at which the following resolution was duly proposed, seconded, supported, and carried unanimously, namely—“That the Colonial Secretary’s attention be drawn to the extraordinary manner in which the committee of the Newcastle Hospital were elected on the 5th instant, and that this meeting is of the opinion that unless steps are instantly taken to investigate the matter serious damage will be done to the institution.”

I also enclose for your honorable perusal a copy of the *Newcastle Morning Herald* of the 9th instant that contains a true and faithful report of the proceedings that took place at the election in question; also a copy of to-day’s *Newcastle Herald* containing a faithful report of the public meeting held upon the Islington Reserve.

I have, &amp;c.,

JAMES F. KERR,

Hon. Secretary.

Ascertain whether the committee were legally and formally elected.—J.N.B., 12/2/95. Inquire from Hospital.—C.W., 12/2/95. The Secty. to the Newcastle Hospital, 15 Feby., 1895.

[Enclosures.]

From the *Newcastle Morning Herald and Miners’ Advocate*, 9th February, 1895.

THE HOSPITAL—A STORMY MEETING—ELECTION OF THE NEW COMMITTEE.

THE adjourned annual meeting of the subscribers to the Newcastle Hospital was held in the Lecture Hall of the School of Arts last evening. Mr. Clarence H. Hannell, the president, occupied the chair, and there were about 100 persons present.

THE PRESIDENT, in opening the meeting, explained that it was adjourned for the purpose of taking the ballot for the election of a committee.

MR. LEVEY said that before hearing the result of the ballot he wished to ask if the £33 given to the hospital as the result of the Friendly Societies’ demonstration had been given in the names of any persons. As a subscriber he had received a voting paper, and then to his surprise a second one reached him. The money had been paid in by the Friendly Societies as a free gift, and in no one’s name; and not being entitled to the second vote, he had not used it. If the money was placed in the names of any persons, it was a wrong proceeding.

THE CHAIRMAN stated that the cash-book was not in the room, and he could not say how the money was paid. At a later stage of the meeting, however, he stated that the money was not in the names of any person or persons.

Mr.

118—A

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Mr. W. LYNE thought that they should clear up the matter alluded to by Mr. Levey before hearing the result of the ballot. It appeared to be most irregular.

Mr. D. J. M'LEAN at this stage rose, and said that the scrutineers had discovered gross irregularities when opening the ballot, and before handing in their statement of the poll they wished to make an explanation. (Sensation.)

Mr. H. J. BROWN said that the point mentioned by Mr. Levey, who had received two ballot-papers, went to prove an irregularity somewhere, but the amended Act laid it down very strongly that the scrutineers' report would have to be given, and the committee declared elected. If irregularities were found, anyone could appeal to the Supreme Court, and have the election upset, but the meeting was not a revision committee, and could not prevent the election from being declared.

The CHAIRMAN, amid a good deal of interruption, said that his duty was to call for the result of the ballot from the scrutineers, and he would do so.

Mr. M'LEAN: We decline to hand in these statements showing the result of the poll until we give our explanation.

Mr. LYNE moved, seconded by Mr. LEVEY, "That the scrutineers be allowed to first give their explanation."

After a conversational discussion this was carried, and

Mr. M'LEAN said that he was glad of that chance of explaining matters, as he had never before seen, or even heard of, an election being conducted in such a loose and unsatisfactory manner as the present one for the election of a committee. (Applause and dissent.) People had voted who had no right to vote.

Mr. J. M. HYDE: "It's false."

Mr. M'LEAN appealed to the chair for protection, and after the president had called for order, and besought those present to conduct the meeting quietly and calmly, Mr. M'Lean continued. In their capacity of scrutineers, Mr. Hudson and himself had formed the opinion that they were elected by the subscribers to see that the election had been conducted in the proper way. (Applause.) As soon as they had commenced their duties they found that ballot-papers had been sent out to the people whose names were last year put down as subscribers by Dr. Cribb when that official gave a donation of £25. They called upon the secretary for an explanation, and asked him by whose authority he had sent out the papers, and he said that he first consulted the president, who told him to send voting papers to all persons whose names were on the list of subscribers for £1 since the last annual meeting, but not to send any to Dr. Cribb's nominees. The secretary, however, proved by the minute-book that he was instructed by the house committee to send out the papers to all, irrespective of whether they had or had not voted at the last annual meeting on the same subscription. The minute was initialled T.B., the initials of Mr. Brooks, the chairman, who with Messrs. M'Michael, Hyde, Graham, and Fenwick formed the house committee. The scrutineers then asked for the names of the nominees of Dr. Cribb, and found that the money was in the form of a donation by Dr. Cribb. They then called Dr. Cribb into the room, and feeling so disgusted to find, especially after the statements made at the last meeting, that Dr. Cribb's nominees had wrongfully voted last year, and the thing could not occur again, that they decided to fully investigate the matter. When asked about the affair, Dr. Cribb hummed and hawed, and said, "Yes, last year there was a reduction made in the salaries." After some questioning, the doctor said that he had placed twenty-four names down as subscribers for his £25, but he could not remember who they were. (Cries of "Oh, oh!") In fact, the medical superintendent said that he could not recollect one name, and if the meeting would believe that statement the scrutineers would not. After severely criticising the medical superintendent, the speaker explained that the scrutineers had at length examined some of the nominees, and they regretted to say that of the 33 votes given away by the doctor and matron last year, 18 of the persons had been unmanly or unwomanly enough to record their votes on this occasion, notwithstanding the protest made by the subscribers, and the alleged promise of the committee and Dr. Cribb that the thing would never occur again. The scrutineers had left out of their statement the votes so used, believing them to be illegal, but if the meeting desired it they could soon add them to the list.

Mr. J. M. HYDE, as one of the house committee, said that he had accused Mr. M'Lean of saying what was false, and he could prove it. The house committee found that the new Hospital Act provided that ballot-papers should be sent to all subscribers who had paid up between the commencement of the last annual meeting and that one. As Dr. Cribb paid his £25 in January, 1894, during the progress of the meeting, his nominees were entitled to vote, and if the committee had neglected to send out the ballot-papers to those people they would have had to stop some seventy others. He would now deal with the scrutineers. They were appointed by the subscribers to count the votes, but what had they done? They had grossly exceeded their duty by holding a kind of private inquiry, at which they examined nurses and officials. They had, in fact, forgotten their duty and usurped the functions of the committee.

Mr. THOMAS BROOKS repeated the statement made by Mr. Hyde, and argued that the house committee were compelled to keep within the four corners of the Act. He accused the scrutineers of holding a star chamber inquiry, and said that they had demanded the books of the institution, and that day they had examined the doctor and the nursing staff. He was surprised at a man like Mr. M'Lean doing a thing like that, but Mr. Hudson was, however, a one-sided man, and always had been.

Mr. HUDSON: You're a liar.

Mr. BROOKS: You're another. (Interruption.)

Mr. H. J. BROWN said that it was a pity that a charitable institution like the hospital could not be conducted in a charitable manner. The dispute before them was a simple one, because both sides were plainly in the wrong. The new Hospital Act, like many modern measures, was very badly drawn up, but it certainly gave people whose names were on the subscribers' list from January, 1894, the right to vote at the present election. The house committee, however, had nothing to do with the ballot-papers, and should have left them alone, simply because they were all candidates, and the Act provided that the secretary should send out the papers.

Mr. M'LEAN said that he believed that Dr. Cribb had the ballot for the twenty-four nominees, and this statement created quite a sensation in the room.

Mr. THOMAS BROOKS assured the meeting that the doctor did not have the papers, as they were sent out to the persons whose names were down.

Mr. D. M'MICHAEL, as one of the house committee, explained the new Act, and showed that the papers had to be sent to all subscribers since January 31st, 1894.

Dr.

Dr. DOYLE said that he had intended to take no part in the proceedings that night, but he wished the president had explained the qualification of a voter. He then showed that for a person to be qualified to vote in 1894 the money would have to be paid before the last annual meeting. If Mr. Moulton (the late secretary) were asked, he would tell them that Dr. Cribb paid the money before the annual meeting last year, namely, January 31st, 1894. That being so, they legally voted last year, and could not vote again on this occasion. He then read the old Act to prove his contention, and said that under the new Act the time of paying the subscription to qualify a voter was from the commencement of one annual meeting to the other one. That being so, it was clear that Dr. Cribb's nominees should not have had voting-papers sent to them; but again, persons who had paid early in January, 1894, had votes sent to them, and that was wrong.

The CHAIRMAN said that no people who had paid before the last annual meeting had received voting-papers.

Dr. DOYLE, continuing, said that he knew of one man who had voted on a pound given early in January, 1894, and got a ballot for the present election. In conclusion, he challenged the right of the house committee to instruct the secretary with regard to the election, and suggested that that meeting should appoint a committee to investigate the election, even if the ballot were put off for some weeks.

The CHAIRMAN, after the discussion had gone on, said that his duty was clear, and he would call for the result of the ballot, and if anything irregular had been done, the subscribers could take the proper course to upset the election.

Mr. H. BERKELEY thought that too much stress was laid on the Act, and the provision that a subscriber could appeal to the Supreme Court. No subscriber wished to do that, but they all had a right to speak, and, if possible, to rectify what was certainly an irregular election.

The CHAIRMAN objected to the imputation that he had not allowed any subscriber the right to give his opinion.

Mr. BERKELEY, continuing, explained that he meant no offence to the chair, but simply thought that there was no occasion to carry out the Act in its entirety if they could settle matters without it. He pointed out that the thirty-three votes controlled by the doctor and matron last year really meant sixty-six, and, in his opinion, the whole election was null and void.

Mr. J. JONES blamed the committee for the whole trouble, as they could, after Dr. Cribb's nominees had been singled out, simply cut out their votes.

Dr. J. W. HESTER also spoke, and argued that the matter was purely a legal one, despite the attempts of some subscribers to belittle its legal aspect. He held that the ballot-papers had to be sent out to all persons who were down on the books as qualified, and in his opinion the scrutineers had acted the part of enthusiastic partisans rather than cool-headed business men.

Mr. MORONEY asked when Dr. Cribb had paid the money on which so many people had voted.

The CHAIRMAN said that the cash-book showed February 1st.

Mr. D. J. M'LEAN said that the date had been altered in the book.

This remark caused another sensation, and Messrs. Berkeley, Menkens, and others examined the book, and said that it had been altered.

The CHAIRMAN, examining the butts of the receipt-book, said that the money was paid on February 2nd, 1894, and therefore the people in whose names it was placed were entitled to vote.

Mr. M. J. MORONEY said that the committee had no power to stop the ballot-papers from being sent out as required by the Act, and as Dr. Cribb had paid the money between the meeting in 1894 and this one, his nominees were entitled to vote.

Mr. W. H. MOULTON, as secretary of the institution last year, explained that he received the money from Dr. Cribb on the last day of January, 1894, and it was stopped from his salary, and so it appeared in the February accounts.

In answer to Mr. MORONEY, Mr. M'LEAN said that the scrutineers had not included the votes of Dr. Cribb's nominees in their list.

Mr. MORONEY moved, seconded by Mr. O'MARA, "That the scrutineers be allowed to retire to add to their list the votes they had left out."

Dr. DOYLE argued that as the late secretary showed that the money was paid before January 31st last year, the votes could not be included.

The CHAIRMAN held that the books showed that the money was paid on February 2nd, and that was sufficient.

Mr. D. J. M'LEAN defended his action at length, and said that as scrutineer he had to hold a scrutiny over the votes. As so much had been said, he would give the subscribers a little more information. The Rev. Mr. Bain, who was not a subscriber, had received a ballot-paper, and the president did not know how many he had signed. The scrutineers also found that a servant of the institution had had twenty ballot-papers in her possession; and, in fact, they appeared to be thrown about broadcast. (Interruption.) From the little he had seen he thought it was high time that a committee of investigation was appointed to inquire into the whole matter.

Mr. H. W. LEE stated that the whole proceedings of the election were so informal that if elected on the committee he would decline to serve.

Dr. DOYLE wished to propose an amendment to appoint a committee of investigation, but the chairman ruled him out of order.

The motion for the scrutineers to retire was then carried, and after ten minutes the result was given.

Mr. A. M. HYDE, the secretary, before the election was declared, explained that every care was taken with the ballot-papers, and the statement that they were thrown about was false. He did not know, and could not find, the address of many of the subscribers, so he gave Nurse Cameron twenty papers to deliver. The lady delivered eight and gave twelve back, and a careful check was kept.

The result of the ballot was:—Captain Newton, 208; W. Lyne, 205; John Hay, 203; D. M'Michael, 201; J. M. Hyde, 199; E. C. Graham, 199; H. W. Lee, 198; A. Fenwick, 196; W. K. Lockhead, 195; R. A. Wallace, 193; W. A. Reid, 190; J. Burke, 189; the Rev. S. C. J. Grime, 187; F. Alcock, 181; W. B. Sharp, 181; J. O'Mara, 180; W. J. Ellis, 170; Thomas Brooks, 155; W. Levey, 152; and A. Timbery, 150. These 20 were declared elected, the votes polled by the other four being:—W. Millar, 136; J. Thorn, 113; F. Barp, 112; Dr. H. M. Doyle, 74.

A vote of thanks to the scrutineers and the chairman concluded the proceedings.

From

From the *Newcastle Morning Herald*, February 11, 1895.

**AFFAIRS OF THE NEWCASTLE HOSPITAL.—PUBLIC MEETING AT ISLINGTON.**

A PUBLIC meeting was held upon the Islington Reserve yesterday afternoon, for the purpose of taking into consideration the manner in which the committee of the Newcastle Hospital had been elected. Mr. T. Ellis, of Tighe's Hill, was voted to the chair. After explaining the objects of the meeting, he called upon Mr. James F. Kerr to move the first resolution.

Mr. KERR, who was well received, said he would make no excuse for appearing before them on Sunday on such an important matter. For, in moving the resolution that was placed in his hands, he would be guided by the purest of motives, namely, to protect the interests of one of the noblest of charitable institutions—the hospital. That was an institution which helped to soothe and comfort the poor in sickness and misfortune. Such an institution could not be too highly valued or too dearly prized, and as one of the working class he was very jealous of any person or persons who by any public action might damage or injure its usefulness, and, when asked, he had, no doubt, like most there present, always cheerfully given his mite towards its support. No doubt they had read the report of the hospital meeting, and could come to no other conclusion but that the business transacted at the meeting was of a very shady nature. In his opinion, if the matter were not rectified without delay it would seriously injure the best interests of the institution. He strongly condemned such action. The honorable conduct of the scrutineers in connection with the meeting could not be too warmly praised. In the best interests of the institution he had pleasure in moving the following resolution:—"That the Colonial Secretary's attention be drawn to the extraordinary manner in which the committee of the Newcastle Hospital were elected on the 8th instant, and that this meeting is of the opinion that unless steps are instantly taken to investigate the matter, serious damage will be done to the institution." (Applause.)

Mr. L. P. VIAL, who was also well received, said that he had carefully read all the published matter in connection with the Newcastle Hospital meetings lately, and could fully endorse all that Mr. Kerr had said. The whole proceedings were most discreditable to all concerned. By the system of bogus voting all the members of friendly societies were rejected upon the committee last year. The time had arrived for the people to make a firm stand, and demand a public examination, for the purity of our public institution. He noticed that by the "Hospital Act" the Colonial Secretary had the power to cause an investigation at any time to be made, and he felt confident that when the facts were fully laid before him he would do so.

Mr. J. J. DICK warmly supported the resolution. He said he was not going to say one word against the institution. He believed all who went there were properly treated. But this was no excuse for the committee acting in the manner that they had done. He denounced in strong terms the manner in which the committee had conducted the election. He said it was no use the officers saying that they did not approve or know of the action in manufacturing bogus votes, as they had by their action since condoned the offence. He hoped the resolution would pass unanimously.

Mr. H. WHITE also supported the resolution, and stated that the Hetton Miners' Lodge was entitled to eleven votes for the amount contributed, but only eight voting-papers were received by his lodge. They were thereby deprived of three votes.

The CHAIRMAN, who belonged to the same lodge, corroborated the statement, and also said that his lodge was entitled to thirteen votes last year, but never received the voting-papers; consequently, the lodge was not represented.

On the resolution been put to the meeting, it was carried unanimously, and with enthusiasm.

Mr. D. WALLWORK also strongly supported the resolution.

Proposed by Mr. D. TOBIN, and seconded by Mr. M. CONNELL, "That Mr. J. F. Kerr be appointed secretary to carry out the objects of the meeting."—Carried.

Proposed by Mr. D. TOBIN and seconded by Mr. D. WALLWORK, "That the secretary be instructed to convey by letter the warmest thanks of this meeting to the scrutineers for their honorable and upright conduct whilst discharging their duty at the late election of the committee of the Newcastle Hospital." Mr. Tobin said there was one thing that meeting had done—it had proved to the working class who were unable to pay the stipulated fee to be present that whilst they had such honest-minded men to watch over their interests as Messrs. McLean, Hudson, Berkeley, and others, their interests were left in good hands.

Moved by Mr. VIAL and seconded by Mr. James DICK, "That the secretary be instructed to send a copy of the foregoing resolution to the hospital committee."

A vote of thanks to the chairman brought the proceedings to a close.

**The Principal Under Secretary to The Secretary to the Newcastle Hospital.**

Sir,

Chief Secretary's Office, Sydney, 15 February, 1895.

Mr. James F. Kerr, having represented that at a public meeting, held at Newcastle on the 10th instant, a resolution was unanimously adopted to the effect that the recent election of the committee of the local hospital was irregularly conducted, I am directed by the Chief Secretary to request that you will be good enough to acquaint me with the facts of the case, and also whether the committee were legally and formally elected.

I have, &c.,

CRITCHETT WALKER,

Principal Under Secretary.

**The Secretary, Newcastle Hospital, to The Principal Under Secretary.**

Sir,

Newcastle Hospital, 22 February, 1895.

In reply to your communication of 15th instant, I am directed to state the matter will be brought before general committee at an early date next month.

I am, &c.,

A. MACARTNEY HYDE,

Secretary.

Mr.

## Mr. James F. Kerr to The Chief Secretary.

Dear Sir,

44, Hunter-street, Newcastle, 25 February, 1895.

I most respectfully beg to inform you that I have not yet received the official reply promised in yours of the 12th instant, subject—the extraordinary manner in which the Newcastle committee was elected. Thinking that the reply may have been miscarried, I thought it best to let you know, as the public here are anxiously waiting for it. Trusting you will excuse the liberty that I have again taken in writing to you on this important subject,—

I have, &amp;c.,

JAMES F. KERR,

Hon. Secretary.

A.U.S.—C.W., 7 March. Dr. Martin Doyle\* and Mr. J. F. Kerr severally ask that investigation may be made into the conduct of the recent election of the committee of Newcastle Hospital. It is alleged that votes were “manufactured.”—12 March.

## The President of the Newcastle Hospital to The Principal Under Secretary.

Sir,

Newcastle Hospital, 4 March, 1895.

I have the honor, in answer to your letter of 15th ultimo, requiring to know the manner in which the committee of the Newcastle Hospital for 1895 were elected, to inform you that the Annual General Meeting of subscribers was held for the purpose of electing all officials on 30th January last, due notice having been notified throughout the press. At that meeting the president, C. H. Hannell, Esq., the vice-president, Joseph Wood, Esq., and two auditors were unanimously elected by show of hands. A greater number of gentlemen than were required for committee having been nominated, the president adjourned the meeting, under clause 3 of the Hospitals Act Further Amendment, 58 Victoria No. 6, for nine days. The secretary in the interim sent ballot-papers to those entitled to receive the same. The voting papers were returned, received by the secretary, and handed by him unopened to the scrutineers twenty-four hours previous to adjourned meeting. Exception was taken by the scrutineers to the nominees of the paid medical officer and the matron voting, it being stated that they, the nominees, did not pay the subscriptions themselves, and, therefore, were not really subscribers within the strict meaning of the Act, and that they had already voted for the year 1894. The acting committee instructed the secretary to send voting papers to said nominees, to be used for election of committee for 1895, basing their decision in conformity with the Hospitals Act Further Amendment, 58 Victoria No. 6, section 4,—“No person shall be qualified to vote at any annual meeting of contributors to any such hospital for the election of trustees or any committee of the said hospital, or on any question brought before such meeting aforesaid, unless he has paid to the hospital a contribution of one pound sterling at the least at any time between the commencing of business at such meeting and the commencing of business at the preceding annual meeting, or has contributed and paid ten pounds in one sum to said hospital.”—and that the subscriptions were paid at such a time as to bring them within the meaning of the said Act. Thirty-three of said voting papers were posted, and eighteen of their number returned with the other voting papers and handed by the secretary unopened to the scrutineers. At the adjourned meeting, which was largely attended, a motion was carried by a large majority that the eighteen votes should be recorded. They were then added by the scrutineers, by them handed with the other numbers to the president, and that gentleman declared the twenty names who had received the greatest number of votes duly elected as committee of the Newcastle Hospital for the year 1895. Following are the names and number of votes received by each:—Captain Newton, 208; W. Lyne, 203; John Hay, 202; D. McMichael, 201; E. C. Graham, 199; J. M. Hyde, 199; H. W. Lee, 198; A. Fenwick, 196; W. K. Lockhead, 195; R. A. Wallace, 193; W. A. Reid, 190; J. Burke, 189; Rev. S. J. C. Grime, 187; F. Alcock, 181; W. B. Sharp, 181; J. O'Mara, 180; W. J. Ellis, 170; T. Brooks, 155; W. Levey, 152; A. Tembury, 145; W. Millar, 136; J. Thorn, 113; F. Karp, 112; Dr. Doyle, 71.

I may say the committee are thoroughly representative in character, have held several meetings, and are carrying out the work of the institution with energy and ability.

I have, &amp;c.,

C. H. HANNELL,

President.

A.U.S., 8/3/95. The explanation given is that the medical officer and the matron were thought to be entitled to vote at the election for the committee. Shall the secretary of the public meeting (Mr. Kerr) be informed in terms of this letter.—12 March. 95-3,834.

## Memo. by The Principal Under Secretary.

COMPLAINT OF IRREGULARITY IN THE ELECTION OF THE COMMITTEE OF THE NEWCASTLE HOSPITAL.

Mr. J. KERR, on the 11th February last, sent a copy of the following resolution, passed at a public meeting at Islington:—

“That the Colonial Secretary’s attention be drawn to the extraordinary manner in which the committee of the Newcastle Hospital were elected on the 8th inst., and that this meeting is of opinion that unless steps are instantly taken to investigate the matter, serious damage will be done to the institution.”

He at the same time forwarded press reports of the proceedings of the public meeting, and also of the meeting of the hospital subscribers, at which the committee was elected. From the latter it is gathered that the complaint is that of manufacturing bogus votes, brought to notice by the scrutineers. It is said that ballot-papers were forwarded to people who had no right to vote, and that certain nominees of the paid medical officer and matron (subscribers to the institution), who had voted in 1894, were again sent ballot-papers, thirty-three in number, eighteen of which were returned.

Dr. Martin Doyle\* has also written asking that an investigation be made.

The president of the hospital, in explanation, states that the subscriptions of the officers referred to were paid within the time required by the Act for voting purposes for 1895, and that the meeting carried a motion by a large majority that the eighteen votes should be recorded. No denial is made of the statement that these nominees had voted in 1894.

C.W., 20/3/95. Inform Mr. Kerr in terms of this memo.—J.N.B., 26/3/95, Dr. Martin Doyle and Mr. James F. Kerr informed.—28/3/95.

Mr.

\* Dr. M. Doyle’s letter of 15 February, was withdrawn on 8 April, 1895.

## Mr. James F. Kerr to The Chief Secretary.

Sir, 44 Hunter-street, Newcastle, 25 March, 1895.  
 I most respectfully beg to inform you that I have not yet received the official reply promised in your letter of the 12th ultimo, in reference to the extraordinary manner that the committee for the Newcastle Hospital were elected for the present year. An early reply would be most thankfully received.  
 I have, &c.,  
 JAMES F. KERR,  
 Hon. Secretary.

## The Principal Under Secretary to Dr. Martin Doyle.

Sir, Chief Secretary's Office, Sydney, 28 March, 1895.  
 In reference to your letter of the 15th ultimo,\* addressed to the Prime Minister, urging that an inquiry be instituted in regard to certain alleged irregularities in connection with the recent election of the committee of the Newcastle Hospital, I am directed by the Chief Secretary to inform you that the President of that institution represents, in explanation, that the subscriptions of the medical officer and the matron were paid within the time prescribed by the Act 58 Vic. No. 6 for voting purposes, and that the meeting carried a motion by a large majority to the effect that the eighteen nomination papers which were returned out of thirty-three—the number of votes to which those officials claim to be entitled—should be recorded.  
 I have, &c.,  
 CRITCHETT WALKER,  
 Principal Under Secretary.

## The Principal Under Secretary to Mr. J. F. Kerr.

Sir, Chief Secretary's Office, Sydney, 28 March, 1895.  
 With reference to your letter of the 25th ultimo, urging that an inquiry be instituted in regard to certain alleged irregularities in connection with the recent election of the committee of the Newcastle Hospital, and enclosing Press reports concerning the election, I am directed by the Chief Secretary to inform you that the President of that institution represents, in explanation, that the subscriptions of the medical officer and the matron were paid within the time prescribed by the Act 58 No. 6 for voting purposes, and that the meeting carried a motion by a large majority to the effect that the eighteen nomination papers which were returned, out of thirty-three—the number of votes to which those officials claim to be entitled—should be recorded.  
 I have, &c.,  
 CRITCHETT WALKER,  
 Principal Under Secretary.

## A. Edden, Esq., M.P., to The Principal Under Secretary.

Dear Sir, Legislative Assembly, N.S.W., Sydney, 3 May, 1895.  
 I take the liberty to ask you to send me Mr. Bruncker's answer *re* the inquiry into the working of the Newcastle Hospital.  
 I am, &c.,  
 A. EDDEN.

Submitted.—4/5/95.

Mr. Edden, M.P., to be informed that no official report has been received from the hospital committee respecting the management of the institution. Mr. Kerr forwarded a resolution passed at a public meeting complaining of irregularities, which were represented as having occurred on appointing the committee and his communication was replied to.—J.N.B., 9/5/95. Alfred Edden, Esq., M.P.—10/5/95.

## The Principal Under Secretary to A. Edden, Esq., M.P.

Sir, Chief Secretary's Office, Sydney, 10 May, 1895.  
 In reply to your letter of the 3rd instant, asking for further information concerning the working of the Newcastle Hospital, I am directed by the Chief Secretary to inform you that no official report has been received from the hospital committee respecting the management of the institution. Mr. Kerr forwarded a resolution passed at a public meeting complaining of irregularities which were represented as having occurred in appointing the Committee, and his communication was replied to.  
 I have, &c.,  
 CRITCHETT WALKER,  
 Principal Under Secretary.

## The Director of the Government Asylums to The Principal Under Secretary.

Sir, Department of Charitable Institutions, Paddington, 14 May, 1895.  
 The Chief Secretary having in conversation with me expressed a wish that I should inquire into certain charges made against the management of the Newcastle Hospital by Dr. Martin Doyle and others, I have now the honor to request that you will be good enough to give me official instructions to carry out his wishes.  
 If I receive the instructions at an early date I could proceed to Newcastle at the beginning of next week.  
 I have, &c.,  
 SYDNEY MAXTED,  
 Director of Charitable Institutions.

Submitted, 14/5/95.

The correspondence upon this subject is somewhat vague. Mr. Maxted may proceed to Newcastle *if possible during this week*, in view of obtaining the fullest information with regard to the conduct and management of the hospital generally.—J.N.B., 14/5/95.

Memo.

## Memo. for The Principal Under Secretary.

I AM informed that Mr. Maxted is not expected to return from Mittagong until Friday evening. To avoid delay, Dr. Ashburton Thompson may be asked to proceed to Newcastle at once to make preliminary inquiry, with a view to further investigation, if deemed necessary, regarding the conduct and general management of the Newcastle Hospital. J.N.B., 15/5/95.

The Medical Adviser to the Government.—C.W., P.U.S., B.C., 16/5/95. Deputy Medical Adviser to visit Newcastle, inquire, and report as soon as possible.—A.S., 17/5/95.

The Principal Under Secretary to The Secretary to the Newcastle Hospital.

Sir,

Chief Secretary's Office, Sydney, 16 May, 1895.

With reference to previous correspondence, I am now directed by the Chief Secretary to inform you that Dr. Ashburton Thompson, Chief Medical Inspector to the Board of Health, has been instructed to proceed to Newcastle at once to make a preliminary inquiry, with a view to further investigation, if deemed necessary, regarding the conduct and general management of the Newcastle Hospital.

I have, &c.,

CRITCHETT WALKER,  
Principal Under Secretary.

Similar letters, on same date, addressed to Mr. James F. Kerr and Dr. Henry Martin Doyle.

## REPORT of Dr. Ashburton Thompson.

THE Medical Superintendent having resigned, it appears that no inquiry regarding the conduct and general management of this institution is now necessary.

The question disclosed by the papers herewith is whether the present committee is legally elected. The answer appears to me to turn on the following points:—Were certain persons who voted at the elections of 1894 and 1895 qualified within the meaning of the Acts? If so, were they entitled to vote at the election of 1895?

After conversing with Mr. Hannell (president of the committee), and Mr. MacLean (an auditor), who represent opposed parties, I find it agreed by both that the above is the only question.

It seems desirable and necessary that the status of the committee now ruling should be ascertained, and in my opinion a good way of doing this would be to desire the Police Magistrate to state the points for submission to the Attorney-General for his opinion.

The Medical Adviser.

J.A.T., 17/5/95.

A letter from Dr. Doyle was missing from these papers when I received them —J.A.T.

Telegram from Dr. Ashburton Thompson to The Medical Adviser to the Government.

Newcastle, 17 May, 1895.

MEDICAL Superintendent having resigned, no matter of general management remains for inquiry. As to election of committee, the questions are, whether certain persons who voted were qualified voters within meaning of Act? and, if so, whether they were qualified to vote at 1895 election? This clearly appears from the papers. However, I have conversed with President Hannell and Auditor MacLean, who represent opposed parties, and they agree that those are the points requiring settlement. No difficulties in the way of inquiry would be raised, and in my opinion the P.M. should be requested to state the matter for reference to law officers. I return to-morrow morning. Papers follow.

J. ASHBURTON THOMPSON,  
Deputy Medical Adviser.

From Dr. Thompson's minute, and from an interview which I have had with him since his return, it appears that the medical points of difference have been settled by the resignation of the Medical Superintendent. There is, however, considerable local feeling on the legal points involved. I suggest that Dr. Thompson's recommendations be carried into effect, viz., that the Police Magistrate be directed to inquire into the legal aspect of this matter, and to state a case for submission to the law officers of the Crown.—A.S., 21/5/95. The Principal Under Secretary.

Submitted, 21/5/95. I concur. The recommendation of the Medical Adviser may be adopted.—J.N.B., 22/5/95. Write to the Department of Justice accordingly.—C.W., 22/5/95.

The Principal Under Secretary to The Under Secretary of Justice.

Sir,

Chief Secretary's Office, Sydney, 23 May, 1895.

I am directed by the Chief Secretary to state that, in response to certain representations made to the Government in the matter, Dr. Ashburton Thompson, Chief Medical Inspector to the Board of Health, was recently instructed to hold an inquiry into the conduct and general management of the Newcastle Hospital. On proceeding to Newcastle this gentleman learned that certain medical points, on which difference of opinion existed, had been settled by the resignation of the Medical Superintendent of the hospital, and that there was now no necessity for holding the proposed investigation.

2. Dr. Thompson represents, however, that a question has been raised as to whether the present committee has been legally elected, and that the answer appears to turn on the following points:—(a) Were certain persons who voted at the hospital elections of 1894 and 1895 qualified within the meaning of the Hospitals Acts? (b) If so, were they entitled to vote at the election of 1895?

3. With a view to settling the question, I am to request that you will invite the Minister of Justice to be good enough to instruct the Police Magistrate at Newcastle to state the points for submission to the Attorney-General for his opinion.

I have, &c.,

CRITCHETT WALKER,  
Principal Under Secretary.

Submitted.—A.C.F., 27/5/95. Approved.—A.J.G., 28/5/95. The Police Magistrate, Newcastle.—T.E.M. (for U.S.) B.C., 28th May, 1895.

### The Police Magistrate, Newcastle, to The Under Secretary of Justice.

Sir,

Court-house Newcastle, 14 June, 1895.

With reference to the enclosed letter from the Principal Under Secretary to yourself, and your minute of 28th ultimo, I have the honor to report that, being unacquainted with the facts relating to the election of the present committee of the Newcastle Hospital, I asked for information, as to the facts, of the president and the committee of the hospital, and also of Messrs. M'Lean and Hudson, who acted as scrutineers at the election of the present committee.

I inclose herewith letters which they have sent to me.

I sent to the committee, Messrs. M'Lean and Hudson's report, with a request to be informed as to whether or not their statement that Dr. Cribb and the matron, early in 1894, to avoid an impending reduction of their salaries, gave donations of £25 and £8 respectively, and nominated thirty-three persons, including themselves, as contributors of £1 each. The committee's reply, dated 10th instant, does not contain a denial of this statement, and, I think, that the committee will not really contend that the statement is not in substance correct.

It appears by a minute of 29th September, 1893, that the committee resolved to reduce all salaries other than those of the doctor, the matron, and the secretary. The doctor and the matron wrote letters offering respectively, £25 and £8 as contributions, on condition that their salaries should not be reduced for the year 1894. A minute of 3rd October, 1893, shows that the committee guaranteed that there should be no reduction in the salaries of these three officers for 1894. The general committee resolved not to take into account the donations of the doctor and the matron in applying to the Government for subsidy.

If the Attorney-General should be of opinion that Dr. Cribb and the matron were contributors to the hospital, within the meaning of the Act 58 Vic. No. 6, it would be important to ascertain whether their contributions were given before or after the annual meeting of 31st January, 1894. There is some difficulty in ascertaining when these donations were made. I went to the hospital on the 12th instant, when the hospital books were shown to me, in the presence of Messrs. Hudson and M'Lean. The receipt book shows that Dr. Cribb and the matron respectively paid £25 and £8 on the 2nd of February, 1894. The cash book shows that the same amounts were paid on the 1st February, 1894, in the names of thirty-three contributors, including the doctor and the matron. The erasure in the cash book does not seem to have been made with any purpose, except to correct a clerical error in stating the day in the month of February. Only the numerical figure has been altered, not the name of the month. Mr. Moulton, who was secretary at the date of the elections in 1894, and who made the entries in the books, has gone to South America. At a meeting of contributors to the hospital, held about February last, Mr. Moulton stated that Dr. Cribb's donation was made in the form of a post dated cheque, received on 31st January, 1894. The election was held in the evening of that day. It appears by the minute book that at a meeting of the committee held on the 9th of March, 1894, it was stated by Mr. Moulton, in answer to a question, that the donations of Dr. Cribb and the matron were given on the 31st January, 1894.

If Dr. Cribb's cheque was post-dated, the money which it represented must have been paid to the hospital after the annual meeting of 31st January, 1894.

I have, &c.,

J. MAIR,  
Police Magistrate.

Submitted. These papers might now be forwarded to the Chief Secretary's Department.—A.C.F., 17/6/95. Approved.—A.J.G., 18/6/95. The Principal Under Secretary.—T.E.M. (for U.S.), B.C., 19th June, 1895.

[Enclosures.]

Sir,

Newcastle Hospital, 5 June, 1895

I have the honor to forward you the information asked for in your letter of 3rd instant "as to the manner in which the committee for 1894 and 1895 were elected."

#### *Re-election of Committee, 1894-95.*

The usual notice convening the annual general meeting of subscribers to the hospital was given through the press in January last. The president, vice-president, two auditors, and two scrutineers were elected by show of hands. The president adjourned the meeting for nine days, there being more gentlemen nominated than were required for committee. The secretary, under the authority of the house committee, sent ballot-papers out to those entitled to receive them. Included in these voting papers were thirty-three which were sent to the alleged nominees of Dr. Cribb, medical superintendent, and Miss Piguénit, the matron. The scrutineers refused to hand in eighteen of the voting papers that had been used (the remaining fifteen of the thirty-three not having been returned), giving as their reason that the doctor and matron had each donated two months' salary to the hospital, which they did in the names of certain persons who had already voted for election of committee for 1894, and should not therefore be permitted to vote again for the election of 1895—in point of fact, not having contributed the money themselves, were not eligible to

to vote at all. The secretary, it appears, committed a clerical error in sending a few voting papers to non-contributors to the extent of 20s., but these it appears were not used. He also left in care of one of the nurses some voting papers to be given by her should any one claiming the right to vote call at the hospital, the secretary being unacquainted with their postal addresses. A certain number of these voting papers, as per list given by the secretary, were handed by the nurse to those entitled to receive them. The balance were returned to the secretary with the names of those who had obtained them from the nurse. The committee held that, under clause 4 of 58 Vic. No. 6, the nominees of the doctor and matron had a right to vote at both meetings, seeing that their donations had been received between the "commencing of business at such meeting and the commencing of business at the preceding annual meeting." There was a large number present at the adjourned meeting, and the matter was fully discussed. The scrutineers at first refused to add the eighteen votes to the ballot, when a resolution was carried by the subscribers that they should do so. The committee for 1895 were then declared elected.

I have, &c.,

C. H. HANNELL,  
President of Newcastle Hospital.

Sir,

Newcastle Hospital, 7 June, 1895.

I am in receipt of your letter of 6th inst., requesting "that you may, in company with Messrs. McLean and Hudson, be allowed to examine certain books of the hospital."

I may say I have no objection to your so doing, nor to the gentlemen you have named having the same privilege. I have advised the committee accordingly, and sent your communication to the secretary in order that a meeting of committee of management (in whose hands the matter as to granting permission entirely rests)—see rule 60—may be called forthwith.

The secretary will send you a notification of committee's decision in due course.

I have, &c.,

C. H. HANNELL,  
President.

James Mair, Esq., P.M., Newcastle.

Sir,

Newcastle, 7 June, 1895.

In response to your request for a statement concerning the election of the committee of the Newcastle Hospital, we beg to submit the following facts for your consideration.

It was alleged that prior to the annual meeting, held about January, 1894, Dr. Cribb, the Medical Superintendent, in lieu of having his salary reduced, agreed to make a donation to the hospital of £25 (the amount of the proposed reduction). This he did, by sending in his own name with twenty-four others as subscribers of £1 each. The same course was adopted by the matron, who donated £8 in the same manner and under like circumstances. The whole of these (inclusive of Dr. Cribb and the matron) were allowed to vote at the 1894 election.

The non-election of certain gentlemen as committee-men gave rise to considerable comment amongst the subscribers, and was only understood about 17th February, 1894, when subscription list No. 5 was published in the local paper, giving the names of certain individuals as subscribers. The publication of these names, and the knowledge of how it was attempted to make them subscribers, was severely criticised in the columns of the *Newcastle Herald*, and one or more of the committee resigned, and a number threatened to do so but for a question asked by Mr. Alan Wallace, and recorded in minutes of committee meeting held 9th March, 1894, viz., "When was the sum of £33 6s. 8d. paid by the Dr. and matron?" Answer: "31st January, 1894."

At the 1895 meeting (held 30th January) some of the subscribers took exception to what had been done, and to the fact that no mention had been made of it by the committee in their Annual Report.

A heated discussion followed, and eventually the president, members of committee, and the medical superintendent expressed regret, and assured those present that a repetition of such conduct was impossible. Then Mr. D. J. McLean, who was one of the scrutineers for 1894, proposed, and it was carried, "That the explanation given be received as satisfactory." After formal business, Messrs. McLean and Hudson were chosen scrutineers; the former, from his previous experience, declined to act, unless everything was fair, square, and above-board. The president assured him it would be so, for had he not done so we would have declined to act.

After further discussion the meeting adjourned until February 8th, and prior to this date it was our duty to count the ballot-papers. Before doing so, and from information we had received, we asked the secretary if ballot-papers had been sent to the so-called nominees of Dr. Cribb and the matron. He replied they had, under written instructions from the house committee, but contrary to the express wish of the president, and he produced to us the minute authorising the issue of the ballot-papers. The minute was initialled by the chairman, Mr. Thomas Brooks. We then asked the secretary to produce the receipts for the money received from the thirty-three alleged subscribers. He replied he was unable to do so, as the money had been paid in the names of Dr. Cribb and the matron, and, upon referring to the receipt-book we found this was correct, but on reference to the cash-book we saw entries of £1 each, purporting to be the donation of as many people. We also saw that the dates in the receipt-book and the cash-book did not agree, and that the date in the latter had been erased. At our request, Dr. Cribb was called into the room, and upon being asked concerning the so-called nominee votes, he hesitated for some time, and said, "Yes, last year there was a reduction in the salaries." He further said that he had placed twenty-five names (including his own) as subscribers for his £25, but he could not remember who they were. In fact, he said that he could not remember one name of the twenty-four. The employees of the institution, amongst whom were many of the nominees, were examined by us, and denied ever having donated one penny to the institution. One informed us that some of the ballot-papers were handed to Dr. Cribb.

At the adjourned meeting, before the ballot was opened, Mr. Levy, a subscriber, informed those present that he had received two ballot-papers. This and other matters created some surprise and discussion, and the scrutineers, at the request of the president, declined to give in the result of the ballot unless permitted to make an explanation. Eventually, the meeting decided that the scrutineers should be heard.

The substance of their explanation was as follows:—

1. That the committee had not kept faith with the subscribers in permitting eighteen of the nominee votes to be recorded.
2. The president, although elected by the subscribers unopposed, allowed himself to be snubbed by the house committee.
3. That the president had not carried out his promise to the scrutineers, viz. :—“That things would be fair, square, and above-board.”
4. Subscribers not entitled to receive ballot-papers had received them,—as proved by Mr. Levy, and again by Messrs. M'Lean and Hudson.
5. That a nurse in the hospital had possession of a number of ballot-papers.
6. That the dates in the receipt-book and cash-book did not agree.
7. That Dr. Cribb could not recollect even one name said to have been given in by him.
8. That Dr. Cribb admitted, on examination by us, that the amount was not a donation, but represented a reduction in his salary.
9. The hospital staff, on examination, had positively assured us they had not subscribed one penny (although their names appeared on the cash-book as subscribers of £1 each.)
10. Admitting payment was made, as stated in the minutes of meeting of 9th March, 1894 (*vide* Mr. Wallace's question and answer as given on page 2 hereof), and providing the doctor and matron were legally entitled to delegate votes, then most certainly they should not have voted at the election of 1895.

The house committee (all of whom were candidates for re-election) acted, in our opinion, illegally by instructing the secretary to issue ballot-papers to the so-called nominees, inasmuch as they were regulating their own election.

Knowing these facts, and believing the nominee votes to be illegal, we declined to include them unless by a vote of the meeting. This was then put to the meeting and carried. The names were then added to the list by us under protest.

Mr. Lee, one of the gentlemen who was a candidate for re-election, informed the meeting that, owing to the way in which the election was conducted, he would decline to act if elected. Mr. Lee polled 198 votes, and subsequently resigned.

We further contend that the sum alleged to be donated by Dr. Cribb was not a subscription, inasmuch as we are informed that the committee of 1894 decided by resolution, recorded in the minute-book of the institution, not to apply for the Government subsidy on the £25, on the grounds that it was not a subscription, but represented a reduction in salary.

The same argument is applicable to the matron's alleged donation.

In the letter from the committee to the Colonial Secretary it is stated that the resolution to add the nominee votes to the ballot was carried by a large majority. We beg to state that at that meeting no steps were taken to ascertain whether those present were subscribers of £1 or upwards, and, as a matter of fact, we are aware that there were many people present who were not subscribers at all, and also subscribers who had not donated £1, and therefore not eligible to vote.

We have, since called upon by you for report, endeavoured to see the books of the institution, but have been unable to do so, although application has been made by us to the chairman of the house committee, and through him to the president.

We think it is imperative that you should see these books, in order that our statements contained herein may be verified.

J. Mair, Esq., P.M., Newcastle.

We have, &c.,  
D. J. M'LEAN,  
EDWIN R. HUDSON.

Sir,

I have the honor, by direction of the committee of management of this hospital, to inform you that your communication of the 6th instant, addressed to the president, stating that it was the wish of the scrutineers that you, with themselves, should see certain books (enumerated by you) at the hospital, and asking for a time to be appointed at which the inspection may take place, was considered by my committee this afternoon when it was resolved that you be informed that the books can be inspected by you and the scrutineers in the presence of the committee of management at the hospital, by giving the secretary twenty-four hours' notice.

I have, &c.,  
S. H. LAING,  
Secretary.

Jas. Mair, Esq., Police Magistrate, Newcastle.

Sir,

I have the honor, by direction of the committee of management, to acknowledge receipt of your letter of the 8th instant, enclosing one from Messrs. M'Lean and Hudson, and requesting to be informed whether their statements are correct. In reply, I have been instructed to inform you that the annual meeting was held on the 31st January, 1894, that the entries in the cash-book are dated 1st February, 1894, and the date in the receipt-book is the 2nd February, 1894. I am further to add that all the books may be inspected by you with the chairman of the committee of management at any time you may desire.

I herewith return Messrs. M'Lean and Hudson's letter.

I have, &c.,  
S. H. LAING,  
Secretary.

Jas. Mair, Esq., Police Magistrate, Newcastle.

1895.

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

**ALBURY DISTRICT HOSPITAL.**

(RETURN RESPECTING SPECIAL GRANT TO).

*Ordered by the Legislative Assembly to be printed, 2 October, 1895.*

SPECIAL GRANT, ALBURY DISTRICT HOSPITAL.

IN February last the Vice-President of the Albury Hospital asked for a special grant of £500 towards the completion of a ward for typhoid and other special diseases, and pointed out that in 1892 the sum of £500 was granted to all country hospitals, but by an oversight the Albury Hospital was omitted.

Mr. Ball, M.P., on 5/9/95, wrote in reference to the matter, stating that only £150 had been put on the 1895-6 Estimates. The ward had been completed at a cost of £500, which amount the hospital had been promised by the late Government. Part of the ordinary funds of the hospital had been used for the building, and assistance had been obtained from the Bank.

The Chief Secretary minuted that it appeared the late Government had promised the £500, but failed to place the money on the Estimates, and he was informed by Mr. Ball the money had been expended in anticipation of the Vote, and the committee expected now to be recouped.

The Colonial Treasurer stated that under the circumstances he thought the grant should be made, and minuted on the papers "£500 Advance Account."

On the 13th instant the papers were sent back from the Treasury, requesting the Principal Under Secretary to furnish voucher and return papers.

C.W., 17/9/95.

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1895.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

## ANTITOXIC SERUM FOR THE CURE OF DIPHTHERIA.

(REPORT BY BOARD OF HEALTH.)

*Ordered by the Legislative Assembly to be printed, 20 August, 1895.*

The President of the Board of Health to The Under Secretary for Finance and Trade.

Sir, Board of Health Offices, 127, Macquarie-street, Sydney, 6 August, 1895.

I have the honor to transmit for the information of the Colonial Treasurer a report on the use of the antitoxic serum for the cure of diphtheria, which was initiated in this Colony by the Board's action on the 27th February of this year.

Judging from the data therein contained, the results are highly satisfactory, since they appear to show that the mortality has been much reduced, that the cases have been rendered milder in their course, and that no untoward effects have been developed as a result of any undesired bye-action of the remedy. The estimated number of human lives saved in New South Wales would thus be about two hundred (200) per annum.

Since the Board's action was taken, a dry form of the serum has been introduced, which promises to keep for a long time and to retain its curative properties unimpaired—a great convenience in such a country as this, where the sparseness of population in many districts, and the distance and inaccessibility of places, render it necessary to keep the remedy "in stock" so as to be in readiness for possible cases.

I may be permitted to specially refer to the extremely useful work which has been done in this matter by Dr. Tidswell, the Medical Officer of the Board in charge of the recently-established biological laboratory.

The Board desires to say that it is aware that the virulence of the disease varies greatly at different times, and that the results in the report must be read with this before the mind. Still, so far as this series of cases goes, the results would appear to be favourable, and the Board can only trust that future experience will justify the hopes entertained as to the success of the remedy.

In conclusion, I beg to suggest that the report be laid before Parliament.

I have, &c.,

A. STUART, M.D.,  
President.

[*Enclosure.*]

To the President of the Board of Health,—

Sir,

21 June, 1895.

The first supply of diphtheria curative serum ("Anti-toxin") was received from the British Institute of Preventive Medicine on 27th February, 1895.

Before issuing the serum for general use in the Colony, the Board desired some assurance that the long journey had not caused any deterioration in the quality of the remedy. Arrangements were accordingly made with the Committee of the Sydney Hospital for Sick Children, which permitted of observations being made on ten cases of diphtheria treated with this serum by the medical staff of that institution. A preliminary report was read at a meeting of the Board, 12th March, and the detailed results of these observations I have recorded in Appendix C.

It was further determined to request information on the effects of the remedy from those medical practitioners who had obtained samples of the serum from this office. During the months of February and March, 1895, seventy-two samples were issued in response to applications. An unavoidable interruption to the transmission of the supplies from England then occurred which gave the requisite opportunity of fixing a limit to the extent of the report, this number being considered large enough to furnish the information required.

I accordingly drew up a schedule of questions, and accompanying letter stating the request of the Board, which were sent to the above-mentioned practitioners. A copy of the schedule of questions will be found in Appendix A.

In arranging these questions, the chief purposes kept in view were to ascertain whether the serum was as efficient as its European reputation led us to anticipate, and, further, what (if any) injurious effects attended its use.

The replies received numbered sixty-four. Of these, nine stated that the use of the serum had not been found necessary, and in many instances the samples were returned to the Secretary unopened. The other fifty-five were reports on the effect of the serum, and their general contents are tabulated in Appendix B.

These latter form the basis of the subjoined report, which has been cast in the form of answers to the above-stated propositions, and it will be seen that in both particulars the results have been highly satisfactory.

In discussing the reports it is necessary to keep in mind the accepted dictum of European authorities that, in estimating the value of the serum, only those cases in which the diagnosis has been bacteriologically confirmed can be used as data. In some of the particulars entered upon below, only such cases are used, but since all the cases were treated with serum, all are available for certain purposes of this report. In the succeeding paragraphs it will be clearly stated whether the part or the whole of the series is referred to in each case.

## REPORT.

### PART I.

Of the fifty-five reports on the use of the serum, in forty-five confirmation of the clinical diagnoses was obtained by bacteriological observations; in nine, no such observations were made; and in one, an examination was attended with negative results.

The returns for the whole series of fifty-five cases show that forty-eight patients recovered and seven died, a case mortality equal to 12.72 per cent.

Unfortunately no estimate of the previous case mortality in the Colony exists to which this can be compared, but, although for many reasons it is difficult to form a reliable estimate, the previous case mortality was probably not less than the English rate of about 25 per cent. The percentage in the present series may be considered as well below the average.

Of the forty-five cases in which the presence of the bacillus diphtheric was demonstrated, forty recovered and five died; a case mortality equal to 11.1 per cent. The absence of data again makes accurate comparison with previous cases impossible, but since the reports from different hospitals show case mortality varying from 30 per cent. to 60 per cent., and making every allowance for the fact that only a certain proportion of the cases of the present series were hospital cases, it is evident that the case mortality here reported is very low.

Compared with the reports of European serum-treated cases, the series also appears in a favourable light. The *British Medical Journal* (16th February, 1895) contains a report of collected cases, with which a comparison may be fairly made, and in these the mortality was 22.1 per cent. In separate series, however, the case mortality has been as low as 5 per cent., and in several instances it has been as low as in the present series.

It is clear, then, that the mortality of the series of cases under discussion shows a considerable reduction on that of previous cases.

Before attributing this favourable result entirely to the use of the serum, it is necessary to inquire further into the circumstances under which it was used. The more important of the conditions which may have had an influence on the mortality will, therefore, be briefly entered upon.

1. The "epidemic type" of the disease should first call for attention, but on this subject there is no guiding information. It would appear, however, from the statements in several of the replies, that the serum was only used, as a rule, in those cases which were sufficiently serious to cause some anxiety. Further evidence on this point is afforded by the symptoms reported, the nature of which will be seen from the following summary:—

High temperatures were present in several cases.

Urinary troubles occurred in twenty-seven cases, or 54 per cent., being slightly less than the average.

(Albuminuria is said to occur in two-thirds of all cases.)

Heart trouble occurred in five cases, in addition to the four patients who died from syncope.

"Paralysis" is reported in thirteen, or 26 per cent., the usual percentage being about 25.

Lung affections were present in three cases.

Debility, more or less marked, is noted as a sequence in several of the cases.

Nasal diphtheria was present in two or three instances, and laryngeal diphtheria in several, necessitating tracheotomy in seven.\*

There is no reason to believe, therefore, that the series presented any advantage on the score of mildness of type. The disease appears to have been of usual severity.

2. *The sex and age distribution of the series.*—Of the fifty-five cases, twenty-three were males, and thirty-two females. The larger proportion of females, who were mostly between 2 and 35 years of age, shows that the series was not specially favourable as regards sex distribution, the mortality for the ages mentioned being greater amongst females. In the present instance, six of the seven deaths occurred in females. The

\* It may here be noted that all of these seven tracheotomy cases recovered, a fact which is extremely interesting, since it was precisely these cases which were most fatal previous to the introduction of the serum treatment.

The age distribution is shown in the table in its relation to the mortality:—

TABLE showing Age distribution and Mortality.\*

Ages in years.	Bacteriologically confirmed.			Not examined.		
	No.	Cured.	Died.	No.	Cured.	Died.
0—1	...	...	...	...	...	...
—2	3	2	1	1	...	1
—3	3	3	...	...	...	...
—4	7	6	1	...	...	...
—5	6	6	...	2	2	...
—6	6	6	...	1	1	...
—7	2	1	1	1	1	...
—8	1	1	...	...	...	...
—9	3	3	...	1	1	...
—10	2	2	...	...	...	...
—15	2	1	1	2	1	1
—20	3	3	...	...	...	...
—30	4	4	...	...	...	...
—40	2	1	1	...	...	...
—50	1	1	...	...	...	...
82	...	...	...	1	1	...
Totals .....	45	40	5	9	7	2

The incidence was greatest on the 4th, 5th, and 6th year periods. The mortality is so distributed as to show no special relation to the ages. Taking the forty-five cases in which the diagnosis is certain, it will be seen that the age distribution is favourable by reason of the small number of very young patients, only six being under 4 years of age. The reports of serum-treated cases show that the mortality has been heaviest in the first year or two of life. Thirteen of the patients were over 10 years of age, and amongst such older patients the mortality is, as a rule, very low. In the present instance, however, they had a higher case mortality than younger patients, two of the thirteen cases being fatal. Their occurrence in the series is, therefore, other than favourable, and counterbalances the paucity of very young patients.

Amongst the cases in which no bacteriological examination was made, the recovery of a patient aged 82 years is reported. This patient, besides "throat deposit," had "paralysis" and "tendency to heart failure," and the attack was followed by extreme debility. Dr. Fitzpatrick, of Crookwell, who reports the case, regards it as one of true diphtheria, and remarks: "In this case, which seemed hopeless on account of patient's great age, I do not consider that any other treatment would have been of any avail."

3. *Conditions present other than those due to diphtheria.*—In answer to the question regarding the health at the time of onset, the reports state that in seven cases there were conditions lowering the health of the patient; in two the previous health was unknown; and in forty-six there was no predisposing illness.

Of the seven cases the following particulars of the initial ill-health are given:—

Pneumonia and malnutrition	...	...	...	...	...	1
Anæmia	...	...	...	...	...	2
Chlorosis and sore throat	...	...	...	...	...	1
Delicate	...	...	...	...	...	2
Over exertion	...	...	...	...	...	1

One (the first) proved fatal from broncho-pneumonia and exhaustion; the others all recovered.

In only one case was any coexisting disease mentioned, viz., sepsis. This prolonged the illness, but the patient recovered.

It will be seen that, on the whole, the cases were free from complicating conditions, and hence, in so far, favourable.

4. *The time the treatment was commenced.*—This is shown in the accompanying table in its relation to the mortality, only those cases in which the diagnosis was confirmed being used.

TABLE showing time treatment was commenced, and mortality.

Ailing.	Number.	Died.	Recovered.
1 day .....	6	.....	6
2 days .....	6	1	5
3 " .....	9	1	8
4 " .....	14	2	12
5 " .....	2	.....	2
6 " .....	3	.....	3
7 " .....	2	.....	2
8 " .....	1	.....	1
10 " .....	1	.....	1
14 " .....	1	1	.....
For all ages .....	45	5	40

Experience of the treatment in Europe has tended to show that the earlier the treatment is begun the more likelihood there is of its being successful, and it has been asserted that little, if any, benefit can be expected if the use of the remedy be delayed beyond the fourth or fifth day of disease. In the present series

\* Case XLVI, in which bacteriological examination was negative, is omitted from the table. The patient's age was 7 years—recovered.

series of cases, in the majority (thirty-seven) treatment was commenced on or before the fifth day, but there are comparatively few cases (twelve) in which it was begun in the earliest stage (one to two days), and further, there are eight cases in which it was commenced late (after five days).

The mortality is related rather to the number of cases than to the previous duration of the disease, and does not indicate the seriousness of delaying treatment, which European reporters have led us to expect. Of the eight cases in which treatment was commenced late, only one died. This case is reported in detail in Appendix C (Case IX), and a reference to it will show that very serious structural damage had been produced before the patient came under treatment. Indeed, this question, though expressed as a matter of time, has reference, in reality, to the probable occurrence of more or less serious pathological tissue changes after the first four or five days of the disease. Since, however, these may occur earlier, or not at all, and in any case depend on factors other than the duration of the illness, it does not appear to be reasonable to fix any time limit to the use of the remedy; nor can we as yet state any limit from the point of view of the patient's condition. Provided that the patient is alive, there is not only no reason why the serum should not be used in any stage of the disease, but, on the contrary, every reason for giving the patient the chance of the possible benefit. There is no doubt, however, that the earlier the treatment is commenced the better.\*

The principal factors which may have influenced the mortality have now been considered, and the results may be briefly summarised as under:—

1. The disease appears to have been of usual severity.
2. The sex and age distribution were not such as to influence the result favourably.
3. The cases were for the most part uncomplicated, and were in so far favourable.
4. The treatment was not commenced at specially favourable stages of the disease.

It may be added that, as far as can be ascertained, the general treatment of the cases was similar to that practised in former times, the only new feature being the use of the serum.

It will be evident, therefore, that the conditions under which the remedy was used did not influence the result favourably, and the conclusion is inevitable that the reduction in the case mortality was produced by the serum.

A reference to some further points reported upon will be seen to give every support to this conclusion.

In reply to the question concerning the influence of the serum on the usual symptoms, the following statements were made:—

Usual symptoms ameliorated in	...	...	...	...	...	...	...	33 cases.
Do	"markedly" ameliorated in	...	...	...	...	...	...	9 "
Do	not ameliorated in	...	...	...	...	...	...	3 "
								45

The disease was, therefore, rendered milder in forty-two of the forty-five cases which were certainly diphtheria.

Similar evidence is afforded by the statements as to the duration as compared with previous experiences. Of the forty-five cases of diphtheria, the duration is said to have been:—

Shorter than usual in	...	...	...	...	...	...	...	27 cases.
"Much" shorter than usual in	...	...	...	...	...	...	...	9 "
Unaffected in	...	...	...	...	...	...	...	1 "
Longer in	...	...	...	...	...	...	...	3 "

The duration of the disease was less than usual in thirty-six of the forty cases which recovered.

Even more direct evidence of the beneficial influence will be gathered from the following extracts from the reports:—

Case I.—"Temperature fell from 103 degrees to normal in six hours after first injection, never rising again to anything of importance. Pulse rate fell. Tonsils shrank to  $\frac{1}{2}$  size. Membrane commenced to separate rapidly in the first twenty-four hours."—DR. F. H. FURNIVAL, Auburn.

Case V.—"When first seen—at time of first injection—the case appeared to be a fairly severe one. There was extensive deposit of membrane on the fauces, considerable cellulitis of neck, fætor of breath, rapid pulse, &c. Symptoms—local and general—entirely disappeared two days after the first injection."—DRS. F. W. and R. C. BARTLETT, Cowra.

Case VIII.—"When I saw this case in its fifth day the pillars of the fauces, uvula, tonsils, back of pharynx and nostrils were covered with diphtheritic membrane; temperature 103 degrees; urine full of albumen; pulse very rapid, and the child in a weak and exhausted state. In spite of the usual remedies, e.g., chlorinated soda, hydrarg. bichlor., carbolic acid, peroxide of hydrogen, boroglyceride, &c., and the aid of two trained nurses, the case was getting rapidly worse. By fifteen hours after the first injection the fever had considerably lessened, and the spread of the membrane had stopped. The improvement in the patient was rapid. I am sure that if the serum had not come to our aid the child would not have lived thirty hours." The patient recovered.—DR. O. H. REDDALL, Randwick.

Case XIII.—"The membrane began to clear twenty-four hours after first injection, all gone on third day after injecting. Fall of temperature, which was exceedingly high—105.2—to normal in thirty-six hours."—DR. CHAS. EDWARD LESTER, Mudgee.

Case XVI.—"Patient convalesced much more rapidly than cases previously treated."—DR. F. M. BLACKWOOD, Summer Hill.

Case XVII.—"The temperature on the day of the first injection was almost continuously at 105 degrees; it fell in twenty-four hours to normal, and remained so. The duration of the illness, as compared with my previous experience of diphtheria, was shortened in a most striking manner."—DR. A. H. FELDSTAD, Randwick.

Case XXI.—"The usual symptoms were "undoubtedly" ameliorated. Improvement in the subjective symptoms such as pain, difficulty in swallowing, &c., two hours after the injection. A decided general improvement in twelve hours, which soon resulted in complete recovery."—DR. THOS. A. MACHATTE, Bathurst.

Case XXIII.—"After the first dose throat easier, swelling of neck subsided, breathing freer. General feeling of improvement. This case was convalescent in about twenty-one days."—DR. A. E. COX, Forbes.

Case

\* In order to economise the then scanty stock of serum, by limiting its use to the cases in which it was most likely to prove beneficial, the first issue of "antitoxin" by the Board was accompanied by a notification that for the present only practitioners having cases of less than four days' duration would be supplied. Though this regulation was very soon withdrawn, some misapprehension appears to have been created as to its intention. I have considered it necessary to make the above remarks on the subject in order to remove any remaining doubt as to the meaning of the Board's action.

Case XXIV.—“There was a decided improvement eight hours after injection. The recovery was much more rapid (than usual).”—Dr. L. F. BUCKNELL, Kogarah.

Case XXVI.—“The usual symptoms were ameliorated, some of them markedly so; the sense of well-being was very noticeable, the patient not being prostrated, but kept in remarkably good spirits notwithstanding that the case was a very severe one—the membrane being very extensive, color very bad, and angina well marked and painful.”—Dr. CECIL PURSER, Lewisham.

It would be easy to add further similar opinions to these already quoted, but sufficient have been given to illustrate the sort of work the serum is capable of doing. On the whole there is almost unanimous testimony to the beneficial influence of the serum.

## PART II.

THERE is further to be considered, the question of ill-effects. On the first introduction of the serum into practice, numerous statements were made as to the possibility of septicæmia, heart failure, renal disease, &c., being produced by the use of such a therapeutic measure.

Practical experience of the treatment, which has now been made use of in several thousand cases, has shown that these ominous prophecies have no basis of facts. They indeed seem to have been the outcome of purely *a priori* reasoning. There are, however, certain inconveniences of a much milder character which appear to be unavoidably attendant on the use of the serum.

Symptoms unusual in diphtheria are reported in twenty-four of the fifty-five cases, and specified as follows:—

Skin eruptions .. .. .	18 cases.
Urticaria .. .. .	9 ”
Do and erythema .. .. .	1 ”
Do and joint pains .. .. .	5 ”
Roseola .. .. .	1 ”
“Papular rash” and joint affections .. .. .	1 ”
“Slight rash” .. .. .	1 ”

None of these cases were fatal. In all the eruptions were temporary and unaccompanied by serious consequences.\* There were reported further:—

Rheumatic pains .. .. .	2
Convulsions .. .. .	1
Vomiting .. .. .	2

The rheumatic pains were of short duration in both instances.† The convulsions occurred in a fatal case in a child aged 1½ years. Within five hours after the injection this patient died of asphyxia, due to obstruction of the larynx by membrane. Although Dr. Evershed, of Bega, attributes the convulsions to the serum, the influence of the asphyxia does not appear to have been sufficiently excluded. Vomiting can hardly be considered an unusual symptom of diphtheria, and is only referred to here on account of its being so reported. In one case vomiting appeared before the serum was injected, and continued till the patient died; in the other it occurred three days after the injection, and ceased in a day or two.

Swelling of the Submaxillary Glands.—Drs. F. W. and R. C. Bartlett, of Cowra, remarked “unusual degree of swelling of the submax. glands and cellular tissues” in their serum-treated cases. Dr. Robert Dick, of Gulgong, has also referred to this point, stating that in one case tenderness and enlargement of the submaxillary glands on both sides appeared after the throat had been well some days. These swellings appear to have subsided without causing further trouble.

These, as far as I am aware, are the only instances recorded of such an occurrence.

It has already been shown that urinary, cardiac, pulmonary, and nervous troubles did not occur in excess, and it may be mentioned that no local ill-effects were observed as a result of the injections.

In this connection the dosage may be referred to. The amounts of serum used are given in the general table; in the small table below a comparison between the dosage and mortality is shown.

TABLE showing Mortality in relation to Dosage.

Amount.	No.	Recovered.	Died.
10 cc.	4	3	1
15 ”	1	1	.....
20 ”	13	12	1
25 ”	3	3	.....
30 ”	11	10	1
35 ”	9	9	.....
40 ”	7	6	1
45 ”	1	1	.....
50 ”	5	2	3
60 ”	1	1	.....
	55	48	7

Initial doses varied from 10–25 cc.; for the majority of cases 40 cc. or less sufficed.

It will be seen that the mortality does not stand in any direct relation to the dosage. There is no reason to attribute the three deaths in the 46–50 cc. group to the amount of serum used. A reference to the general table will show that the cases were initially very serious ones. The dosage recorded neither ascends to the maximum nor descends to the minimum of European records.

The

\* Drs. F. W. and R. C. Bartlett report in one case purple discoloration of the neck and chest as being observed by the nurse in charge. It disappeared in a few hours.

† Dr. A. E. Cox, of Forbes, notes that these rheumatic pains, though resisting the usual anti-rheumatic remedies, were relieved by the administration of iron.

The sites chosen for injection varied. The front of the chest, the abdomen and lumbar regions, the scapular, interscapular, and subscapular regions of the back, and the thigh were made use of by different operators. They seem to have been decided on more as a matter of convenience than anything else, and do not appear to have had any influence on the result.

There remains for consideration the fatal cases. The immediate causes of death were stated to be—

Syncope (fourth day of illness) ... ..	1
"    (post-diphtheritic)... ..	3
Asphyxia ... ..	2
Broncho-pneumonia and exhaustion ... ..	1

The particulars relating to these are as follows:—

Case II.—Syncope. "At the time of the first injection there appeared to be little hope of the patient living many hours." The patient lived for three days after.

Case IV.—Broncho-pneumonia and exhaustion. "This patient had suffered from a previous attack or attacks of pneumonia. She had undoubtedly been ill-nourished for a very long time, and had been suckling her seven children successively almost continuously for ten years."

Case XXVII.—Post-diphtheritic heart failure. The patient had been ailing fourteen days, and was in a very weak condition when coming under treatment. "The heart failure could not be attributed to the anti-toxin."

Case XXX.—Post-diphtheritic heart failure occurred after eighth day of illness. (*Vide App. C, Case VII.*)

Case XXXIX.—Heart failure on fifteenth day. "This was a very malignant case. The child would probably have died of toxæmia [under other treatment] instead of living to die of heart failure."

Case XLIX.—Asphyxia, due to membrane in larynx, five hours after injection. "This was the most rapidly fatal case that has come under my observation during the present epidemic."

Case LI.—Failure of the heart's action due to asphyxia forty-two hours after the injection. "I am not certain as to the diphtheritic aspect of the disease." The patient had bronchitic symptoms.

It is clear from these reports that the serum had no share in producing the fatal issue, on the other hand, the deaths were apparently due to the existence of conditions which that remedy could not be expected to benefit.

Unusual symptoms, which could be attributed to the use of the serum, appeared, therefore, in about twenty of the cases. They were slight in nature, and occurred in the patients who recovered. There is no evidence that the serum produced any ill-effects which can be considered as prohibitive of its use.

The experiences recorded in the present series of cases are obviously in favour of the serum treatment, and the opinions of the reporting physicians are unhesitatingly expressed in its praise. The results show that the serum has suffered no deterioration on account of its long journey, and speak well for its "keeping" properties. They show also that it is a remedy which may be safely and beneficially used. At the most modest estimate its use has been followed by a reduction in mortality to about half the usual rate. This means that in New South Wales alone about 200 lives a year can be saved by its use.

As the method of administration is simple, and one with which every medical practitioner is well acquainted, there does not appear to be any reason why this saving of lives should not be realised in practice.

I have, &c,

FRANK TIDSWELL.

## APPENDIX A.

### LIST OF QUESTIONS IN SCHEDULE.

Patient's initials; sex; age; residence.

- How long had the patient been ill previous to the use of the curative serum?
- Particulars as to the injections;—kindly state—
  - How many injections were given?
  - What quantity of curative serum was used for each injection?
  - What interval of time elapsed between the injections?
  - What site was chosen for each injection?
- Do you consider that the usual symptoms of diphtheria were ameliorated by the use of the serum?
- Were any of the *usual* complications of diphtheria observed?
- Was there any difference noted in the duration of the illness, as compared with your previous experience of diphtheria not treated by serum?
- Did the patient present any symptoms which, in your experience, are unusual in cases of diphtheria not treated by serum? Information is specially requested concerning the local effect of the injection, urticaria, or other rashes, joint pains, tendency to heart failure, renal disease, septicæmia, or any other symptom which might be considered an ill-effect of the serum.
- Was tracheotomy or intubation performed; if so, was the patient operated on before or after the injection of the serum?
- Was the general health at the time of onset such as would render the patient less able to resist an attack of diphtheria?
- Was the diphtheria complicated by the co-existence of any other infectious disease?
- If the case was fatal, kindly state—
  - Immediate cause of death.
  - Date of death in relation to duration of illness.
- Was a bacteriological report obtained; if so, what was the result?
- Remarks. (In this column the practitioner is requested to state any unusual or untoward features of the case which are not specially inquired for above.)

## APPENDIX B.

APPENDIX B.  
TABLES SHOWING GENERAL CONTENTS OF REPORTS.  
CASES bacteriologically confirmed.

No.	Sex.	Age.	Predisposing illness.	Ailing.	Particulars as to injections.		Usual symptoms and complications.	Unusual symptoms.	Duration.	Cured.	Died.	Reporting physician.	Remarks.
					Amount.	Site.							
I	M	y. m. 5 0	None	24 hours	16 cc. 3 cc. 10 cc.	Scapular region	Usual symptoms markedly ameliorated	None	Much shorter.	1		E. H. Furnival, Auburn	
II	F	10 0	"	36 "	12 cc. 12 cc. 25 cc.	Interscapular region	Usual symptoms ameliorated; paralysis of palate syncope; toxæmic symptoms of great severity.	Vomiting began before injections, and persisted.		1		F. W. Bartlett } Cowra. R. C. Bartlett }	Death from syncope, 4th day.
III	M	45 0	"	24 "	12 cc. 12 cc. 25 cc.	"	Usual symptoms ameliorated (?); paralysis of palate and general persistent and very marked muscular weakness; paralysis of external rectus of left eye, albuminuria.	None	Shorter	1		"	
IV	F	32 0	Pneumonia, malnutrition.	4 days	25 cc. 12 cc. 12 cc.	"	Usual symptoms ameliorated; laryngeal symptoms; broncho-pneumonia.	Purple discoloration of neck and chest on day after first injection; lasted few hours.		1		"	Death from broncho pneumonia, 13th day; laryngeal symptoms; cleared up before death.
V	F	5 0	None	2 "	25 cc. 15 cc.	"	Usual symptoms undoubtedly ameliorated.	None	Much shorter.	1		"	Severe case.
VI	M	13 0	"	9 hours	25 cc. 12 cc. 12 cc.	"	Usual symptoms much ameliorated.	"	Unaffected	1		"	"
VII	F	18 0	"	48 "	20 cc. 10 cc. 10 cc.	Outerside of thigh	Usual symptoms most decidedly ameliorated, albuminuria.	Erythema and urticaria; lasting a few days.	Much shorter.	1		P. S. Kendall, Petersham.	
VIII	F	5 0	Not known	7 days	15 cc. 15 cc. 8 cc.	Front of chest	Usual symptoms ameliorated, albuminuria.	Urticaria and slight joint pains, lasted a few days.	Shorter	1		O. H. Reddell, Randwick.	Nasal diphtheria, very malignant case.
IX	M	8 0	None	3 "	15 cc. 5 cc.	Interscapular region	Usual symptoms ameliorated.	None	"	1		R. Dick, Gulgong	
X	F	24 0	"	4 "	20 cc. 10 cc. 5 cc.	"	Usual symptoms ameliorated albuminuria and casts.	Urticaria 4-12 days after injection; joint pains 20th day; lasted 2 days.	"	1		"	Submax glands both sides became swollen and tender twelve days after injection; throat at time normal.
XI	F	5 0	Anæmic and weak	3 "	20 cc. 10 cc. 5 cc.	Front of chest and interscapular region.	Usual symptoms ameliorated.	Urticaria on 7th day after injections; joint pains 13th day.	"	1		"	
XII	M	4 0	None	3 "	20 cc. 10 cc.	Interscapular region	Usual symptoms ameliorated.	Vomiting 4-7 day after injection.	"	1		W. H. Coutie, Petersham.	
XIII	F	6 0	"	6 "	25 cc. 15 cc. 5 cc.	Subscapular region	Usual symptoms ameliorated; albuminuria; weakness of lower extremities.	Roseola near site of injection 7th day.	Decidedly shorter.	1		C. E. Lester, Mudree.	
XIV	F	22 0	"	4 "	20 cc. 15 cc.	Subscapular region front of chest	Usual symptoms ameliorated; albuminuria; ten days after injection paralysis.	None	Shorter	1		D. Doolan } Yass. P. T. Thane }	Paralysis late.
XV	F	6 0	"	24 hours	15 cc. 7 cc.	Outer side of thigh	Usual symptoms ameliorated, albuminuria.	"	"	1		G. J. Seale, Petersham.	
XVI	F	9 0	"	3 days	20 cc. 10 cc. 5 cc.	Interscapular region Right loin.	Usual symptoms ameliorated; slightly albuminuria for 3 days.	"	Much shorter	1		F. M. Blackwood, Summer Hill.	
XVII	M	9 0	"	4 "	20 cc. 10 cc.	Interscapular region	Usual symptoms ameliorated; albuminuria	Urticaria and joint pains on 10th day; lasted 24 hours.	"	1		A. H. Fieldstad, Randwick	
XVIII	M	2 6	"	4 "	15 cc. 10 cc. 10 cc.	"	Usual symptoms ameliorated; slight albuminuria.	None	"	1		J. Marshall, Bega	Tracheotomy performed two days before serum used. Canula removed 9th day.
XIX	F	20 0	Chlorotic and delicate. Sore throat.	12 hours	10 cc. 10 cc.	"	Usual symptoms markedly ameliorated	"	Shorter	1		E. Harvey, Wentworth.	

CASES bacteriologically confirmed—continued.

No.	Sex.	Age.	Predisposing Illness.	Ailing.	Particulars as to injections.		Usual symptoms and complications.	Unusual symptoms.	Duration.	Cured	Died.	Reporting physician.	Remarks.
					Amount.	Site.							
XX	M	y. m. 4 6	Anæmia .....	4 days	25 cc. ....	Thigh .....	Usual symptoms not ameliorated; paralysis .....	Papular rash in several places; joint pains and swellings 7-12 days	Longer .....	1		C. S. Dowdell, Sydney .....	Septicæmia and broncho-pneumonia prolonged case. Membrane disappeared from throat four days after injection.
XXI	F	20 0	None .....	2 "	20 cc. ....	Interscapular region	Usual symptoms undoubtedly ameliorated .....	None	Much shorter	1		T. A. Macchattie, Bathurst	
XXII	M	26 0	" .....	24 hrs.	20 cc. ....	Shoulder .....	Usual symptoms ameliorated; albuminuria .....	Rheumatic pains in all limbs.	"	1		A. E. Cox, Forbes.	
XXIII	F	25 0	Delicate .....	3 days	16 cc. } 8 cc. } 8 cc. } 32 cc.	Interscapular region Lumbar region.	Usual symptoms ameliorated; palate paralysis, albuminuria; tendency to syncope.	Rheumatic pains in knees and elbows.	Shorter .....	1		" "	
V	F	10 10	" .....	4 "	20 cc. } 10 cc. } 30 cc.	Interscapular region	Usual symptoms "most certainly" ameliorated, paralysis of palate; great prostration, albuminuria.	Urticaria and joint pains.	"	1		L. F. Bucknell, Kogarah.	
	M	10 0	None .....	36 hrs.	10 cc. ....	Front of chest ..	Usual symptoms markedly ameliorated, slight albuminuria.	Urticaria 7th and 8th days after injection.	"	1		C. Purser, Lewisham	
	F	32 0	" .....	40 "	20 cc. } 10 cc. } 5 cc. } 35 cc.	" "	Usual symptoms markedly ameliorated, slight albuminuria; palate paralysis.	Urticaria from 11th to 14th days after injection.	Longer .....	1		" "	Immediate effect markedly beneficial, but convalescence protracted.
VII	F	1 5	" .....	14 days	20 cc. } 10 cc. } 30 cc.	" "	No evidence of amelioration; albuminuria .....	None	"	1		W. F. Litchfield, H.S.C.	Death from heart failure on sixteenth day of illness.
XXVIII	F	2 8	" .....	8 "	10 cc. ....	" "	Usual symptoms ameliorated .....	"	Shorter .....	1		" "	
XXIX	F	6 0	" .....	4 "	20 cc. } 10 cc. } 30 cc.	" "	"	"	"	1		" "	
XXX	M	4 0	" .....	3 days probably longer.	20 cc. } 20 cc. } 40 cc.	" "	Usual symptoms not ameliorated; albuminuria, (uræmia?) anuria.	Urticaria .....	"	1		" "	Death from heart failure.
XXXI	F	4 0	" .....	3 days	20 cc. ....	Front of chest .....	Usual symptoms ameliorated; laryngeal symptoms	Urticaria .....	Shorter .....	1		" "	Tracheotomy performed before injection.
XXXII	M	5 5	" .....	5 "	20 cc. } 10 cc. } 30 cc.	" "	Usual symptoms ameliorated; albuminuria; paralysis.	"	"	1		" "	
XXXIII	F	3 4	" .....	10 "	20 cc. } 10 cc. } 30 cc.	" "	Usual symptoms ameliorated; albuminuria; paralysis.	None	"	1		" "	
XXXIV	M	5 6	" .....	4 "	20 cc. } 10 cc. } 30 cc.	" "	Usual symptoms ameliorated; laryngeal symptoms.	"	"	1		" "	Tracheotomy at time of first injection.
XXXV	M	2 0	" .....	4 "	20 cc. } 10 cc. } 30 cc.	" "	Usual symptoms ameliorated, albuminuria; cardiac asthenia.	Urticaria .....	"	1		" "	
XXXVI	M	4 0	" .....	4 "	20 cc. } 10 cc. } 30 cc.	" "	Usual symptoms ameliorated; albuminuria; cardiac asthenia.	None	"	1		" "	
XXXVII	M	7 0	" .....	6 "	20 cc. ....	" "	Usual symptoms ameliorated .....	"	"	1		" "	
XXXVIII	M	4 0	" .....	6 "	16 cc. ....	" "	"	"	"	1		" "	
XXXIX	F	6 8	" .....	4 "	20 cc. } 10 cc. } 10 cc. } 50 cc.	Chest and abdomen.	Usual symptoms "ameliorated; albuminuria, cardiac asthenia.	"	"	1		" "	Death from heart failure on fifteenth day; very malignant case.
XL	F	9 0	" .....	4 "	18 cc. ....	Abdomen .....	Usual symptoms ameliorated; slow pulse during convalescence.	"	Shorter .....	1		" "	
XLI	M	3 3	" .....	5 "	12 cc. ....	Not stated .....	Usual symptoms ameliorated .....	"	"	1		" "	
XLII	F	4 7	" .....	3 "	10 cc. ....	Abdomen .....	Usual symptoms ameliorated; albuminuria ..	Urticaria .....	"	1		" "	
XLIII	M	3 0	" .....	3 "	16 cc. } 16 cc. } 32 cc.	" "	Usual symptoms ameliorated, albuminuria; laryngeal symptoms.	"	"	1		" "	Tracheotomy at time of first injection.
XLIV	F	1 9	" .....	7 "	20 cc. ....	" "	Usual symptoms ameliorated; albuminuria; paralysis, laryngeal symptoms.	None	"	1		" "	Tracheotomy at time of injection.
XLV	F	5 5	" .....	4 "	20 cc. } 10 cc. } 10 cc. } 10 cc. } 60 cc.	Not stated .....	Usual symptoms ameliorated, albuminuria, general asthenia.	Urticaria .....	Longer .....	1		" "	Tracheotomy at time of first injection.

CASES bacteriologically examined with negative result.

Case.	Sex.	Age.	Predisposing illness.	Ailing.	Particulars as to injections.		Usual symptoms and complications.	Unusual symptoms.	Duration.	Cured.	Died.	Reporting Physician.	Remarks.
					Amounts.	Site.							
XLVI	F	yr. m. 7 0	None	5 days.	15 cc. } 10 cc. } 25 cc.	Right lumbar region, left lumbar region.	Usual symptoms ameliorated	Slight rash near site of injection, soon faded.	Shorter	1		R. T. Jones, Ashfield.	

36-B

CASES not bacteriologically examined.

Case.	Sex.	Age.	Predisposing illness.	Ailing.	Particulars as to injections.		Usual symptoms and complications.	Unusual symptoms.	Duration.	Cured.	Died.	Reporting Physician.	Remarks.
					Amounts.	Site.							
XLVII	F	yr. m. 52 0	Over exertion	2 days.	20 cc. } 20 cc. } 40 cc.	Interscapular region	Usual symptoms most decidedly ameliorated; paralysis of throat muscles; extreme debility; tendency to heart failure	None	Much shorter.	1		A. Fitzpatrick, Crookwell.	Case seemed hopeless till serum used.
XLVIII	F	15 0	None	3 "	15 cc. } 10 cc. } 20 cc.	" "	Usual symptoms ameliorated; albumenuria; neuritis of arms.	"	Shorter	1		J. Marshall, Bega.	
XLIX	F	1 6	"	3 "	5 cc. } 20 cc. } 25 cc.	"	Symptoms not in the least ameliorated	Convulsions after injection.	"		1	M. F. Evershed, Bega.	Death five hours after injection from asphyxia. Most rapidly fatal case of present epidemic.
L	M	4 6	"	48 hours	19 cc.	Scapular region	Usual symptoms ameliorated	None	Shorter	1		F. H. Furnival, Auburn.	
LJ	F	14 0	"	14 "	10 cc.	Front of chest	Usual symptoms ameliorated; bronchitis; no membrane visible.	"	"		1	H. Dalton, Hartley Vale.	Death from asphyxia thirty-six hours after injection. "Not certain as to diphtheritic aspect of disease."
LII	M	5 5	"	4 days	20 cc.	" "	Usual symptoms ameliorated "in a marked degree."	None	"Materially shortened."	1		J. F. Codrington, Orange.	
LIII	M	5 0	"	3 "	20 cc. } 10 cc. } 30 cc.	Subscapular region	Usual symptoms very much ameliorated; paralysis of vocal cords.	"	Shorter	1		A. G. Cribb, Newcastle.	
LIV	F	9 0	"	24 hours	20 cc.	" "	Usual symptoms very greatly ameliorated	"	"	1		"	
LV	M	7 0	None	5 days.	20 cc. } 10 cc. } 30 cc.	" "	Usual symptoms very markedly ameliorated	"	"	1		"	Tracheotomy between first and second injection. Extensive membrane.

6

## APPENDIX C.

## REPORT OF TEN CASES OF DIPHTHERIA TREATED WITH THE RUFFER CURATIVE SERUM.

To the President of the Board of Health,—

Sir,

21 May, 1895.

The cases with which this report is concerned were treated in the diphtheria branch of the Sydney Hospital for Sick Children, Glebe Point, during the months of February and March, 1895.

The patients were under the care of Mr. C. P. B. Clubbe, M.R.C.S., L.R.C.P., Honorary Surgeon to the institution.

The observations were made on ten unselected consecutive cases, which are arranged in this report in the order of their admission to the hospital.

In none of the cases was there any history of recent predisposing illness, but in two the children were said to be "delicate."

Definite exposure to infection was only ascertained in two cases.

The injections were made with a Koch's ball injector under the skin of the front of the chest, all necessary aseptic precautions being taken. The amounts of serum used in each case are shown in Table I. Where 20 cc. were given at a time, the dose was divided; 10 cc. being injected into each side of the chest.

The general treatment of the cases was, for the most part, symptomatic. The patients had the usual diet of the hospital, consisting of milk (plain or peptonised), eggs, broths, milk puddings, Mellin's food, Benger's food, &c.

The presence of the bacillus diphtheriæ was reported present on admission in all cases. In one case (VII), the streptococcus pyogenes was reported in addition to the bacillus diphtheriæ. No observations were made as to the time the bacilli disappeared from the throat.

In the subjoined report the plan has been followed of considering the effect of the serum on each of the body systems separately:—

Under each system there has been made a preliminary note of the results of European observations, of which reports are to hand.

A statement of the symptoms observed in the present series of cases.

A comparison of these with the symptoms presented by previous cases in the hospital, which were not treated with serum.

A brief conclusion drawn from these data.

After each system has thus been considered in detail, the report terminates with a recapitulation and general conclusions.

A synopsis of the principal features of the disease observed in the present series of cases is given in Table I.

SYNOPSIS OF CASES.

No. of Case.	Initials.	Sex.	Age.	Type of Disease.	Operation.	Injections on— (day of disease).	Amounts of Serum.	Unusual symptoms.	Facial membrane—disappeared on— (after 1st injection).	Syncope—	Albuminuria.	Nervous Symptoms.	Cured.	Died.	Complications.	Bacteriology.	Time in Hospital.
I	J.G.	F.	Yr. mos. 4 0	Laryngeal ..	Tracheotomy on admission	3rd day ..	20 cc. ....	Urticaria 12th to 15th days after first injection.	None present.	None .....	None .....	None .....	1		None .....	Diphtheria bacilli on admission.	20 days.
II	R.M.	F.	2 8	Pharyngeal....	None.....	3rd day ..	10 cc. ....	Slight cellulitis for three or four days after injection.	6th day.	None .....	None .....	None .....	1		None .....	Bacilli found on admission.	10 days.
III	G.M.C.	F.	6 0	Pharyngeal ..	None. ....	4th day .. 5th day ..	20 cc. } 10 cc. } 30 cc.	A few small urticarial spots on 5th to 10th day.	5th day..	None .....	Slight amount present from 5th day after admission till discharged.	None... 1			None .....	do do ..	14 days.
IV	A.P.	M.	4 0	Pharyngeal and Laryngeal.	Tracheotomy on admission.	4th day .. 5th day .. 6th day ..	20 cc. } 10 cc. } 10 cc. } 40 cc.	None.....	6th day	Threatened on 18th day after admission.	From admission till 15th day after.	None... 1			None .....	do do ..	23 days.
V	L.L.	M.	5 3	Pharyngeal ..	None.....	5th day .. 6th day ..	20 cc. } 10 cc. } 30 cc.	A few small urticarial spots on 5th day.	5th day	None.....	Traces present from admission till discharge	None. . 1			None .....	do do ..	12 days.
VI	V.H.	M.	2 0	Pharyngeal and Laryngeal.	None .....	4th day .. 5th day .. 6th day ..	20 cc. } 10 cc. } 10 cc. } 40 cc.	.....	4th day..	Threatened three times—on 5th, 7th, and 8th days after last injection.	Traces from time of admission till 15th day after.	None. . 1			None .....	do do ..	23 days.
VII	R.M.	M.	4 0	Pharyngeal ..	None .....	2nd (?) day 3rd day ..	20 cc. } 10 cc. } 30 cc.	Urticaria 2 1/2 hours after first injection; lasted 2 days.	3rd day..	On day after admission, and on several subsequent occasions.	Copious on admission, and continued till death; casts &c.	None..... 1			Sepsis; death from uræmia (?)	Bacilli and streptococci found on admission.	6 days; taken home, & died 2 days later
VIII	F.McM.	F.	3 4	Pharyngeal ..	None .....	3rd day .. 4th day ..	20 cc. } 10 cc. } 30 cc.	None.....	3rd day..	None. ....	Present on admission, and continued till discharge.	None. . 1			None.....	Bacilli found on admission	17 days
IX	D.L.	F.	1 5	Pharyngeal ..	None .....	13th day .. 14th day ..	20 cc. } 10 cc. } 30 cc.	None .....	Persisted till death.	Threatened from time of admission.	Copious; casts, renal cells; urine small in amount.	None .. 1			Death from heart failure and ashenia.	Bacilli found .....	2 days.
X	W.C.T.	M.	5 6	Pharyngeal and Laryngeal.	Tracheotomy on admission	4th day .. 5th day ..	20 cc. } 10 cc. } 30 cc.	None .....	4th day	Threatened several times (nine in all). First on 5th day after injection.	None .....	None ... 1			None .....	Bacilli found on admission.	16 days.

THE EFFECT OF THE SERUM.

1. On the general condition of the Patient.

In most of the recorded cases improvement in the general condition of the patient is mentioned as occurring after the use of the serum.

In the present series, with the exception of cases I, II, and VIII, who did not look at all ill, the children presented the usual appearances of diphtheria. The look of "ill-being," lack of tone, pallor, drowsiness, apathy, irritability, and impatience of disturbance, were present in most of them. In some there was added the aspect of "air-hunger," respiratory stridor, cyanosis, dyspnoea, and the laboured respiration due to laryngeal obstruction.

In the successful cases (whether operated upon or not) a marked change was apparent within twenty-four or forty-eight hours after the injection of the serum. The "sick" appearance, the pallor, drowsiness, apathy, and irritability all disappeared. The "muddy" complexion became clear. In the course of two or three days the formerly inert child was lively and cheerful, playing with toys, eager for food, and taking an active interest in its surroundings.

In ante-serum days a week at least would elapse, even in the mildest cases, before such a condition was reached, and usually a much longer period was required. It was the rapidity of the change which constituted its most striking feature.

In the two fatal cases no such change occurred. In case VII the pallor, languor, and irritability were only slightly abated, and in case IX the extreme depression and weakness did not show the least sign of improvement.

The observed effect on the general condition of the patients in the series under consideration is thus in accord with that reported by European observers.

2. On the duration of the Illness.

It is stated that by the use of the serum the duration of the illness is curtailed.

In the present series of cases the duration has been estimated by the number of days the patients remained in the hospital.

Case II remained in.....	10 days	} Non-operation cases— Average, 15.5 days; max., 23; min., 10.
„ III „ .....	14 „	
„ V „ .....	12 „	
„ VI* „ .....	23 „	
„ VIII „ .....	17 „	

\* This case presented very marked laryngeal symptoms on admission. Its inclusion amongst the non-operation (pharyngeal) cases perhaps unduly lengthens the average stay in hospital. Without it this would be 13.2 days.

Case I remained in .....	20 days	} Operation cases— Average, 19.6 days; max., 23; min., 16.
„ IV „ .....	23 „	
„ X „ .....	16 „	

(The two fatal cases are excluded.)

From the previous records the average times were found to be:—For non-operation cases, 15 days; maximum, 31; minimum, 3. For operation cases, 27 days; maximum, 58; minimum, 8. Comparing the two series of results we have:—

Cases.	Operation (days in).	Non-operation (days in).	General Average.
Not treated with serum .....	27 (8-58)	15 (3-31)	21 days
Treated with serum.....	19.6 (16-23)	15.5 (10-23)	14.6 „

In the operation cases, therefore, the stay in hospital was shorter than formerly; in the non-operation cases about the same. On the whole, the present cases remained in the hospital for a much shorter time than former cases.

3. The effect on the local condition.

It has been stated that after the injection of serum the membrane ceases to spread, and disappears in from twenty-four hours to three days. In the present series of cases the course of events was usually as follows:—There was, first, a lessening of the "angry" appearance of the throat. The membrane not only ceased to spread, but became more "isolated," so to speak; the inflammatory condition appeared to be limited to its immediate neighbourhood. The membrane in most cases became white and shining, and then gradually disappeared.

The actual times after the first injection at which the throat was definitely free from membrane are shown in the following table:—

In Case	II.—On the sixth day	} Average, 4.25 days; minimum, 3; maximum, 6.
„	III— „ fifth day	
„	IV— „ sixth day	
„	V— „ third day	
„	VI— „ fourth day	
„	VII— „ third day	
„	VIII— „ third day	
„	X— „ fourth day	

Unfortunately, a comparison with actual time of disappearance of membrane in non-serum cases could not be made, as no complete record has been available. Usually, however, except in the mildest cases, the membrane persisted for a week or ten days. The serum-treated cases thus have an advantage of several days.

In the former cases, moreover, treatment directed towards dissolving the membrane, and destroying the bacilli producing it, was usually indulged in. In the present series of cases the only application was Liq. Sod. Chlor. (1-2 sq.), with which the throat was mopped out every four hours. When the membrane disappeared no local application at all was made. No reappearance of membrane occurred in any of the cases,

cases, but the throat did not appear to reach its normal condition any earlier than usual. The sites the membrane had occupied presented, in most of the cases, a dusky appearance for several days. There was also some erosion in several of the cases, and definite ulceration in two of them.

It may be mentioned that the improvement in the throat condition occurred in the fatal case which lived long enough to exhibit it.

Swollen submaxillary glands in the few cases they were present rapidly subsided.

In the operation cases the children suffered less from dryness and the other difficulties usually attendant on tracheotomy. The membrane ceased to spread and was rapidly eliminated. The wounds were healthy-looking, free from membrane throughout, and readily healed up. No cellulitis of the neck occurred.

The tracheotomy canula could be dispensed with at an earlier date.

In Case I the canula was permanently removed on the third day.

" IV " " " fourth "

" X " " " " third "

From the previous records it was found that the canula was most commonly removed on the sixth, to eighth day. (Average, 6.5; minimum, 3; maximum, 28.)

In the present series of cases, therefore, the canula could be permanently removed in about half the usual time.

It is evident that the serum had a marked beneficial influence on the local condition in the cases under consideration. The membrane disappeared from the throat earlier than in former cases, though not so rapidly as it has been said to do, whilst that in the trachea was even more rapidly got rid of.

#### 4. The effect on the Temperature.\*

By several observers it has been stated that the temperature became normal in the course of a day or two after the injections. The final fall occurred sometimes after the first, sometimes only after subsequent injections.

In the present series of cases the initial temperatures were all subfebrile (99.6-101.6 degrees). The period following the injections was usually characterised by irregularity. The normal (98.4 degrees) was touched in periods varying from eight to twenty-four hours after the immediately preceding injection. There then followed, in some instances, a period lasting a few days, characterised by irregular rises to about 100 degrees, after which the temperature took the irregular subnormal course usual in diphtheria. A very careful analysis of the periods immediately following the injections has yielded indefinite results. In several cases the apparent effect of the injection was a fall of 1 or 2 degrees, then a rise of 1 or 2 degrees, which was either maintained till a subsequent injection, or followed by a fall to normal. In some cases, however, a rise followed directly on the injections, in others a fall to normal resulted, either in a straight course or with irregular small rises intervening. These effects occurred irrespective of the number of the injection (first, second, or third). Similar irregularities are exhibited in the charts of non-serum cases, so that probably no special significance attaches to them.

The final falls to normal (*i.e.*, after which no rise to 100 degrees or more occurred for several days) are shown in the following table:—

Case.	Initial Temperatures.	Number of Injections.	Amount of Serum used.	Temperature became permanently low (under 100° F.)
I	100.8°	1	20cc.	Eight hours after injection.
II	Normal.	1	10cc.	Third day after injection. (Rose after injection.)
III	101.6°	2	30cc.	Sixth day after first; fifth day after last injection.
IV	100.8°	3	40cc.	Third day after first; first day after last injection.
V	101°	2	30cc.	Thirty-two hours after first; eight hours after last injection.
VI	100°	3	40cc.	Sixteen hours after first injection.
VII	Normal.	2	30cc.	Showed irregular rises till termination.
VIII	"	2	30cc.	Fourth day after first; third day after last injection. (Rose after injection.)
IX	99.6°	2	30cc.	Rose almost continuously till termination.
X	100°	2	30cc.	Third day after first; second day after last injection.

It will be observed that a permanently low temperature was reached in various periods, and no constant effect in reducing the temperature was noticed.

The temperature in diphtheria is always a very variable factor, especially in children. It is only in the early stages that anything like a febrile condition is exhibited (in the absence of complications).

The previous records of the hospital show that in recovering cases temperatures originally subfebrile (100-101 degrees) became normal, as a rule, during the first day or two after admission, and higher temperatures (up to 103 degrees) became normal in a few days. In fatal cases (as also in case IX of the present series) there was not uncommonly a rise to the end. In the subsequent course the temperatures usually oscillated about the normal for a few days, after which they took an irregular subnormal course, showing a total disregard for physiological diurnal variations, and occasionally, even in the absence of any recognised complications, shooting up temporarily to 100 degrees or higher.

The same general characters were exhibited by the temperatures in the present series of cases. No constant features were exhibited in them foreign to former (non-serum) cases. The charts in the two classes of cases are very similar.

The writer has to acknowledge his inability to note any distinctive characters in the temperatures of the present series. It is very possible that the observed fluctuations depend on causes other than the serum. It can only be said, therefore, that the injection of the serum was not observed to produce any ill-effect on the patients as regards temperature.

In the cases in which urticaria occurred a slight increase of temperature accompanied the rash.

\* In the present series the temperature was always taken in the axilla.

## 5. On the Circulatory System.

## THE PULSE.

The general features of the pulse observed in the present series of cases are given in the accompanying table:—

TABLE showing the general features of the Pulse.

Case.	No. of Injections.	Amount of Serum used.	Age.	Normal Pulse—Daily range.	Initial Pulse.			Time in which Pulse reached normal.			Condition of Pulse, subsequent to injections.						
					Rate.	Rhythm.	Strength.	After 1st injection.	After 2nd injection.	After 3rd injection.	Average daily range.	Max.	Min.	Rhythm.	Strength.		
I	1	20 cc.	yr. m.	Per minute.	138	Irregular	Soft	40 hours				Per minute	120-80	148	74	Regular	Strong.
II	1	10 "	2 8	100-90	110	Regular	Medium	2 "				117-85	130	80	"	Soft.	
III	2	30 "	6 0	90-80	188	"	Soft	48 "	24 hours			120-48	120	80	"	Strong.	
IV	3	40 "	4 0	100-90	144	Irregular	Medium	72 "	48 "	24 hours		105-80	120	60	Regular for a time, but relapsed.	Soft.	
V	2	30 "	5 5	90-80	120	Regular	Medium	24 "				110-84	123	74	Regular	Strong.	
VI	3	40 "	2 0	120-100	128	"	Soft	24 "	4 hours			113-85	122	74	Usually regular, at times irregular	Soft.	
VII	2	30 "	4 0	100-90	120	"	"	20 "				110-89	116	80	Regular	"	
VIII	2	30 "	3 4	100-90	120	"	Medium	52 "	24 hours			117-99	120	88	"	Medium	
IX	2	30 "	1 5	120-100	120	Irregular and intermittent	Soft										
X	2	30 "	5 6	90-80	120	Irregular	Very soft	96 "	72 hours			108-78	120	68	Irregular	Soft.	

*The Pulse frequency.*

The normal range of the pulse in children is difficult to fix. The figures given in the table as the daily range according to age are averages of those in standard works on the subject.

In European reports it is stated that the pulse frequency becomes reduced, and reaches the normal in two or three days after the use of the serum. Relapse, however, occurred in several of the recorded cases.

In the present series the initial pulse rates, with one exception (case IX), were above the normal limits. The time in which they became normal varied from two hours to four days after the first injection, and from two hours to three days after the last injection. The averages were forty-two hours and twenty-six hours respectively. The reduction was in all cases coincident with the fall of temperature.

From the previous records it was found that in some cases the normal frequency was reached sometimes within a few hours of admission; sometimes the high rates persisted for a week or longer, even when the temperature had become normal in a day or two.

The present series has the advantage of constancy, the pulse rates in all cases becoming normal within a few days.

These results are therefore in accord with the statements of European observers.

The subsequent daily range was in all cases in excess of the normal given, but as it extended on both sides of the limits, and is in agreement with previous cases, probably no great importance attaches to the point.

Rapid pulses (ten or more beats per minute above the normal limit) were observed in six cases.

They were always of a temporary character, and were unaccompanied by a rise of temperature. They occurred at various intervals (one to fifteen days) after the last injection of serum, showed no relation to the dosage, nor to the occurrence of syncope.

Similar occasional increases in pulse rate are to be noticed in cases not treated with serum.

Besides the increase of pulse frequency already mentioned, increases accompanied the urticarial rashes. In these cases they were associated with a rise of temperature.

Slow pulses (ten or more beats per minute below the normal limit) occurred in four cases (I, IV, VI, and X), the observed rates being seventy-four, sixty, seventy-four, and sixty-eight respectively.

The previous records show that pulses between seventy and eighty were commonly met with, so that only cases IV (sixty) and X (sixty-eight) showed unusually slow pulses. Pulses as slow as these, however, had been recorded in previous cases. In one chart examined, a pulse rate of fifty occurred in a convalescent case.

Of the two cases in the present series, in both the pulses were irregular on admission. Both were severe cases, and both tracheotomies. One, aged 4 years, received 40 cc. of serum; the other, aged 5½ years, received 30 cc. of serum.

The slow pulses occurred on the sixteenth and eighth days respectively after the last injection.

*The Rhythm of the Pulse.*

In cases I, IV, IX, and X the pulses were irregular on admission. In case IX it was also intermittent.

In case I the pulse soon became regular.

In case IV the rhythm improved, and only occasional irregularity was observed.

In case IX death resulted without improvement.

In case X the irregularity continued throughout the stay in hospital, and intermittance occurred temporarily on the eighth day after the last injection.

In one case (VI) the pulse became irregular subsequently to the injections. The arrhythmia occurred on the fourth day after the last injection, and continued for three days, after which it remained regular.

Arrhythmia was observed, therefore, in five of the ten cases. In only one of these was its occurrence subsequent to the injections, and in this case it was temporary. In two of the other four cases the pulse initially irregular became regular after the injections.

*The Strength of the Pulse.*

The pulse was noted as initially "soft" in six cases. Of these, two died without improvement. In one the pulse remained soft, and in three it became strong.

In four cases the initial pulse was medium. Of these, it became "soft" in two, became strong in one, and remained medium in one.

These variations in the strength of the pulse occurred at different intervals after the injections, and had no relation to the dosage.

Inequality in the strength of the beats was noticed occasionally in several of the cases.

Briefly summarising the pulse conditions observed, it is found that in the present series of cases:—  
The frequency became normal at an earlier period than in former cases. Rapid and slow pulses were noted in several instances, but their occurrence had no relation to the injections, and they were quite comparable to similar frequency variations observed in former cases. The changes in rhythm and strength observed had no obvious relation to the injections.

## THE CARDIAC CONDITION.

In view of the statements of some observers that the injection of the serum increases the tendency to heart failure, particular attention was paid to the heart conditions in the present series of cases.

TABLE showing Cardiac Conditions.

Case.	Amount of Serum injected.	Initial condition of Heart.		Subsequent condition of Heart.	Syncope.
		Rhythm.	Cardiac Sounds.		
I	20 cc.	Irregular	First sound muffled	Became regular on second day after admission. Sounds became clear on sixth day after admission.	
II	10 "	Regular	Both sounds clear	Remained regular throughout. First sound muffled on second day after admission, and remained so throughout.	
III	30 "	"	First sound muffled	Remained regular throughout. Sounds became clear on sixth day after admission; temporary relapse on eighth and ninth days.	
IV	49 "	Irregular	Both sounds clear	Became regular on second day, relapsed on eighteenth, and continued irregular. First became muffled on third day. Both muffled on fifteenth, and continued so till discharged.	Occurred twice on eighteenth and twentieth days after admission.
V	30 "	Regular	First sound muffled	Remained regular throughout. Sounds became clear on fourth day after admission.	
VI	40 "	"	"	Occasionally irregular from fourth to ninth days after admission, regular afterwards. Both sounds became muffled on sixth day, became clearer during convalescence. First still muffled at time of discharge from hospital.	Occurred once on seventh day after admission.
VII	30 "	"	"	Remained regular throughout. Both sounds became muffled on second day, and remained muffled throughout.	
VIII	30 "	"	Both sounds clear	Remained regular throughout. First sound became muffled on second day after admission, normal on and after twelfth day.	
IX	30 "	Irregular and intermittent	Both sounds muffled	Remained same till death	Caused death thirty-two hours after admission.
X	30 "	Irregular	"	Remained irregular throughout; occasional intermittence on ninth day. Became clearer during convalescence.	Occurred nine times, fifth to twelfth days after admission.

Irregularity has already been sufficiently noted under pulse.

*The Heart Sounds.*

In three cases (II, IV, VIII) the heart sounds were noted as normal on admission.

In case II the first sound became muffled on the day following the injection, and remained so throughout.

In case IV both sounds became muffled, the first on the day following the last injection, and the second twelve days later. Both sounds remained muffled throughout.

In case VIII the first sound became muffled on the day following the last injection, but became normal ten days later.

In five cases the first sound was muffled on admission.

In three of these (I, III, and V) the sounds became clear on the fifth, fifth, and third days respectively after the last injection.

In one (case VI) both sounds became muffled on the fourth day, but became clearer again during convalescence.

In one (case VII) both sounds became muffled on the second day after the last injection, and remained muffled throughout.

In the remaining two cases both sounds were muffled on admission.

In one of these (case IX) the sounds were very soft, and "stating" of them was noticed. The case was fatal.

In the other case (X) the sounds became clearer during convalescence.

No murmurs were observed.

Summarising it is found that—

In three cases the sounds improved soon after the injection.

In three cases the condition became worse at first, but ultimately improved.

In three cases the condition became worse, and remained so.

In one case no change was observed.

In all cases the heart sounds were abnormal at some period of the illness. The changes occurring after the injections show the greatest variation. They were independent of the dosage, and occurred at various intervals after the treatment had been commenced. The same kinds of variations were observed in former cases.

*Cardiac*

*Cardiac Syncope.*

As will be seen from the table, syncope occurred in four cases, and proved fatal in one.

In the latter (case IX) the patient had been ill thirteen days, and was in a very exhausted condition when admitted to the hospital. The initial heart condition was very bad. The beats were irregular in time and quality, and also intermittent. The sounds were very soft, muffled, and stated. The pulse curve shows a rising frequency previous to the treatment. The rise continued for four hours afterwards, then a sudden turn occurred, and the pulse fell continuously till death, twenty-four hours later. The failure of the heart was accompanied by increased frequency of respirations and a rise of temperature.

Although in this case rapid heart failure followed so closely on the injection of the serum, the causal relation of the latter is not evident. It is well known that sudden heart failure is apt to occur in the stage of disease (second week) which had been reached in this case, and indeed for some time afterwards during convalescence. Many cases have been observed in previous experiences in which such rapid heart failure occurred, sometimes within a few hours of admission to the hospital.

Impartially judged, the present case appeared to the reporter to be an exact counterpart of such cases.

In the other three cases (IV, VI, and X) in which syncope occurred, the initial heart condition was defective, particularly so in cases IV and X. No sudden change occurred. The approaching syncope was in all cases heralded by a gradual weakening of the heart sounds. The syncopal attacks occurred from the fourth to the eighteenth days after the injections. The dosage was 40 cc., 40 cc., and 30 cc. respectively.

Syncope therefore occurred in both the cases in which large doses of serum were given, but for all that it does not appear to be dependent on the dosage. The large doses were given because the cases were severe, such as would be likely to have heart troubles. In case X the patient was older, and received less serum, yet the tendency to heart failure was much more seriously manifested. In four other cases in which 30 cc. were administered no syncope occurred. Consequently, there is no reason to suppose that the dosage had any influence on its occurrence.

Syncope occurred in four cases of the ten. Three cases recovered and one died. The reporter is not in a position to state whether the proportion of non-fatal syncope in the present series is larger or smaller than usual, as no reliable data could be found on which to base a comparison.

The death certificates for 1893, which, thanks to the courtesy of the Government Statistician, I have been able to examine, indicate that at least 10 per cent. of the deaths own syncope as immediate cause. The present series, therefore, is not excessive as regards fatal syncope.

*6. On the Respiratory System.*

No definite statements are made by observers on the respiratory condition in serum-treated cases; indeed, very little attention appears to have been paid to it in any cases except in relation to tracheotomy and pulmonary complications. The previous records of the hospital show that, as a rule, the frequency is increased in the early stages. In simple (non-tracheotomised) cases the normal range was returned to in various periods, usually within a few days of admission, *i. e.*, the respiratory frequency was in keeping with pulse and temperature. Sometimes the frequency was initially normal, even in laryngeal cases.

Subsequently the respirations showed similar irregularities in frequency to those of the pulse mentioned above. There was, however, no apparent relation between the two in most cases. In many fatal cases the frequency was increased out of all proportion to the pulse rate and temperature. In one chart examined, sixty-eight, seventy-two, and ninety-eight respirations per minute were recorded.

In the present series the characters of the respirations were very similar. Sometimes the initial respiratory frequency was high, sometimes normal. In the former cases the normal was returned to within a few days. The subsequent course was characterised by irregular upward excursions, which were often unassociated with pulse and temperature rises.

In both the fatal cases the respiratory frequency was above the normal throughout. In case VII the range averaged thirty-five to forty-nine per minute throughout, the highest reached being fifty-five, the lowest thirty-two. The pulse rate and temperature were practically normal. In case IX the respiratory frequency was thirty per minute on admission, varied from forty to twenty-four during the next day, then rose suddenly to eighty-eight per minute just before death.

It is obvious that the conditions observed in the present series of cases are quite similar to those of former cases. There was no evidence that the serum had any influence on the respiratory system.

*7. On the Digestive System.*

In the recovering cases the appetite was good throughout and the food readily taken, except in one case, where anorexia persisted for two days, but after that the appetite returned. This is in contrast to previous cases in which anorexia was common and the little food taken had to be coaxed into the children. In the fatal cases anorexia and vomiting were present throughout. No diarrhoea was noted.

*8. On the Nervous System.*

Paralysis is said to occur in about 25 per cent. of cases of diphtheria. After the use of the serum it is said to be rarer and less grave. In the present series no paresis was observed while the children were in the hospital. In one case the patellar reflex was not obtained, but all the superficial reflexes were present, and there was no other sign of paresis. Not much stress was placed on the loss of knee-jerk in this case, as it is often difficult to obtain in children. This case, however, and one other were subsequently reported to have had slight palate paresis and loss of knee-jerks after leaving the hospital.

At the most, then, paresis occurred in two of the cases (equal to 20 per cent.), and in both it was very slight. Nervous symptoms, therefore, were less common and less severe than usual in the present series.

9. *On the Urinary System.*

Statements have been made by some observers that renal changes have been more common after the use of the serum, and a few have gone to the length of asserting that grave damage to the kidneys has been produced by it.

The principal facts concerning the condition of the urine in the present series of cases are given in the accompanying table:—

TABLE showing Urinary Conditions.

Casc.	Amounts of Serum used.	Initial condition of Urine.	Subsequent condition of Urine.
I	20 cc. ..	Normal in amount; clear and transparent; reaction acid; sp. gr., 1026; no albumin.	The urine remained free from albumin throughout.
II	10 " ..	Normal in amount; clear and transparent; reaction acid; sp. gr., 1020; no albumin.	" " "
III	30 " ..	Normal in amount; clear and transparent; reaction acid; sp. gr., 1030; no albumin.	Traces of albumin were found on the fifth day, and persisted throughout.
IV	40 " ..	Normal in amount; clear and transparent; reaction acid; sp. gr., 1030; traces of albumin.	The albumin became more decided during the first week, then lessened, and disappeared on the thirteenth day.
V	30 " ..	Normal in amount; clear and transparent; reaction acid; sp. gr., 1012; traces of albumin.	Traces of albumin persisted throughout.
VI	40 " ..	Normal in amount; clear and transparent; reaction acid; sp. gr., 1020; traces of albumin.	The albumin became more decided during the first week, then lessened, and disappeared on the fifteenth day.
VII	30 " ..	Normal in amount; clear and transparent; reaction acid; sp. gr., 1016; decided albumin.	The albuminuria persisted till the end; renal epithelium and granular casts were found in sediment.
VIII	30 " ..	Normal in amount; clear and transparent; reaction acid; sp. gr., 1028; decided albumin.	The albuminuria persisted throughout.
IX	30 " ..	Very small amount of urine passed, which was highly albuminous.	Renal epithelium and casts were found; no blood-cells detected.
X	30 " ..	Normal in amount; clear and transparent; reaction acid; sp. gr., 1030; no albumin.	The urine remained free from albumin throughout.

With regard to the amount of urine, this was roughly estimated in the way usually adopted with young children, viz., by the number of times the diapers required changing.

Albumin was tested for by the usual clinical methods, viz., boiling after acidulation, and the cold nitric acid test. The urine was tested every second day.

It will be seen from the table that in four cases (I, II, III, and X) the urine was initially free from albumin.

In one of these (III) albuminuria appeared on the fifth day after admission, and persisted; in the others no albuminuria occurred. In three cases (IV, V, and VI) traces of albumin were present on admission. In two (IV and VI) it disappeared on the thirteenth and fifteenth days respectively; in the other (V) it persisted.

In the other three cases (VII, VIII, and IX) a decided amount of albumin was present on admission. In case VIII, which recovered, it persisted, and in cases VII and IX, which were fatal, renal epithelium and casts were plentiful in the sediment.

Albuminuria occurred, therefore, in seven of the ten cases. In six it was present from the time of admission; in one, traces of albumin appeared subsequently. In this case the child, aged 6 years, received a medium amount of serum (30 cc.) In cases IV and VI, who both received 40 cc., a slight increase above the initial amount of albumin was noted, but in both cases the albuminuria disappeared earlier than usual.

Only in the fatal cases (VII and IX) were distinct evidences of renal change discovered, and these were present from the first.

Albuminuria is said to be present in two-thirds of diphtheria cases. In the present series it occurred in about the average proportion, and on the whole, the serum appears to have had little influence over the albuminuria.

## THE UNUSUAL SYMPTOMS.

1. *Local effect of the Injections.*

The swelling produced by the injections was unaccompanied by pain or any sign of discomfort. It rapidly subsided, and in twenty-four hours after the injection only the puncture marks remained to indicate that one had been given.

In one case only was any local ill-effect observed (case II). A slight cellulitis appeared on the day following the injection, subsided in about three days, leaving slight thickening, which resolved during the succeeding week.

The serum used in this case had been uncorked four days previously, but had no odour, &c., such as to indicate that any change had occurred.

2. *Urticaria.*

This and similar cutaneous eruptions have been reported as of common occurrence after the injections. In the present series of cases urticarial or erythematous rashes appeared in four cases (I, III, V, VII), in which it occurred on the twelfth, eighth, fifth, and first days respectively after injection. The extent varied, being most marked in case I, in which all the limbs, the trunk, and face were affected, and least in case III, in which only three or four spots occurred on the chest.

The rash disappeared in all cases within two or three days. It was accompanied by irritation, and a slight rise of temperature and pulse frequency, but otherwise appeared to produce very little change in the condition of the patient. No joint pains were observed. The dosage of serum in these cases was 20cc., 40cc., 30cc., and 30cc. respectively.

No other unusual symptoms were observed.

*The Severity of the Cases and Mortality.*

It will be seen from the table that of the ten cases eight recovered and two died—a mortality equal to 20 per cent.

It would appear from European reports that the principal factors influencing the mortality in serum-treated cases are as follows:—

1. The time the treatment is commenced.
2. The age of the patient.
3. The amount of structural damage already present.
4. The co-existence of other forms of disease.

1. *The Time the Treatment was commenced.*

It appears certain that the earlier in the disease the treatment is commenced the better chance there is of success.

In the present series the treatment was begun—

On the second day in one case.  
 „ third day in three cases.  
 „ fourth day in four cases.  
 „ fifth day in one case.  
 „ thirteenth day in one case.

On the whole, treatment was commenced early. It is not a mere matter of time, but the probability of tissue changes having occurred during the time which has elapsed since the onset which gives this question its importance. These are discussed under heading 3, in accordance with the above divisions of the subject.

2. The age of the patient has been shown to have a very marked influence on the results of the treatment. In the accompanying table the age mortality of the present series is compared with those of previous available reports of serum-treated cases.

Age.	European Cases.				Present Cases.			
	No.	Recovered.	Died.	Mortality percentage.	No.	Recovered.	Died.	Mortality percentage.
Under 1 .....	12	6	6	50.0	.....	.....	.....	.....
1—2 .....	34	23	11	32.3	2	1	1	50.0
—3 .....	27	19	8	29.6	1	1	.....	0.0
—4 .....	23	20	3	13.0	4	3	1	25.0
—5 .....	26	18	8	30.8	.....	.....	.....	.....
—10 .....	37	35	2	5.4	3	3	.....	0.0
—15 .....	13	13	0	0.0	.....	.....	.....	.....

The table is imperfect owing to the small number of cases in the present series, although these show a general resemblance to European cases. It has been retained in the report as being as convenient a way as any of showing the age mortality of the present series.

The majority of the cases (seven) were favourable ages (4 to 6 years), and of these one died. The remaining three were of less favourable ages, and of these one died.

As regards sex, there were five males and five females, but sex has not been ascertained to have any influence in the treatment.

3. *The amount of Structural Damage already existing.*

The two fatal cases exhibited marked structural damage on admission. Of the recovering cases, heart trouble was indicated in seven, evident in one, albuminuria was present in four, but the renal condition was not serious in any of them.

No nervous nor pulmonary symptoms were observed.

In the recovering cases, therefore, the conditions were not unfavourable as regards structural change.

There was no co-existent disease, except in case VII, in which septic infection was associated with the diphtheria.

Apart from the aspects of severity considered above the constitutional effects of diphtherial toxæmia were exhibited more or less in all the cases.

Less in four (I, II, V, VIII), all of which recovered.

More in three (III, IV, VI), all of which recovered.

Most in three (VII, IX, X), one of which recovered, and two died.

The series included four laryngeal cases, in three of which tracheotomy was performed. In the fourth case the laryngeal symptoms disappeared within forty-eight hours after treatment was commenced.

In former cases tracheotomies averaged six (4 to 9) per ten cases. The present series is, therefore, below the average as regards the number of tracheotomies.

It must be remembered in this connection that it is said if the treatment be commenced early enough in laryngeal cases, an operation is rendered unnecessary on account of the rapid elimination of the membrane from the larynx. In one case (VI) there were definite laryngeal symptoms on admission. The skin was dusky, respiration laboured, inspiratory and expiratory stridor, "croupy" cough, hoarse voice, and epigastric and suprasternal recession. Indications of increase in the severity of these symptoms were carefully watched for, with the intention of operating if such occurred. They gradually subsided, and had completely disappeared on the third day after admission.

No laryngeal symptoms were noted in any of the other six cases.

None of the usual complications, such as broncho-pneumonia, &c., were observed.

On the whole, therefore, the series may be considered as fairly representing the types of the disease most commonly met with. The extremes are wanting—there were neither very mild nor very malignant cases in the series

It has been noted that there were eight recoveries in this series of ten cases. The previous cases on the hospital records have been divided into series of ten, in the order of their admission; and the number of recoveries in each series ascertained. The results were as follows:—

1 recovery occurred in	...	...	...	...	1 of the series.
2 recoveries	..	..	..	..	2 ..
3 ..	..	..	..	..	1 ..
4 ..	..	..	..	..	4 ..
5 ..	..	..	..	..	6 ..
6 ..	..	..	..	..	4 ..
7 ..	..	..	..	..	4 ..

The average number of recoveries per ten cases was 4·87 (minimum, 1; maximum, 7).

The number of recoveries in the present series was, therefore, much above the average, and the highest till then reached. In this series all the tracheotomy cases recovered. The previous percentage of recoveries after this operation was found to be 32·1. In 137 operations the recovery of three consecutive cases had happened only twice before.

Of the two fatal cases, case IX had been ill for thirteen days previous to coming under treatment. The child was very young (17 months), and the cardiac and renal conditions were such as to indicate the hopelessness of any kind of treatment. Heart failure, which threatened from the first, proved fatal thirty-two hours after admission. In the other case (VII) there was sepsis added to the diphtheria. Some improvement was noticed during the first few days, but not to the extent exhibited by successful cases. On the fourth and fifth days after admission the child had convulsive seizures, which, in view of the renal condition, one is inclined to regard as uræmic. The termination of this case was not observed, as the patient was removed from the hospital two days before death. He was said to have died "in convulsions," and hence in all probability the death was due to the kidney affection.

The conditions presented by these two cases were, therefore, such as the serum could not be expected to benefit.

#### *Recapitulation.*

The cases treated were fair types of the disease.

The use of the serum was followed by a rapid and marked beneficial change in the general and local conditions.

The serum did not appear to have any direct action on the temperature, circulatory system, nor respiratory system, but improvement in these was associated with the general improvement.

There was no evidence that the serum had any injurious effect on the heart.

The digestive system shared in the general improvement.

Nervous symptoms were less frequent than usual.

The urinary system was apparently quite unaffected by the serum. No injurious effect on the kidneys was observed.

The unusual symptoms (urticaria) observed were not serious.

No complications were observed.

The mortality was the lowest reached in the institution up to that period. The fatal cases were such as could not be expected to be benefited by the serum.

Comment on the effect of the serum seems almost needless. The facts set forth above speak for themselves. By the use of the serum the patients seemed to be placed almost immediately in a condition of convalescence. The only untoward results noted as due to it were the transient swelling produced by the injection, and occasionally an innocuous rash—a very trifling price to pay for the benefits received in return. The explanation which has been given of the manner in which the excellent results of the serum treatment are effected is at present too theoretical to be entered upon here. It is sufficient for us to know that the serum has considerably reduced the mortality from diphtheria, and is a remedy which may be safely used. The results of the observations show that no deterioration in the properties of the serum has resulted during its long journey from England.

I have, in conclusion, the grateful task of recording my obligation to Dr. Clubbe for the readily-granted permission to make use of the previous records of the hospital, and to the nursing staff of the institution for their willing aid in the preparation of case charts, &c.

I have, &c.,  
FRANK TIDSWELL.



1895.

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

DEATHS ON BOARD THE "YSABEL."  
(PARTICULARS RESPECTING.)

*Ordered by the Legislative Assembly to be printed, 5 September, 1895.*

*[Laid upon the Table of this House in answer to Question No. 9, of 21st August, 1895.]*

Question.

9. MR. BAVISTER asked THE COLONIAL SECRETARY,—Will he endeavour to obtain from the German Consul the following particulars:—  
(1.) How many persons, being passengers by or officers or others employed on board the "Ysabel" during the years 1894-1895, or any part thereof, have died, stating cause of death?  
(2.) How many above described contracted malarial fever, not resulting fatally?

Answer.

The Acting Consul-General for Germany to The Principal Under Secretary.

Sir,

Sydney, 27 August, 1895.

I have the honor to acknowledge the receipt of your favour of 22nd August, enclosing a copy of a question asked in the Legislative Assembly respecting deaths on board the "Ysabel."

I am most happy to supply the Colonial Secretary with all the information on this subject, but would first remark that different articles appeared in daily papers about this vessel which were not in accordance with the facts. Every shipping reporter can see me daily from 9 a.m. to 5 p.m. and obtain every information, but in this case no inquiry was made.

Dr. Eichler, one of the most experienced doctors amongst shipping, attended from the first, and his attest enclosed herewith, which I asked for after receipt of your letter, denotes the nature of the disease of which two Malay sailors died.

All the others recovered their health and strength during their stay here of about a month by the influence of the climate and good living. I visited the steamer myself several times, as I am a considerable shareholder in the New Guinea Company, whose steamer it is, and whose shareholders are men of the highest position and very large wealth in Berlin.

I have, &c.

CARL L. SAHL,

Imperial German Consul and Acting Consul-General.

*[Enclosure.]*

At the request of the Acting Imperial Consul-General of Germany I hereby certify that I have attended professionally on board of the German steamer "Ysabel" during her stay in Sydney Harbour on three different occasions. Several of the officers and crew suffered from occasional light attacks of malarial fever, who, however, all recovered under proper treatment and the influence of the cooler Australian climate. During the "Ysabel's" last trip in April this year, one of the sailors died on board of acute tubercular disease of the lungs, and another died in the Sydney Hospital after a few days' illness of idiopathic tetanus. These two cases of death are the only ones known to me.

Sydney, 27th August, 1895.

CHR. F. EICHLER, M.D., & M.R.C.S.F.



1895.

## NEW SOUTH WALES.

DEPARTMENT OF MINES AND AGRICULTURE.  
(ANNUAL REPORT OF THE STOCK AND BRANDS BRANCH.)

Presented to Parliament by Command.

TO THE HON. SYDNEY SMITH, ESQ., M.P., MINISTER FOR MINES AND  
AGRICULTURE.

Sir,

In presenting the Report of the Chief Inspector of Stock for the year 1894, I have the honor to invite attention to the fact that the number of horses has been steadily increasing since 1861. It is to be regretted that more attention is not paid to the improvement of the breed of horses generally, and that special attention is not given to the breeding of horses suitable to the English and Indian markets, as it is believed that, with reasonable care, a very large and profitable trade could be secured. And a large export of horses would not only benefit the breeders, but also the farmers, as the consumption of fodder on the voyage would be very considerable. It is to be hoped that when the experimental farm at Bathurst is fairly started some valuable help may be given in this direction. The tax on and inspection of stallions suggested by the Chief Inspector is, I think, worthy of consideration.

Since 1861 there have been great fluctuations in the number of cattle in this Colony, the number in 1873 having reached 3,794,327, while in 1885 the number fell to 1,317,315; whereas, in 1894, the number only slightly exceeded that of 1861. The success attending the recent experiments in the export of live cattle will doubtless have the effect of inducing runholders to give more attention to large stock, and to the breeding of such as are best suited to the English market. There can be little doubt that, with proper care, this Colony may secure a very large share of the trade in live stock hitherto carried on between America and Great Britain. Under the heads "Description of Stock to Ship;" "Breeds of Cattle to Ship;" "Preparation of Cattle for Export;" "Arrangements for Shipping," the Chief Inspector of Stock offers some pertinent suggestions. The cultivation of this trade means increase in railway traffic, to say nothing of the consumption of farm produce.

The decrease in the number of sheep last year, as compared with 1893, was only 3,418, whereas the exports exceeded the imports by 375,119. The number of sheep in this Colony has steadily increased since 1861; the years in which there have been decreases as compared with the previous year are—1870, 1877, 1882, 1884, 1892, and 1893. The cast of fat and store sheep respectively for the ensuing season is very satisfactory, as is the improvement in the condition of our flocks. The value to the Colony of establishing a large export trade in meat cannot be overestimated, and no effort should be spared to help forward this good work. It is worthy of

12—A

consideration

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consideration whether advantage should not be taken of the desire to establish direct shipments of produce from these Colonies to Manchester to open up business relations between this Colony and that important centre. The export of mutton will probably have the effect of considerably altering the character of our flocks, as it will become an important question for the consideration of our flock-masters whether growing mutton and wool will not pay better than wool, that is to say, whether it will not pay better to breed sheep that will be quickly fit for market, and fetch the best price as mutton, even though some sacrifice of wool be involved.

The experiments made by Mr. Postle in the matter of thawing frozen mutton, have been attended with such marked success; that it appears highly desirable that his process should be tested in London, so that the mutton exported from this Colony may be placed on the market in a more attractive condition.

The increase in the clip of wool for last year is most satisfactory. It is also satisfactory that a somewhat larger proportion of our wool was shipped from the ports of our own Colony.

The report which Dr. Cobb is preparing on the life history of the worms which affect our flocks, will, it is thought, when published, be of immense value to flock-owners. It is to be regretted that the Department has not the means of more thoroughly investigating the various diseases affecting our flocks and herds, and that the Inspectors of Stock, have not the power to destroy travelling stock which are infected, so as to prevent the spread of disease.

The export of rabbits as an article of food is deserving of more consideration than has hitherto been given to it in this Colony, as it is almost certain that extensive sales could be effected in Great Britain and the Continent of rabbits whether tinned, frozen, or dried. The preparation of these for export would furnish employment to a very large number of men, and if operations were conducted on a sufficiently large scale, they could be put upon the market at such a price as would ensure a sufficiently large demand to keep down the pest in the infested districts within reach of railway communication. I trust, however, that ere long this matter will receive the consideration to which, in the interests of this Colony, it is justly entitled.

I have, &c.,

HARRIE WOOD.

Department of Mines and Agriculture,  
Sydney, 25th July, 1895.

The Chief Inspector of Stock to The Under Secretary for Mines and Agriculture.

Sir, Department of Mines and Agriculture, Stock and Brands, Sydney, 28 May, 1895.

On the 1st February last I submitted a Progress Report for the year ending 31st December, 1894, giving the approximate number of the horses, cattle, and sheep then in the Colony; and I have now the honor to submit for your consideration my complete Report for that year on the working of this Branch, which is, as usual, based very much upon Inspectors' estimates—owners still showing very little inclination to furnish data. It will be seen that the actual number of horses and cattle in this Report exceed those in the Progress Report, while the number of sheep is slightly less.

I have, &c.,

ALEX. BRUCE,

Chief Inspector of Stock.

INSPECTIONS OF OFFICES.

During the year the following District Inspectors' Offices, their books and work, have been inspected, namely:—Braidwood, Bombala, Bourke, Bathurst, Carcoar, Cooma, Deniliquin, Forbes, Goulburn, Hay, Jerilderie, Molong, Moss Vale, Mudgee, Narrandera, Yass, and Young.

It was found that, with one or two exceptions, the Inspectors' duties were satisfactorily performed. Some of them have the supervision of two or more districts, and some have districts which extend over a very wide area of country, upon which there are depasturing larger numbers of stock than they can fully attend to. To remedy this it will be necessary, when the state of the fund will admit, to appoint additional Inspectors, with the view of affording greater security to stockowners against the introduction of disease, and the loss of stock by theft, and the better protection of the Travelling Stock Reserves from trespass.

INSPECTORS' WORK.

The Colony is now divided into sixty-five Sheep Districts, and there are fifty-one Staff Inspectors employed, who have made the following inspections during the year 1894:—

Stock, including horses, cattle, and sheep	...	...	...	...	...	27,698	inspections.
Reserves	...	...	...	...	...	5,012	"
Public Pounds	...	...	...	...	...	432	"
Commons	...	...	...	...	...	585	"
Dogs	...	...	...	...	...	1,237	"
Pigs	...	...	...	...	...	2,853	"
Under Pastures and Stock Protection Act	...	...	...	...	...	9,146	"
Under Public Watering-places Act	...	...	...	...	...	1,691	"
Total	...	...	...	...	...	48,654	

being an average of 954 inspections by each Inspector.

The total number of stock inspected was,—152,207 horses, 1,315,711 cattle, and 26,598,346 sheep. This shows a decrease of 1,909,691 sheep inspected during 1894, as compared with the previous year, while there is an increase of 2,614 horses and 315,699 cattle.

*Homebush Sale-yards.*

The whole of the stock arriving at these yards were carefully inspected on each sale-day, by an Inspector of Stock and the Government Veterinarian, with the result that a considerable number were condemned as unfit for human consumption. The numbers of stock submitted to auction were as follows:—

Cattle, 119,124 head.

Sheep, 2,749,703 head.

a weekly average of 2,291 cattle and 52,879 sheep. Compared with 1893, this is an increase of 167 cattle and a decrease of 8,846 sheep per week. These inspections occasionally lead to the detection of stolen stock, as the Inspector's duty requires him to compare the brands and marks on the stock with those in the permits and travelling-statements accompanying them. These documents are filed in this office for reference, and are frequently referred to by persons inquiring about stock supposed to have been stolen.

*Inspectors' Mileage.*

During the past year the staff of fifty-one Inspectors travelled over a distance of 208,528 miles while on duty, an average of 3,990 each per annum.

*Prosecutions and Convictions obtained.*

Under what Act.	No. of Prosecutions.	No. of Convictions.
Diseases in Sheep Acts	112	87
Imported Stock Acts...	...	...
Registration of Brands Acts	7	6
Pastures and Stock Protection Acts	288	238
Public Watering-places Act...	33	25
Impounding Acts	8	5
Diseased Animals and Meat Act	16	16
Total	464	377

The large number of cases under the Pastures and Stock Protection Acts were principally against owners who had failed to make returns of their stock at the proper time.

Altogether, the number of prosecutions were more than those in 1893.

HORSES.

## HORSES.

The number of horses in the Colony during the thirty-four years previous to and including 1894 was as follows:—

Year.	No.	Year.	No.	Year.	No.
1861 ... ..	251,497	1873 ... ..	328,408	1885 ... ..	344,697
1862 ... ..	233,220	1874 ... ..	334,462	1886 ... ..	361,663
1863 ... ..	273,389	1875 ... ..	357,697	1887 ... ..	390,609
1864 ... ..	262,554	1876 ... ..	366,703	1888 ... ..	411,368
1865 ... ..	284,567	1877 ... ..	328,150	1889 ... ..	430,777
1866 ... ..	282,587	1878 ... ..	336,468	1890 ... ..	444,163
1867 ... ..	278,437	1879 ... ..	360,038	1891 ... ..	459,755
1868 ... ..	280,201	1880 ... ..	395,984	1892 ... ..	481,416
1869 ... ..	280,818	1881 ... ..	398,577	1893 ... ..	481,399
1870 ... ..	280,304	1882 ... ..	328,026	1894 ... ..	500,068
1871 ... ..	337,597	1883 ... ..	326,964		
1872 ... ..	304,100	1884 ... ..	337,172		

being an increase of 18,669 horses on the number returned for the previous year, which is accounted for by additional settlement, breeding, low prices, and no markets.

The number of horses as returned in each Sheep District of the Colony will be found in Appendix A hereto, as also the number of cattle, sheep, and pigs.

*Breed of Horses.*

Under this head the Inspectors' returns give the different breeds of horses as follows:—

	Ordinary.	Thoroughbred.	Total.
Draught ... ..	131,438	22,406	153,844
Light harness ... ..	115,228	18,360	133,588
Saddle ... ..	179,489	33,147	212,636

Grand Total ... .. 500,068

*Australian and Foreign Horses Introduced and Imported.*

*Australian Horses—From other Australian Colonies.*—By sea: 50 stud horses and mares, and 1,009 ordinary horses and mares; total, 1,059. Overland: 7 stud horses and 7 stud mares, and 4,079 ordinary horses and mares; total, 4,093.

*Foreign Horses—From Foreign Countries (including Great Britain and Ireland).*—During the year 19 horses were imported into the Colony from England and other countries, and were subjected to the prescribed quarantine of fourteen days (the charges for which have been reduced) in Sydney before being allowed to go inland. Particulars as to number and breed of these horses are as follow:—

Name of Importer.	Address.	Where Imported from.	Circus Horses and Mares.	Breeds.						Total.
				Thoroughbred.		Arabs.		Trotting.		
				Horses.	Mares.	Horses.	Mares.	Horses.	Mares.	
Robert Gordon.....	Queensland .....	India .....	...	...	...	1	...	...	...	1
V. J. Dowling .....	Luc, New South Wales .....	India .....	...	...	...	1	...	...	...	1
H. C. White.....	Havilah, New South Wales .....	England ...	...	1	3	...	...	...	...	4
C. Tindall.....	Ramornie, New South Wales .....	England ...	...	1	...	...	...	...	...	1
Messrs. Hayes and Lawrence	Sydney, New South Wales.....	Noumea.....	*12	...	...	...	...	...	...	12
			12	2	3	2	...	...	...	19

\* These were originally Sydney horses.

*Horses fit for sale, and number Exported, Improvement, &c.*

In the several districts of the Colony Inspectors' reports show that there are 27,735 draught, 28,508 light harness, and 44,314 saddle horses fit for market, while of this number 25,275 are considered suitable for requirements of India and China.

During the year 4,606 horses were exported, principally to Victoria, New Zealand, India, Queensland, and South and Western Australia. Reports from forty-four districts say that the horses are improving in quality, owing to a better class of entires having been introduced, the selection of better mares, and generally more attention to breeding, as it does not pay to breed inferior ones.

In nineteen districts there is no improvement in the quality of the horses, while in two districts they are reported as deteriorating. A tax on stallions is still advocated by a large number of breeders, and is, I think, desirable, at any rate in cases where they stand for mares other than those belonging to the owners of the horses; and in all such cases the horse should be subject to inspection by a qualified Veterinary Surgeon appointed by the Government, and certified to as sound and free from disease.

It is also recommended that all entires be registered.

## DISEASES IN HORSES.

*Blindness in Horses on the Lower Darling.*

A considerable number of horses on the Lower Darling has during the year been affected in the eyes, in some cases to the total loss of sight, mostly at night. Various causes are assigned for the malady, and among others to the eating of wild tobacco growing on the country where the horses are grazing. This suggestion has not, however, by any means been confirmed, and as yet the disease has not been diagnosed nor the cause been demonstrated. In

In order to obtain as much information as possible with respect to the disease, with the view, of course, of treating the affected horses and preventing the spread of the ailment, the Department despatched Mr. Veterinary-Surgeon Robinson in 1893, and more recently Mr. Veterinary-Surgeon Scott in January last, to the localities in which the horses were affected. They devoted considerable time and attention to the matter, and made a great many inspections (and some *post-mortem* examinations) of diseased horses, and their reports will be found as Appendix B.

Mr. Stanley, Chief Veterinary Inspector, has made some remarks on Messrs. Veterinary-Surgeons Robinson's and Scott's Reports, and a suggestion which was offered by me, and which was approved by the Minister, that a systematic trial by the Inspectors at Wilcannia and Wentworth, of the effect of vermifuges should be made on twelve affected horses in different stages of the disease, and the result carefully noted is now being carried out.

If the ailment continues it will be necessary to institute fresh investigations; and should this be required I would recommend that Dr. Cobb, the Government Pathologist, and Chief Veterinary-Inspector Stanley should visit the Darling and prosecute the inquiry.

With the exception of the ailment just alluded to our horses have been very free from disease during the year. A few deaths are reported in one district from Scrub Ticks. *Anthrax* was reported in two districts, *Australian Stringhalt* in four districts, and *Strangles*, but only in a mild form, in twenty-two districts; Prurigo (mange) is still reported to have shown itself in six districts, but not to any great extent. When this disease makes its appearance owners should see at once to the cleanliness of the horse's body, and wash with caustic soda and water,  $\frac{1}{2}$  oz. to a pint of water, which gives good results. Only two districts report influenza, while glanders is unknown. (See Appendix C as to treatment for Influenza.)

#### Glanders and Farcy.

This disease is said to be less prevalent in Great Britain and increasing in Ireland.

The estimated total losses in horses during the year from disease, accidents, and other causes amount to 9,024.

#### CATTLE.

The returns of cattle in the Colony during the thirty-four years ending 31st December, 1894, stand as follows:—

Year.	No.	Year.	No.	Year.	No.
1861	2,271,923	1873	3,794,327	1885	1,317,315
1862	2,620,383	1874	2,856,699	1886	1,367,844
1863	2,032,522	1875	3,134,036	1887	1,575,487
1864	1,924,119	1876	3,131,013	1888	1,622,907
1865	1,961,905	1877	2,746,385	1889	1,741,592
1866	1,771,809	1878	2,771,583	1890	1,909,009
1867	1,728,427	1879	2,914,210	1891	2,046,347
1868	1,761,411	1880	2,580,040	1892	2,147,074
1869	1,795,904	1881	2,597,348	1893	2,155,500
1870	2,195,096	1882	1,859,985	1894	2,290,112
1871	2,014,888	1883	1,640,753		
1872	2,237,660	1884	1,425,130		

From the above it will be seen there was an increase of 134,612 cattle during the year 1894, and an increase of 864,982 as against the decennial year 1884.

The number of cattle in each of the Sheep Districts of the Colony will be found in Appendix A.

148,965 cattle were introduced from other Colonies during the year, and 43,277 exported.

#### Increase in Cattle.

The increase in the number of cattle is due to several causes:—(1.) To the last three or four seasons being comparatively wet, and leading owners who had stocked doubtful country with sheep to return to a considerable extent to cattle; (2.) To owners finding that they can keep a fair number of cattle in their sheep-paddocks without reducing the carrying capacity for sheep, but could thereby improve the pasture, the cattle eating the longer and coarser grasses; (3.) To the adoption of a rotation under which they set apart one-fifth or one-sixth of their holdings every year for cattle, which allows the grasses to seed and the pasture generally to be sufficiently long to burn off, thus enabling them to clear out the rough and innutritious grasses, to give the good grasses a chance to grow, and to destroy the parasites which now affect the stock; and (4.) To a gradual increase of selection, which leads to an increase of cattle and horses.

#### Breeds of Cattle.

	Pure and Stud.	Ordinary.	Total.
Shorthorns	68,382	732,782	801,164
Hereford	32,793	249,514	282,307
Devon	13,455	67,572	81,027
Black-polled	1,596	3,258	4,854
Red-polled	30	.....	30
Ayrshire	6,282	22,614	28,896
Alderneys	2,516	4,446	6,962
Highland	.....	2	2
Holstein	50	260	310
Jersey	1,765	5,286	7,051
Buffalo	.....	7	7
Crosses (first crosses)	.....	1,077,502	1,077,502
Grand Total	.....	.....	2,290,112

The crosses are estimated as follows:—

Shorthorn and Hereford	...	...	...	...	...	...	356,881
Shorthorn and Devon	...	...	...	...	...	...	148,029
Hereford and Devon	...	...	...	...	...	...	65,817
Shorthorn and Black-polled	...	...	...	...	...	...	16,998
Ayrshire and Shorthorn	...	...	...	...	...	...	38,318
Alderney and Shorthorn	...	...	...	...	...	...	413
Jersey and Shorthorn	...	...	...	...	...	...	60
Unrecognisable	...	...	...	...	...	...	450,986
Total	...	...	...	...	...	...	1,077,502

*Australian and Foreign Cattle Introduced and Imported.*

AUSTRALIAN CATTLE.—*Overland*—29 stud bulls, 28 stud cows, 148,834 ordinary cattle; total, 148,891.

*By sea*—46 stud bulls, 28 stud cows; total, 74.

FOREIGN CATTLE.—During the year nine cattle were imported from England, and were subjected to the prescribed quarantine of sixty days (the charges for which have been reduced) in Sydney, before being allowed to go inland. Particulars as to number and breed, &c., are as follow:—

Names and Addresses of Importers.	Where Imported From.	Breeds.						Total.	
		Hereford.		Devons.		Jersey.		Males.	Females.
		Males.	Females.	Males.	Females.	Males.	Females.		
F. Reynolds, Tocol, N.S.W.	England	1	.....	.....	.....	.....	.....	1	.....
John Hay, Coolangatta, do.	"	.....	.....	.....	.....	2	4	2	4
James Mitchell, Tabletop, do.	"	.....	.....	2	.....	.....	.....	2	.....
		1	.....	2	.....	2	4	5	4

*Increase and Decrease of Cattle in the several Districts.*

From forty-two districts the cattle are reported as increasing, the principal reasons given being good seasons, introduction of large numbers of store cattle from Queensland, and more owners having taken to breeding cattle and stocking up their runs. In the remaining districts the cattle are said to be decreasing through sales, owners not breeding or stocking up, and changing for sheep.

*The "Cast" of Fat and Store Cattle.*

The estimated "cast" of fat cattle to be sent to market during the coming year is 368,132, and store cattle, 276,526. From fourteen districts the fat cattle are principally sent to Victoria; from two districts they are principally sent to South Australia and Tasmania; and the remaining districts supply the markets of Sydney, Maitland, Mudgee, Bathurst, Orange, Goulburn, Tamworth, and Albury. The principal markets for store cattle are Muswellbrook, Maitland, Goulburn, and Wagga Wagga, and Wodonga in Victoria.

*How kept.*

The number of cattle kept wholly in paddocks is returned as 1,849,140; on open runs, 272,149; and the balance, 168,823, are depastured both ways.

*Improvement and Deterioration.*

In thirty-nine districts the cattle are said to be improving; in twenty-four districts they are stationary; and in two districts deteriorating. The principal reasons given for the improvement are—introduction of good stud stock; more attention and care in selection and breeding of stock, more particularly those for dairying purposes; also in culling and keeping in paddocks. The reason given for deterioration is inattention to breeding, many owners breeding from all sorts without respect to breed or quality, and using the same blood for years.

*Their Diseases and Ailments.*

*Pleuro-pneumonia.*—Inspectors' reports show that this disease existed in thirty-one districts, and that the cattle on 162 runs were affected; while the other districts are reported to be free from the disease.

This disease may be said to be stamped out in Great Britain and Ireland, there having been only two outbreaks in forty-one weeks of this year.

*Cumberland Disease.*—From eight districts the number of cattle reported to have died from this form of anthrax is 667.

*Symptomatic Anthrax or Blackleg* is reported to have carried off 727 head in ten districts.

*Cancer and Actinomycosis.*—1,590 cattle are reported to have died in thirty-four districts from these diseases.

*Tuberculosis.*—Cattle to the number of 3,150 are reported from thirty-three districts to have died of swellings in the throat.

*Red Water.*—From one district 10 deaths are recorded. The disease is prevalent in certain localities in the coast country at particular seasons, more so in spring.

*Ophthalmia* occasionally assumes an epidemic form, and the numbers attacked are in some cases considerable, causing much temporary inconvenience to stock from blindness. Outbreaks have been reported from five districts, and the deaths numbered 37.

*Poisonous Plants.*—From nine districts deaths to the number of 447 are reported through eating supposed poisonous plants.

*Foot and Mouth Disease.*—An outbreak of this disease occurred in the counties of Essex, Kent, and Cambridgeshire, in England, but was speedily stamped out. It has never obtained a footing in this Colony.

SHEEP.

## SHEEP.

The number of sheep in the Colony during the thirty-four years ending 31st December, 1894, stands as follows:—

Year.	No.	Year.	No.	Year.	No.
1861	6,119,169	1873	18,990,595	1884	31,660,321
1862	6,558,896	1874	22,797,416	1885	37,820,906
1863	7,169,126	1875	25,353,924	1886	39,169,304
1864	9,082,463	1876	25,269,755	1887	46,965,152
1865	9,650,106	1877	21,521,662	1888	46,503,469
1866	11,644,593	1878	25,479,484	1889	50,106,768
1867	15,066,377	1879	30,062,910	1890	55,986,431
1868	16,000,090	1880	35,398,121	1891	61,831,416
1869	16,848,217	1881	36,591,946	1892	58,080,114
1870	16,218,825	1882	36,114,814	1893	56,980,688
1871	16,766,012	1883	37,915,510	1894	56,977,270
1872	17,873,636				

The number of sheep in the several Sheep Districts will be found in Appendix A.

*Increase and Decrease.*

This shows a decrease for the whole Colony of 3,418.

The number of sheep imported during the year was 530,664, and the number exported 905,783, being an increase in the exports over the imports of 375,119 sheep.

In Appendix D there is a statement kindly furnished by Mr. T. A. Coghlan, A.M.I.C.E., Government Statistician, which accounts for lambs, and shows why instead of an increase on the total number of sheep there is a slight decrease.

*The different Breeds.**Merino.**Combing.*

	Rams.	Ewes.	Wethers.	Lambs.	Total.
Pure and stud—Superfine ...	72,563	871,138	355,747	448,994	1,748,442
Ordinary ...	82,188	2,311,007	1,744,799	1,061,197	5,199,191
					6,947,633
Pure and stud—Medium ...	54,133	1,692,641	732,504	759,951	3,239,229
Ordinary ...	161,010	7,446,709	4,899,011	3,238,693	15,745,423
					18,984,652
Pure and stud—Strong ...	45,362	1,258,963	853,649	686,522	2,844,496
Ordinary ...	94,558	4,174,672	3,287,438	2,096,230	9,652,898
					12,497,394
Total, Combing ...					38,429,679

*Clothing.*

Pure and stud—Superfine ...	14,359	255,575	195,757	112,850	578,541
Ordinary ...	19,188	594,941	571,101	246,080	1,431,310
					2,009,851
Pure and stud—Medium ...	18,876	619,435	360,947	213,828	1,213,086
Ordinary ...	79,285	3,453,139	2,146,729	1,367,626	7,046,779
					8,259,865
Pure and stud—Strong ...	21,378	638,819	465,364	290,624	1,416,185
Ordinary ...	42,133	1,613,607	1,548,567	750,894	3,955,201
					5,371,386
Total, Clothing ...					15,641,102

Total number of Merino Sheep ... 54,070,781  
*Brought*

		<i>Brought forward</i> ... .. 54,070,781				
		<i>Long-woolled and Cross-bred Sheep.</i>				
		Rams.	Ewes.	Wethers.	Lambs.	Total.
Pure and stud—Lincoln ... ..		21,634	85,371	78,300	66,601	251,906
Ordinary ... ..		21,888	140,853	143,286	99,956	405,983
Total, Lincoln ... ..						657,889
Pure and stud—Leicester ... ..	5,959	41,212	45,278	24,800		117,249
Ordinary ... ..	7,928	64,923	101,066	39,337		213,254
Total, Leicester .. ..						330,503
Pure and stud—Border Leicester	1	—	—	—		1
Total, Border Leicester ... ..						1
Pure and stud—Southdowns	526	3,805	347	2,744		7,422
Ordinary ... ..	420	2,488	1,896	1,292		6,096
Total, Southdowns ... ..						13,518
Pure and Stud—Shropshire Downs	240	1,409	10	782		2,441
Ordinary ... ..	68	720	30	326		1,144
Total, Shropshire ... ..						3,585
Pure and Stud—Hampshire Downs	2	—	—	—		2
Total, Hampshire Downs... ..						2
Pure and stud—Romney Marsh	1,086	700	100	619		2,505
Ordinary ... ..	432	700	500	400		2,032
Total, Romney Marsh ... ..						4,537
Pure and Stud—Cotswold ... ..	30	10	—	9		49
Total, Cotswold ... ..						49
Total number, Long-woolled Sheep						1,010,084
		<i>Crosses.</i>				
Crosses of the above breeds	22,598	663,910	628,835	581,062		1,896,405
(Long-woolled) with Merino						
principally.						
Total, Crosses ... ..						1,896,405
Grand total ... ..						56,977,270
		<i>Sexes and Classes.</i>				
Rams ... ..						787,815
Ewes ... ..						25,936,777
Wethers ... ..						18,161,261
Lambs ... ..						12,091,417
Total ... ..						56,977,270

*Australian and Foreign Sheep Introduced and Imported.*

*Australian Sheep Overland from other Colonies.*—Stud sheep, 3,303; ordinary, 516,514; total, 519,817.

*By Sea from other Colonies.*—10,827 stud sheep were introduced from the other Australian Colonies by sea; particulars of those sold at the annual stud sales are given in Appendix B.

The prohibition against the introduction of stock from Western Australia is now in force only so far as relates to sheep.

*Foreign Sheep.*

Twenty stud sheep were imported from England, and passed through quarantine (the charges for which have been reduced) in Sydney before going inland. These were isolated for sixty days, and dressed three times with a mixture of tobacco and sulphur, in terms of the Regulations of 10th January, 1893. The following table gives the names, addresses, &c., of the importers:—

Name of Owner or Importer.	Address.	Breeds Imported.											
		Cheviot.		Dorset Horn.		Shropshire.		Southdown.		Merino.		Total.	
		Rams.	Ewes.	Rams.	Ewes.	Rams.	Ewes.	Rams.	Ewes.	Rams.	Ewes.	Rams.	Ewes.
H. C. White .....	Havilah, N.S.W.	...	...	...	...	2	10	...	...	...	...	2	10
W. Kilgour .....	Sydney, N.S.W.	...	...	...	...	...	...	...	...	4	...	4	...
Agricultural Department .....	Sydney, N.S.W.	1	...	1	...	1	...	1	...	...	...	4	...
Total .....		1	...	1	...	3	10	1	...	4	...	10	10

*The "Cast" of Fat and Store Sheep.*

The annual "cast" of fat sheep for the ensuing season is estimated at 6,605,904, and store sheep, 6,763,148.

*How Sheep are kept.*

Paddocked ... ..	55,663,677
Shepherded ... ..	576,723
Both ways ... ..	736,870
	56,977,270

*Condition of the Flocks.*

In forty-eight districts the sheep are said to be improving, the principal reasons given being more attention to breeding, paddocking, introduction of high-class rams and ewes, more careful classing and culling, better management, and good seasons.

In thirteen districts they are said to be stationary, and in four districts they are deteriorating. The reasons given are effects of bad seasons, country unsuited, breeding from inferior ewes, bad management, bad selection of rams, purchase of stores, fluke and foot-rot.

*Lambing.*

From a return of the autumn, winter, and spring lambings obtained from the Inspector for each Sheep District, the average percentage of lambing for the whole Colony is estimated at 68 per cent, *i.e.*, calculating the number of lambs marked on the number of ewes put to the rams. The autumn lambing was the highest, averaging 74½ per cent., while the winter and spring lambings averaged 70½ and 49½ per cent. respectively.

*The Clip.**Average per Sheep.*

*Lambs.*—The number of lambs shorn in the grease was 7,948,101; the number washed, 463,950; total lambs shorn, 8,412,051.

*Sheep.*—The number of sheep shorn in the grease was 42,632,425; hot water and spout-washed, 100,000; creek-washed, 88,686; and scoured, 3,001,835; total sheep shorn, 45,822,946.

The average weights of the clip are estimated as follows:—

	<i>Lambs.</i>	<i>Sheep.</i>
	lb. oz.	lb. oz.
Grease ... ..	2 4	6 1½
Creek-washed ... ..	1 7½	3 1½
Scoured ... ..	.....	3 5½
Hot water and spout washed ... ..	.....	3 13

*Total Clip.*

Total clip in the Colony for the year 1894, according to the number of sheep, would be:—	
42,632,425 sheep shorn in the grease; average clip, 6 lb. 1½ oz. per sheep =	259,791,340 lb.
88,686 " creek-washed " 3 " 1½ " " =	274,372 "
3,001,835 " scoured " 3 " 5½ " " =	10,037,386 "
100,000 " hot water and spout washed " 3 " 13 " " =	381,250 "
7,948,101 lambs shorn in the grease " 2 " 4 " per lamb =	17,883,227 "
463,950 " washed " 1 " 7½ " " =	681,426 "
	289,049,001 lb.

The estimated total weight of the clip as shown above exceeds that of the previous year by 514,843 lb. The number of sheep and lambs shorn was greater in 1893. The average clip per fleece for sheep and lambs is also higher, owing to the good seasons, good condition of the sheep, runs not being overstocked, and improved quality of the sheep.

*Condition of Clip.*

In fifteen districts the clip is reported as entirely sound and containing a good supply of yolk; in thirty districts fairly sound, with good supply of yolk; in twelve districts sound, but deficient in yolk; in remaining districts weak, owing to absence of yolk. On the whole the clip was clean, but in a few districts the value of the wool was affected by grass-seed and burrs, owing to late shearing.

*Exportation of Clip.*

The clip grown in the Colony of New South Wales is shipped principally to England, America, France, and Germany, and considerable portions of it is so from the ports of the three neighbouring Colonies, as well as from Sydney and Newcastle. The portions of our clip thus shipped from the other Colonies is often mistaken as the produce of those Colonies, more particularly for that of Victoria and South Australia.

The following is an estimate of the clip sent to Sydney, and also the proportion sent across the Borders and to Melbourne, Adelaide, and Brisbane for the years 1893 and 1894:—

Port of Shipment.	1893.			1894.		
	Greasy.	Washed.	Total.	Greasy.	Washed.	Total.
	lb.	lb.	lb.	lb.	lb.	lb.
Sydney .....	218,563,673	2,544,409	221,108,082	215,535,980	6,292,052	221,828,032
Melbourne .....	53,339,634	493,692	53,833,326	51,636,602	1,488,132	53,124,734
Adelaide .....	12,456,645	799,256	13,255,901	10,227,016	3,594,250	13,821,266
Brisbane .....	331,849	.....	331,849	274,969	.....	274,969
	284,691,801	3,842,357	288,534,158	277,674,567	11,374,434	289,049,001

This shows an increase in the quantity of wool shipped during the year from the Ports of Sydney and Newcastle of 719,950 lb., as compared with that shipped in 1893.

Classing

### Classing of Clip.

In thirty-nine districts the clip is reported as having been well classed. In the other districts it is not considered to have been so, the reasons given being, owners consider it does not pay, that prices obtained are no better, also want of convenience, sheds not large enough to warrant expense, and the difficulty of obtaining competent wool-sorters.

### Wool-presses.

A great number of different kinds of presses are used; those most in favour are Ferrier's Patent and Williams' and Robinson's; rack screw and pinion presses are used. There is still room for improvement in the mode of pressing, especially by the owners of small clips.

### Woolpacks.

The woolpacks used are mostly Calcutta and Dundee, of various sizes, from 4 ft. 6 in. x 2 ft. 2 in. to 5 ft. 8 in., and the weight from 10 to 12 lb.

On thirty-nine holdings the wool is dumped before leaving.

### Sheep-brands and Marks.

During the year 1894 the number of Sheep Brands and Ear-marks recorded, transferred, and cancelled were as follows:—

Recorded.			Transfers.			Cancelled.		
Fire Brands	...	193	Fire Brands	...	39	Fire Brands	...	64
Tar do	...	1,121	Tar do	...	132	Tar do	...	167
Ear-marks	...	778	Ear-marks	...	109	Ear-marks	...	125
Total	...	2,092	Total	...	280	Total	...	356

### Ear-marking and Tattoo-marking.

In all districts the system of ear-marking sheep is now generally carried out, and the system of tattoo-marking is mostly used by owners of stud-sheep, not as yet to any great extent in the case of ordinary flock sheep, but where tried it has been found to be a good preventive to sheep-stealing.

### Destruction of Wool by Tar and Paint Brands.

Complaints having been made that great loss was caused by the use of tar and other ingredients in branding sheep, which destroyed the wool, a circular was addressed to the wool brokers in Sydney, asking if they could suggest any material for branding, which, while it would remain legible for twelve months, could be removed by scouring, and the result of the inquiry will be found as Appendix F.

### DISEASES IN SHEEP.

*Scab.*—The flocks in this Colony and in the Colonies of Queensland, Victoria, South Australia, New Zealand, and Tasmania are free from scab. It exists, but to a very slight extent, in Western Australia, but it is hoped that Colony will soon be declared clean. The importation of sheep from Western Australia into this Colony is still prohibited.

*Anthrax.*—There have not been any serious outbreaks of this disease during the year, yet it has prevailed in several districts, and it would appear to be extending over a greater area of country than hitherto, or perhaps the favourable result of vaccination may be inducing owners (who formerly concealed the fact of the existence of the disease on their holdings) to let it be known, what they must do before the sheep can be vaccinated. As will be seen by statement in Appendix G, a good many sheep have been vaccinated during the year by Mr. J. A. Gunn and Mr. A. A. Devlin (the latter Mons. Pasteur's representative), a statement of which is given hereunder, showing the result of the vaccinations for the year 1894. A few cattle have also been vaccinated. While the results of the vaccinations are apparently very favourable, another year at least must elapse before their real value is satisfactorily demonstrated. The increased prevalence of this disease in the United Kingdom has been maintained during the year. A severe outbreak of anthrax occurred in the Siberian province of Russia.

*Foot-rot.*—In forty districts the sheep have been more or less affected with foot-rot during the year, the reasons given being continued wet seasons running on low rich pasture, unsound country, and infected land.

The principal remedies reported as having been applied in addition to those recommended by the Department will be found as Appendix H.

*Fluke.*—In thirty districts the sheep were affected with fluke through wet seasons, depasturing on low swampy ground, unsound country, and rank pasture. The preventives used were salt, tar, and turps, sulphate of iron and Liverpool salt, and sulphur with good results, but the best course where it can be followed is to remove the sheep to salt bush country, and where that cannot be done to keep the country free from surface water by means of drains run with a plough and helped with a spade, and burn the grass when opportunity offers, besides giving the licks mentioned. A report by Mr. V.-S. Stuart C. Pottie and my remarks will be found in Appendix I.

*The New Disease in Sheep.*—This disease has affected the sheep to a greater or less extent in several districts widely apart, and as the owners on the upper Billabong and Upper Murray were anxious that the ailment should be investigated, Mr. S. C. Pottie, M.R.C.V.S. was instructed by the Department to make the necessary enquiry and report. His report will be found as Appendix J.

If the symptoms of this disease are the same, as it is believed they are, as those of Liver Rot, described by Professor J. H. Steel in his work on "Diseases of the Sheep," then the ailment which is known here as "The New Disease in Sheep" would appear to be "Liver Rot"; and if this is the case I would accept Professor Steel's opinion as given at page 140 of his work, that "to all intents and purposes we may deal with Rot as fascioliasis, *i.e.*, the pathological state which results from Fluke invasion." And whether this be the case or not, the circumstances under which this "New" Disease is induced, such as a continuance of wet seasons with frequent summer rains, the country comparatively saltless, with a great deal of surface water,

water, and the grass rank and innutritious, are the same as those that lead to the prevalence of Fluke, and it therefore makes very little difference what the actual cause is, or what the proper designation of the ailment may be, for the same preventive treatment is called for in either case, and prevention is the only treatment of any real value. The following are the principal measures which Professor Steel recommends should be taken with respect to "Rot," and they are of course in many respects applicable to ordinary invasions of Fluke, but some of his suggestions, especially those relating to Government interference, are not practicable in this colony.

*State Interference.*

1. Sheep affected with Fluke should be subject to State Regulations.
2. They should be prevented from travelling; for he says one sheep may have 1,000 flukes and each fluke may have 40,000 eggs, that is each sheep may be a bearer of forty million flukes.
3. Government Officers should be empowered to compel drainage, ploughing, and fencing off dangerous ground.
4. The Agricultural Societies (here the Stock Branch could do so) should collect and disseminate information in regard to the disease.

*Precautions by Owners of Doubtful and Infested Land.*

5. Owners should keep a strict watch, and early detect invasion of Fluke.
6. They should be exceedingly careful to prevent flukey sheep coming on their land, and if any infested sheep have been brought on a holding they should be destroyed, *i.e.*, boiled down and offal burned.
7. They should never allow their sheep on infested places.
8. They should thoroughly surface drain their land.
9. They should fence off doubtful and infested places.
10. They should systematically burn their pasture.
11. They should put quicklime in the creeks, waterholes, and swamps, and if plentiful on the pasture where damp, to destroy the snails and other bearers of the fluke, and the fluke in certain of its stages.
12. They should avoid overstocking.
13. They should frequently change the pasture, and be careful where possible to put weaners on uninfested land.
14. They should have two sets of paddocks—one set for the dry and other for the wet seasons of the year.
15. They should keep their sheep constantly supplied with Liverpool salt and sulphate of iron, and with lime and sulphur occasionally added, and other licks such as those prescribed by Mr. Pottie.
16. They should see that every sheep had its share of the lick.
17. They should see that the sheep had a sufficient supply of nutritious food.
18. When the sheep are flukey the effort should be to make them outlive the invasion.
19. If horses and cattle are kept on infested country they should not be allowed in sheep paddocks, as they can be bearers of the fluke.

*Sheath Disease in Wethers on the Lower Macquarie.*—A disease affecting the sheaths of a number of wethers upon a run in the Coonamble district was professionally examined in October last by Mr. Veterinary Surgeon Scott, instructed by this Department, whose report thereon I append in the form of Appendix K. The treatment recommended was successful.

*Parasitic Worms.*—In thirty-five districts the sheep are reported as having been infested with worms to an extent of (say) 14 per cent. In nineteen districts the sheep are reported as having been infested with stomach, lung, and tape worms; in six districts with stomach and tape worms; in six districts with stomach worms; and in five districts with lung-worms. The prevalence of the worms in one district (stomach and lung worms) is attributable to the frequent summer rains following upon a wet winter, which lessened the nutrition in the pasture and lowered the stamina of the sheep, while at the same time the moisture and heat tended to a large development and increase of the worms. A brief statement of the remedies used, and the result, will be found in Appendix L.

Dr. Cobb, Vegetable Pathologist for the Department, is still engaged upon the study of the life history of the worms which cause the chief losses in our flocks, with the view to find a remedy for them, or at least to ascertain when, where, and how they can best be attacked. A progress report on the work so far as done will be found as Appendix M.

PIGS.

The number of pigs in the Colony at 31st December, 1894, was 273,290, being an increase of 32,430 as compared with the actual returns for the previous year.

From the other colonies 220 have been introduced by sea.

The prohibition which had existed for some years against the introduction of pigs from foreign countries has now been removed, and they are admitted on undergoing a quarantine of sixty days, the charges for which have been reduced. One improved Berkshire boar was imported from England by C. Webb, Esq., of Springfield, Bathurst; afterwards purchased by Mr. W. H. Walker, of Tenterfield.

The number of pigs exported from port of Sydney was 266.

Four ships' pigs were quarantined during stay of vessels in port, and forty-four were killed as the owners would not quarantine them.

DISEASES IN PIGS.

The pigs are occasionally found to be affected with tuberculosis, cancer, and contagious catarrhal pneumonia.

According to late reports swine fever is on the increase in the United Kingdom.

DOGS.

Thirteen dogs were imported last year from England and other places outside the Australasian Colonies, and were subjected to the proscribed quarantine of six months (the charges for which have been reduced) before being admitted into the Colony, while 441 colonial dogs were introduced at the Port of Sydney from the other colonies.

Three

Three hundred and thirty-seven dogs were inspected prior to exportation, as also forty "ships' dogs" were quarantined during stay of vessels in port, and eighteen dogs were destroyed.

All "ships' dogs," and other stock on board foreign vessels for the use of the passengers and crew, are now quarantined during the stay of the vessel to which they belong in port, whether in Sydney or at Newcastle.

#### DISEASES IN DOGS.

Rabies is reported to be increasing in Great Britain and Ireland. In Paris the disease is also on the increase. A case of rabies is reported from South Africa, said to be the first which has occurred. This fact disposes of the theory that the disease would never occur south of the Line.

#### TRAVELLING STOCK (*Reserves, Roads, Tanks, Wells, &c.*)

##### *Trespass on Reserves.*

In thirty-five districts the travelling stock and camping reserves are reported as having been trespassed upon, generally only to a slight extent, and in thirty districts they are reported as being free from trespass.

##### *Marking of Travelling Stock and Camping Reserves.*

Good progress has been made with regard to the marking of travelling stock and camping reserves, the system of which is shown as Appendix N, there being at present about 900 miles surveyed and about 400 miles in course of survey. The routes marked are:—

1. From Boggabilla, *via* Yetman, Warialda, and Cobbadah, to Breeza.
2. From Moree, *via* Millie, Narrabri, Boggabri, Breeza, and the Liverpool Range, to the Bulga Mountains.
3. From Walgett, *via* Coonamble, Mendooran to Uarby.
4. From Coolah, *via* Uarby, to Rylstone.
5. That portion passing through Terry-hie-hie holding.
6. From Boggabri, *via* Turrabeile or Cox's Creek, to Coolah.
7. Mungundi to Moree.

With a view of making these surveys of practical benefit to drovers, stock-owners, and others' lithographs are being prepared showing sections of the roads in lengths of between 20 and 30 miles.

Lithographs of the roads, Boggabilla to Cobbadah, in six (6) sections; Moree to Cobbadah, *via* Gurley Holding, in one (1) section; Walgett to the Castlereagh, in one (1) section; and Liverpool Range to Putty, in five (5) sections, are now on sale at the Head Office, and also at the local Stock Office, at 2s. per section.

##### *Grass on Reserves and Driftways.*

The Inspectors report that in all the districts in good seasons there is sufficient grass on all the reserves and driftways to enable fat stock to reach market in good condition. In ten districts there is not sufficient in ordinary seasons.

From seven districts it is reported that 115 horses, 120 cattle, and 373,823 sheep have passed through during the year in search of grass and water. From two districts the number of loafing sheep is given at 84,546.

##### *New Stock Roads required.*

In sixteen districts new roads are required for travelling stock, and to obtain these action has been already taken in eleven districts.

##### *New Stock Reserves required.*

In nine districts new reserves and alterations of existing ones for travelling stock are required. In fifty-five districts there are sufficient reserves; but in a great many cases the reserves are leased under annual lease, and are, therefore, kept very bare of feed.

##### *New Wells, Tanks, or Dams.*

In seventeen districts the inspectors report that new wells, tanks, or dams should be constructed by the Government at places which they indicate.

#### REGISTRATION OF HORSE AND CATTLE BRANDS.

##### *Brands registered.*

The number of horse and cattle brands registered up to 31st December, 1894, was 73,594. The number of brands registered during the year 1894 was—Horse brands (alone), 390; cattle brands (alone), 423; and horse and cattle brands, 1,026; making a total of 1,836.

This shows a decrease of 321 in the total number of brands registered during the year as compared with 1893. There is also a decrease in the number of brands transferred and cancelled.

##### *Brands transferred.*

The brands recorded during the year 1894 as transferred were—Horse brands, 26; cattle brands, 40; horse and cattle brands, 42; total, 108, being a decrease of 42 on previous year.

##### *Brands cancelled.*

The brands cancelled (horse and cattle) in 1894 were 128.

##### *Addresses changed.*

The number of addresses of owners changed in 1894 was 75.

##### *Compliance with the Act.*

In all the districts the provisions relating to registration and the other requirements of the Act are reported as being fairly carried out.

##### *Benefits of the Act.*

The inspectors, in alluding to the benefits of the Act, report that it prevents duffing, stock-stealing, facilitates identification, assists in recovering lost stock, and otherwise is a great convenience and protection to stock-owners.

POUNDS.

## 13

## POUNDS.

*Number and Inspection.*

At the end of the year there were 248 pounds in operation in the Colony; 43 have been closed for want of poundkeepers, and there are sites set aside for the establishment of 155 more as occasion requires. The whole of the pounds are inspected periodically by the various stock inspectors.

*State of Yards.*

Fifteen of the pound-yards are reported to be old; some require renewing, being unfit for the safe custody of stock; while others need repairs. The remainder are said to be in a fair and good condition.

*Keeping and Depasturing Pound Stock.*

The provision made for the proper sustenance of impounded stock, according to the reports received, is satisfactory. As a rule, poundkeepers have now paddocks for the stock.

*Management of Pounds.*

The poundkeepers are reported to be performing their duties, upon the whole, in a satisfactory manner, and the appointment of inspectors of stock as inspectors of pounds has had a very beneficial effect.

## NOXIOUS ANIMALS.

*The Districts in which the Pastures and Stock Protection Act is in force.*

The Act has been brought into operation in all the districts, and during the year work has been done to the extent shown in Appendices O and P.

*Receipts and Expenditure under the Act.*

The amount of assessment paid by stock-owners in 1894 was £39,466 13s. 3d.; and the amount expended £44,695 6s. 3d., the difference being accounted for by the subsidy granted by the Government to the Boards, and large amount to credit of some of the Boards at commencement of the year. Eight districts are reported to be in debt to the amount of £737 8s.

In eight districts full rates were levied, in forty-nine districts less than full rates, while in eight districts no rates whatever were levied.

During the year the bonuses paid by the Boards for scalps ranged as follows:—For kangaroos, from 1d. to 6d.; kangaroo rats, 1d. to 6d.; wallaroo, 2d.; wallaby, from 1d. to 4d.; paddymelon, from 1d. to 6d.; bandicoot, 2d. and 3d.; hares, from 1d. to 6d.; native dogs, from 10s. to 60s.; pups, 2s. 6d. to 10s.; opossums, 1d.; wild pigs, 3d. and 9d.; eagle-hawks, 6d. to 5s.; emus, 3d. to 6d.; crows, 1d. to 6d.; and foxes, 10s. and 20s.

*Increase and decrease.*

Kangaroos are reported to be increasing in twenty-one districts, wallabies in sixteen districts, native dogs in thirteen districts, hares in nineteen districts, and wild pigs in eight districts. In sixteen districts kangaroos are reported to be decreasing, wallabies in fifteen districts, and native dogs in twenty-three districts, hares in eleven districts, and wild pigs in four districts.

*Number destroyed.*

The number of kangaroos destroyed during the past year was 11,630; of kangaroo rats, 238,825; of wallabies, 796,667; of wallaroo, 51; of wombats, 79; of bandicoots, 2,167; of paddymelons, 135,785; of wild pigs, 25,851; of hares, 708,581; of foxes, 52; of native dogs, 11,279; of opossums, 3,471; of eagle-hawks, 4,874; of crows, 58,962; and of emus, 918.

*Steps taken for their destruction.*

In the majority of the districts hunting with dogs, drives, shooting, trapping, and poison have been adopted with satisfactory results. In forty-five districts poison has been used, mostly for dogs, with fair to best results, and from five districts it is reported that the results have not been satisfactory, the dogs being too cunning to take baits.

*Amendments suggested in the Act.*

Owners are desirous that the Amended Stock and Pastures Bill speedily become law; and they suggest that all owners of stock, irrespective of number, should be liable to an assessment, as also owners of 5 acres of land and over; that farmers and owners of orchards and vineyards should pay to the fund; that hares be included in the list of noxious animals; that the Boards be empowered to pay for rabbit scalps; that the Government should grant larger subsidy to enable Boards to destroy noxious animals on vacant Crown lands; that uniform rates be levied; that the rate of bonus be the same throughout the Colony; that all returns of stock be made on the same day; that adjoining Boards assimilate bonuses; that the provisions of the Act *re* defaulting Boards be strictly enforced; open voting at Elections of Directors; a Bill to include noxious weeds; portions only of district to be declared infested; Superintendents to have the same power for voting as owners, by proxy; and all owners to lay poison simultaneously for rabbits.

*Losses from Native and Tame Dogs.*

The losses in stock for the past year from the ravages of native dogs are estimated at 127,121 sheep, valued at £25,334, and from tame dogs, 54,496 sheep, valued at £10,206 making the loss from native and tame dogs together, £35,540.

## COMMONS.

*Number and extent.*

The number of Commons in the Colony is 297, with an average of about 4,000 acres each.

*Number*

*Number of Commoners, Stock, &c.*

The average number of Commoners to each Common is estimated at eighty-five, and the average number of stock kept on each Common at 184.

In three districts some of the Commons are reported to be used for other purposes than that of grazing Commoners' stock. Many of the Commons are unfenced, consequently are trespassed upon by travelling stock, &c.

## MISCELLANEOUS.

*Cultivated Grasses.*

In thirty-one districts cultivated grasses have been sown for pasture during the year to a small extent, in eight districts to a large extent, and in remaining districts none; the most successful being lucerne, prairie, and rye.

*Number and Division of Runs.*

The number open or unenclosed runs in the Colony is 6,540; the number enclosed is 40,891; the number partially sub-divided is 14,351; and the number properly sub-divided is 23,180.

*Improvements, Fencing, Dams, Tanks, and Wells.*

The number of miles of fencing throughout the Colony is estimated as follows:—1,562,528 miles without wire netting, at an average cost of (say) £38 10s. 7d. per mile, amounting to £60,203,355, and 73,025 miles with wire netting, average cost at (say) £70 14s. 6d. per mile, amounting to (say) £5,164,880.

The number of dams used for stock purposes is estimated at 61,650, at an average cost of (say) £75; number of tanks, 36,811, average cost of each, £187 16s.; and the number of wells used is estimated at 4,005, at an average cost of £184 11s. each.

Cost of fencing, £65,368,235; cost of dams, £4,621,556; cost of tanks, £6,913,460; cost of wells, £739,176; making a total of £77,642,427, as representing the amount expended by way of improvements, &c.

*Plants and Weeds.*

## Prevalence.

In sixteen districts *trefoil burr* grows to a very large extent; in twelve districts, to a considerable extent; in seventeen districts, to a slight extent; and in twenty districts there is none reported.

In twenty-nine districts *variegated thistle* is reported to a slight extent; in twelve, to a considerable extent; in nine, to a very large extent; and fifteen districts are reported as free from it.

In twenty-four districts *black thistle* is reported to a slight extent; in sixteen, to a considerable extent; in seven, to a very large extent; and eighteen districts are reported to be free from it.

In nine districts the land is reported as being infested to a very large extent with *Bathurst burr*; in thirteen districts, to a considerable extent; in thirty districts, to a slight extent; and in thirteen districts the land is not infested.

In twenty-eight districts, other noxious weeds grow to a slight extent; in thirteen districts, to a considerable extent; in seventeen districts, to a very large extent; and in seven districts there is none reported.

## Legislation for Noxious Weeds.

Legislation is urgently required for dealing with noxious weeds and plants, more especially the *Bathurst burr*, the prevalence of which is inflicting very serious loss on travelling stock.

## Cost of clearing Commons, Reserves, &amp;c., of Weeds.

The cost of clearing the Commons of noxious weeds throughout the Colony is estimated by inspectors at £73,304; the police paddocks, £4,547; the travelling stock reserves and droving roads at £196,415; amounting in all to (say) £274,266.

*The Stock and Pastures Bill.*

It is hoped that the state of the Government business will soon admit of this measure, which is so urgently required, being passed to enable inspectors to deal with diseased stock, which are now, through the want of the legislation so frequently asked for, allowed to travel throughout the Colony, spreading the infection as they go. This is especially the case with Queensland cattle infected with pleuro-pneumonia, which frequently introduce the disease in our herds.

## THE LIVE STOCK EXPORT TRADE.

Judging from what has been already done in this trade its prospects are good, so far at least as freights on the upper deck are concerned, notwithstanding that rather heavy losses have in several instances been sustained, and that obstructions have been met with through the regulations in force in England and on the Continent of Europe. But to make the trade a success the cattle should be inoculated for pleuro-pneumonia three months at least before they are shipped. If they are not inoculated, and the disease is taken on board by a single animal, the disease would probably go right through the whole shipment, and entail very heavy loss, besides giving our cattle a bad name.

Hitherto this trade has been confined to stock carried on the upper deck of the vessels, as the rate of freight on that portion of the vessel has been at the comparatively low rate of £6 a head, and it is so because of course cargo is very seldom carried on that deck, and the freight for the cattle is so much found money to the shipowner. If, however, the shipments were confined to the upper deck they would never amount to much, with the ships now in the trade the annual export in that way might be about 8,000 or 10,000 head of cattle, or the equivalent in sheep; and if the business is to expand the stock will have to be carried on the between decks as well as on the upper. If that were done it is calculated that there would be on an average room for, say 300 head per vessel, which again would, with 100 steamers a year, be, say 30,000 head.

That would, I think, be a very suitable shipment, and could with proper management be readily obtained twice a week, or oftener if necessary, in Sydney; and from the enquiries I have made I have good hopes that an arrangement could be made with some of the Shipping Companies at a freight of from 120s.

120s. to 130s. a head, if a guarantee were given that a regular supply of cattle would be provided for their steamers. This, again, if not arranged by the Associated Stock Salesmen, could, it is believed, now be so by such an Association as it was at one time attempted to form, to promote the live stock export trade, but which fell through from want of support.

The numbers here mentioned are what the cargo boats now in the trade could, I understand, carry on the two decks. But if ships specially constructed for the trade were put on they might take at least 100 head more on the two decks, while they filled up below with frozen meat, wool, tallow, hides, and perhaps timber and ore.

But if it be the case, as reported, that a vessel capable of carrying 750 cattle has been chartered for the trade, and if the freight does not exceed £6, and the shipment of such a large number of cattle in one vessel proves a success, it will be seen that a very much larger number of cattle will be annually exported, and sheep will also be sent. In those cases, however, where the vessel is wholly loaded with stock it is probable that she would far more frequently get her cargo in Queensland than in this colony, and that our live stock export trade would, as a rule, be confined to shipments on the upper and 'tween decks, which, after all, would take a considerable number of stock, as the trade of Sydney brings a great many steamers to our port.

#### *The Description of Stock to Ship.*

Then, if we are to do a large and successful trade in the export of fat stock it is scarcely necessary to say that they should be of the most saleable breeds, ages and sizes, and prime quality, and that the arrangements for their shipment, carriage and food should be the best that can be made, and I will glance shortly at these requirements. Before doing so, however, there is an important matter which calls for serious consideration. I refer to the question whether the present system of charging freight per head of the cattle shipped should not be changed for a charge for the space taken up by the stock, inasmuch as the system of charging per head naturally leads to extra heavy cattle being shipped through the shipper, in that way getting more meat Home for the money than if he shipped smaller cattle, while all the time the cattle most in demand in London and for which the highest price is paid, young cattle, dressing from 700 to 850 lb. when slaughtered, cannot be sent, as it does not pay to ship them at the rate per head charged. This was clearly shown in the case of the beautiful Devons, and even Devon crosses, shipped by the "Port Pirie" by Mr. H. C. White, of Havilah, which barely paid their way, if they did that; while large, heavy Shorthorns gave fairly good returns. Not only is the existing system objectionable for these reasons but it is also for another very important one, that is that comparatively small young cattle are the very class of which we could with ordinary management and care have by far the largest supply. Of course these objections would not apply where a vessel is chartered, for in that case the charterer would arrange the stalls according to the size of the cattle.

#### *The Breeds of Cattle to Ship.*

There is no doubt but the cattle which would bring the highest price in the London market if primo and young, say from 3 to 4 years old, would be the Black Polled, the next the Devons, the next the Shorthorn and Black Polled Crosses, the next the Shorthorn and Devon Crosses, the next the Shorthorn and Hereford Crosses, then the Hereford, and then the Shorthorn. This is the order in which the different breeds and crosses stand in the London market week after week, and that should guide our breeders and shippers—not the opinions current in the Colonies; and it should be specially remembered that old beef is not liked in London—a reduction in the price per lb takes place where the cattle are over 4 years old, unless they are otherwise specially prime.

#### *Preparation of the Cattle for Export.*

There is no doubt that ordinary bush cattle, though comparatively wild when shipped, shortly become quiet and tractable, and in the course of a few days take to their food on board ship. But as there is greater risk and trouble in getting such cattle on board ship, and as it is only when they are starved into submission, which, of course, entails the loss of considerable condition, that they become manageable and eat their food, it is plain that it is much better—as Mr. Keys has all along pointed out—to train the steers to tie up and eat cultivated food, and at the same time to dehorn them. The best time for dehorning the calves of quiet, broken-in cows is when they are a week old, by rubbing the horn buds with caustic soda, and in the case of the "get" of bush cattle by taking off the young horn with a fine saw or with clippers when they are branded; and this latter plan could, until those which have been dehorned as calves have grown up, be adopted in the case of steers, say from 2 to 2½ years old, when they are being trained as proposed and before they are put into the proper paddocks to be fattened.

#### *Arrangements for Shipping.*

Believing that there will be a large expansion of the export trade in live stock, the Department has been looking for a site on deep water, where the largest ocean-going steamers could go to load cattle and where there would not only be the necessary yards, forcing yards and crush, and the most convenient arrangements for putting the cattle quietly and safely on board, but where there would be sufficient yard room to allow the cattle to feed and rest for a day or two after their journey by road or rail before they are put on board the vessel by which they are to be shipped. And it is hoped that one of the sites inspected, which is very accessible to stock as well as convenient for the shipping, will be obtained and fitted up for the purpose.

### THE MEAT EXPORT TRADE.

#### *The Importance of the Meat Trade.*

I do not think I can give a better illustration of the incalculable benefit which the establishment of an extensive Meat Export Trade would confer on the Colony than by quoting the remarks lately made by a writer on the Frozen Meat Trade of New Zealand and its expansion, when speaking of its importance to that Colony. He says, "Indeed, so important has the Meat Export Trade of New Zealand become that it might without exaggeration be said that the very existence of the Colony depends upon it."

While

While not taking such an extreme view of the position of the Meat Export Trade in this Colony, and fully recognising the fact that New South Wales has other important exports to depend upon as well as meat, it is to be borne in mind that while New Zealand, with 20,000,000 sheep, annually exports some 2,000,000 of frozen carcasses, we, with 56,000,000, send away only some 800,000 or 900,000. If, therefore, we are to do anything approaching to a proportionate export trade (which would be about 5,000,000 sheep a year), far greater and far more general interest will have to be taken in the Meat Export Trade by all classes in this Colony. The Government will have to give the trade greater assistance and encouragement than it has hitherto done, and there will require to be much more energy and co-operation on the part of stock-owners themselves.

*How the Government can assist the Meat Export Trade.*

The acquirement of land by purchase or selection should be on easy terms, while the rent of Crown lands should be low, and every encouragement given to the tenant to make improvements, especially in waterless and comparatively poor country.

The necessary reserves should be notified for travelling stock, and they should be sufficiently watered and protected from trespass.

Railway accommodation should be provided as far as possible. There should be an ample supply of trucks for the live stock traffic and of refrigerating cars for the chilled meat. The speed should be as high as will pay, and the rates for both the live stock and fresh meat as low as possible.

The necessary markets should be established and provision made for the inspection and grading of the stock and meat.

Proper yards and wharfs should be provided for the shipment of live stock, meat, and other produce for European and other ports.

Assistance should be given to exporters in procuring the necessary freights at reasonable rates.

Regular information should be procured with respect to Home and Foreign markets and new centres of distribution and sale.

Extended provision should be made for agricultural education, and especially for elementary agricultural education in the country Public Schools.

Legislation should be passed and enforced in regard—

1. To the eradication of noxious plants and weeds.
2. " " of pests in trees, pastures, and crops.
3. " " of noxious animals.
4. " " of diseases in stock.

*Stock-owners' Duties.*

They should improve their holdings.

1. By erecting secure fencing.
2. By sub-dividing their paddocks, and regularly shifting the stock from one paddock to another.
3. By providing an ample supply of water.
4. By draining the land where necessary, both on and under the surface.
5. By ringbarking the timber.
6. By burning off the grass.
7. By growing cultivated food for the stock where practicable, *i.e.*—
  - (1). Lucerne in warmer portions of the Colony on suitable soil.
  - (2). Where land is unsuitable for lucerne, and climate warm, dun-oats, black-oats, winter rape, and other green crops.
  - (3). Where the climate is temperate or cold, to grow turnips, rape, green crops, and English grasses.

They should improve their stock.

1. By breeding pure-bred thick-fleshed cattle and sheep.
2. By using the best breeds for crossing.
3. By breeding from the most suitable Merinos for crossing with English sheep.
4. By using the best English rams with the Merino ewes.
5. By being careful not to overstock, and never to send stock to market (except when absolutely compelled) unless they are really prime; and to make them that at an early age: They should, if possible, be kept improving from the time they are dropped till they are sold; and to bear in mind that not only does young beef and mutton bring the best prices in England, but that they pay the breeder best.

Those owners who have country fit to carry and fatten crossbreds and for growing cultivated food for them, should also bear in mind that mutton can now be almost as readily laid down in London as wool, and that while a rise of even 2d. per lb. in merino wool will only bring, say, 1s. 2d. per sheep (one half-penny per lb. on the 60 lb. of crossbred mutton, which it will at least bring more than the merino), will give 2s. 6d. per sheep; and that the crossbred, if fairly well done to, is ready for market at two years old, and the merino at three years, which gives only 50 lb. of mutton, and crossbred mutton is much more saleable than merino.

Owners should co-operate and work for mutual benefit.

1. By forming Chambers of Agriculture, where they would meet and discuss such matters as the export of meat, the most profitable crops to grow, the best dairy, breed of cattle, the most profitable pigs, &c.
2. By forming joint stock companies with the view to the erection of the necessary works for the preparation of the meat for export. By chilling, freezing, tinning, salting, or boiling down, and the thorough utilization of the bi-products. It is as unwise as it is unfair on the part of owners who shirk their duty in this respect. The trade wants thorough reformation at Home, especially in the direction of the establishment of fresh centres of distribution; and this cannot be effected without capital; while capital again cannot be obtained unless our stock-owners as a class co-operate and contribute their fair share of capital, as well as heartily assist in the establishment and conduct of the business. Nor is this all; the shareholders of these companies should insist upon their directors working in unison (which they are sometimes disinclined to do) with those of the other companies, and depend far more on the indirect advantages to the shareholders than on a direct return in the shape of dividends; for it is nearly as hopeless for a single company to attempt to make good arrangements for freight and set and keep the trade right at Home as it is for the individual owner to make the attempt. There must be co-operation all

all through from start to finish. In the first place, owners in the several localities must work together and form companies; in the second place, the companies in each of the Colonies must come to an understanding and work together; and in the third place, the companies in the several Colonies must co-operate and work heartily and fairly together in the matter of freights, prices at Home, and the disposal of their produce there; for not only is it necessary to bring combined action into play in arranging with the shipping companies for freight, and in seeing that the middlemen and rings in London and the other ports to which our produce is sent do not get it, as they are now largely doing, practically at their own price. (Combination in this age of the world had become a science, and there are those in the meat trade in London who are able scientists); but we have to get possession of our share of the trade in meat, which the shippers from both North and South America have so largely monopolised, and principally by means of combination. If, therefore, we are to regain possession of this trade, we must oppose combination to combination, and work shoulder to shoulder; for unless we do the enemy will deal with us in detail, our meat and other animal products will be sacrificed, and our stockowners will have to put up with the ruinous returns which they have so frequently been receiving for their mutton and beef.

It is said that the five or six packing companies in Chicago, which practically "run" the American meat trade, have an arrangement among themselves by which they each take and work a certain portion of the United Kingdom; and that although they now and then, in order to keep up appearances, enter each other's territory for a short time (and make believe they are opposing each other), the several companies faithfully adhere to their agreement. And if no better nor closer form of co-operation can be made among the New Zealand and Australian meat companies, an agreement might, so far as the larger towns, other than perhaps London, are concerned, be come to, under which those companies that were in a position to do so might erect or rent the necessary cold storage accommodation at towns such as Southampton, Bristol, Cardiff, Bedford, Birmingham, Norwich, Lincoln, Nottingham, Manchester, Bradford, Sheffield, Newcastle, Edinburgh, Glasgow, Dublin, and Belfast, and work these towns and the surrounding districts, the boundaries of the districts being settled by the companies agreeing to co-operate, which would, as has been suggested, mean joint engagement of freight, the weekly settlement of prices of meat, the lending when required of meat on certain terms, &c.

#### THAWED AND CHILLED MEAT.

There can be no question, if these processes prove as successful as there are good grounds for believing they will, that they will prove to be of the greatest benefit to the Australasian Colonies; for they will enable us, after a little experience, to place our meat on the London and other markets in as presentable a condition as the chilled meat from the United States, which has for years brought from 1d. to 2d. per lb. more than the Australian.

##### 1. Thawing.

The accounts received from time to time from London with regard to the artificial thawing of the meat are very favourable indeed, and they are fully confirmed by the experiments which have recently been made in Sydney with Mr. Postle's process; for those experiments, after an exhaustive practical test, show that not only is the appearance of the sheep, after being thawed, thoroughly presentable, but the mutton on being cooked has proved to be excellent. This marketable appearance was spoken to by two of the leading butchers in Sydney, one of whom declared that the sheep were not distinguishable from those which had been killed in the ordinary way in favourable weather, and that not one man in ten would be able to say that the sheep had ever been frozen; while all those who had the mutton when cooked, including many of the Members of both Houses of Parliament, members of some of the leading clubs, and others, declared that it was juicy and tender and of excellent flavour.

The process is an inexpensive one. Mr. Postle states that for a fairly large quantity the cost would not exceed one-sixteenth of a penny per lb., and the thawing occupies, with mutton from nine to ten hours, and with beef (say) thirty hours. Although it may not do so at first, there is little doubt but thawing in the case of prime cross-bred sheep will enhance their value  $\frac{1}{2}$ d. to a 1d. per lb., and in that of merinos, say,  $\frac{1}{2}$ d. per lb. Even a less increase of price would make a very material difference to the trade, for with the low rates frequently prevailing of late in London, owners have found that it would have been to their interest to have boiled down their sheep instead of freezing them. An increase of only  $\frac{1}{2}$ d. per lb. on the low prices lately going in London would make it a good deal more profitable to freeze than to boil.

##### 2. Chilling.

The recent news of the success of the shipment of chilled beef by the s.s. "Doric" must, both as regards the condition of the meat and the prices it realised, be exceedingly gratifying to stock-owners in this and the other Australasian Colonies, and the undertaking and its success is very largely due to the foresight and enterprise of Messrs. J. H. Geddes, Birt, and Co., who were also the first to demonstrate the practicability of the live stock trade so long and so earnestly advocated by Mr. Keys.

Although only two shipments of chilled beef have as yet been sent to London, and although at first every shipment may not prove a success, still that here referred to, assisted by the shipment of the "Port Pirie," prove that the process is a practicable one; and as this is the case, it is only a question of a very short time when the trade in Australian chilled meat will be thoroughly established.

#### RABBIT EXPORTATION.

While it is allowed that the most effective means of dealing with the rabbit pest are fencing and poison, it is believed that at certain seasons of the year, when the rabbits are plentiful, and the locality is within easy reach of the railway, a profitable business might be done in catching rabbits for export to the London and other European markets, an undertaking which would provide work for a considerable number of hands.

With that view, therefore, the Department has opened up a correspondence with the Agent-General in London on the subject, the result of which has proved that a market exists in England for a considerable number of rabbits. If forwarded at the proper season of the year, and prepared for shipment in such a manner as to ensure their being placed upon the English market in a sound and presentable form, a good useful article of food may thus be put within the purchasing power of a very large number of people there, and the Colony will profit very considerably by being relieved to an appreciable extent, if what is daily proving to be an expensive, in fact an almost ruinous, annoyance to the pastoralist and farmer.

The following is a Statement of the Boiling-down, Chilling, Freezing, and Preserving Works in the Colony and of their Capacity and the Work done during 1894.

Name of Establishment.	Boiling.		Chilling.		Freezing.		Preserving.		Sundries.	Remarks.			
	Capacity per diem.	Number treated.											
	Cattle or Sheep.	Cattle or Sheep.											
The Aberdeen Chilling Company...	1,000	206,420			1,500	209,832			431,352 lb. mutton preserved	Has storage capacity for 26,006 sheep and being increased to 30,000. Plant to be increased.			
The Australian Meat Company (Ramornie).							71	13,600					
The Narrandera Chilling Depot ...	2,000	65,018	40	800	188	81,399							
The Pastoral Finance Association, Limited— North Sydney					160	3,000		219,110					
Young ..	40	1,600	30	400					} Frozen	Has storage capacity for 50,000 sheep.			
Gunnedah ..	40	1,500	56	1,000									
The Sydney Meat Preserving Company, Limited.							280	3,500	8,475	1,050,388	In Course of Construction.		
Geddes, Birt, and Co., Limited. New South Wales Government Meat Markets, Darling Harbour					80	1,500					Recently opened. Has storage capacity for about 20,000 sheep.		
Ditto, Narrabri	40	1,000	30	600							Just opened.		
Fresh Food and Ice Company					215	3,000		419,568			} Frozen	Has storage capacity for about 75,000 sheep. Chilling works recently opened	
Bourke Meat Preserving Company	200	4,000	150	2,500					5,816	55,947			
The Graziers' Meat Export Co.— Nyngan	100	2,000	25	500								do.	
Werris Creek	120	2,000	30	600								Plans and specifications prepared and tenders called for.	
Carathool		2,000		600								do.	
Forbes	120	2,000	30	600								do.	
Dubbo	150	2,500	56	1,000								Lately opened.	
Pymont Ice Works					90	1,500						Recently opened for Meat. Has storage capacity for 40,000 sheep.	
Hudson Brothers, Tenterfield	60	600	40	500									
Riverina Frozen Meat Company, Deniliquin	125	2,500			75	1,500		100	1,800			Just about to be opened.	
	995	24,700	487	9,100	188	81,399	620	12,000	451	5,300	27,891	1,106,330	

*Total Capacity of the Works in the Colony.*

Capacity for boiling per diem—cattle 995 or sheep 24,700	Capacity for boiling per annum—cattle 298,500 or sheep 7,410,000
"    chilling    "    "    487    "    9,100	"    chilling    "    "    146,100    "    2,730,000
"    freezing    "    "    620    "    12,000	"    freezing    "    "    186,000    "    3,600,000
"    preserving    "    "    451    "    5,300	"    preserving    "    "    135,300    "    1,590,000

It will be seen from the above statement that considerable progress has been made during the last two or three years in the erection of the necessary works for the boiling down, chilling, freezing and preserving requirements of the Colony.

#### BOILING DOWN.

So far as this is concerned, it may be said that almost all the works that are necessary will, by the end of this year, have been constructed; for, besides those which are mentioned in the statement, there are a number of plants, large and small, in different parts of the Colony, which when taken together have a very large boiling capacity, it being calculated that over 3,000,000 sheep were disposed of in this way during the year.

#### KILLING, CHILLING, AND REFRIGERATING DEPÔTS.

It will also be seen from this statement, that by the end of the year provision will have been made in a good many parts of the Colony for killing and chilling meat, the refrigeration of dairy and other perishable produce, and for their safe transport at all seasons of the year to market or for export.

The depôts already constructed, in the course of construction, or decided upon, and plans prepared, are at the following places:—Tenterfield, Werris Creek, Narrabri, Gunnedah, Aberdeen, Bourke, Nyngan, Dubbo, Forbes, Young, Carrathool, Narrandera, and Deniliquin—in all thirteen depôts.

These depôts will provide to a very considerable extent, for present requirements of the localities in which they are erected, but we may expect before very long that works will also be established at places such as Guyra, Bathurst, Mudgee, Goulburn, Cooma, Gundagai, Wagga Wagga, and Jerilderie.

One very encouraging feature with respect to these depôts is, that they are, in a good many cases, now being provided with the necessary machinery and appliances for turning their bi-products to profitable account, and a few of them have added, or are about to add, tinning plants to their works.

#### FREEZING WORKS.

According to the foregoing statement there are now in the Colony freezing works capable of dealing with 3,000,000 sheep, or the equivalent in cattle (of, say, fourteen sheep to one head of cattle) per annum—that is, supposing that the supply of stock was regularly distributed throughout the year, and were to reach the works in such numbers day by day as they could be properly dealt with. Such an arrangement cannot, however, be carried out, for the supply of fat stock does not come to hand in that regular continuous way. Instead of that, the extent of the supply largely depends on the season, and it often (it might almost be said regularly) happens that two or three times as many fat stock are ready for market at one time than at another. For that reason it is necessary, if we wish to be prepared for all sorts of seasons, to have nearly twice as much freezing power as would be required in average seasons, and be in a position to deal with whatever quantity may be required to be prepared for shipment. Our surplus in fairly good seasons of beef and mutton for export has been estimated by competent authorities to be about equal to 4,000,000 sheep, and that would call for freezing power to, say, 6,000,000.

But although provision to this extent should eventually be made, it is believed that the capacity of the freezing works now in existence, or expected very shortly to be so, are equal to the present requirements; for our sheep-owners have not yet completed their arrangements for turning off the proportion of fat sheep which they will yet do,—especially if the expected large increase in the number of cross-breeds takes place. It will be some time before the cast fit for export amounts as estimated to 4,000,000 sheep; it cannot now, it is believed, exceed, if it comes up to, 3,000,000.

Under these circumstances the capital and energy of our stock-owners ought now to be mainly devoted to improving the mode of disposing of our meat in the markets of the United Kingdom; and with that purpose in view, stock-owners throughout the Colony should co-operate in securing favourable terms from the shipping companies, direct shipments should be secured to other ports besides London, cold stores should be erected or leased in the great centres of population at which a constant supply of first-class meat should be kept, and fresh centres of distribution established at these centres of population.

#### PRESERVING OR TINNING MEAT.

The foregoing statement shows that nearly 28,000 cattle and over 1,000,000 sheep were last year tinned. The largest number of cattle dealt with in this way was at the Australian Meat Company's Works at Ramornie (the oldest preserving works in the Colony), while the largest number of sheep were tinned by the Sydney Meat Preserving Company. Our pastoralists owe a deep debt of gratitude to the directors and shareholders of the Sydney Meat Preserving Company for the way in which the company has assisted in maintaining the price of stock in the Sydney market, and saved it frequently from total collapse, while all the time the company has paid no dividend. The Deniliquin Chilling and Freezing Company have added a complete tinning plant to their works, and it is reported that Messrs. Geddes, Birt, and Company are about to attach tinning appliances to their works at the Government Meat Market at Darling Harbour. This would be of immense advantage to stockowners whose meat is offered for sale in these markets, for it would in reality fix a minimum price for beef and mutton at the market, as an arrangement could be made with the person working the tinning plant to take any beef and mutton which was not sold to the trade at a certain specified rate, which would be subject to periodical adjustment, according to the state of the market.

As the boiling, chilling, and freezing works become more complete, they will, as a rule, be provided with tinning appliances, and in this way they will not only be able to put the stock at the start, according to their quality, to the purpose for which they are best adapted—whereby carriage and expense would be saved—but prices would be helped by large quantities of second-class sheep, which are now sent in to glut the market, being tinned, and thus kept out of the trade. It is only when these works are prepared to deal with the stock either by boiling, tinning, chilling, freezing, or salting, according as the case may require, that it can be said that the stock are turned to the best possible account.

#### THE DARLING HARBOUR MEAT MARKET.

It may now, I think, be said that with the erection of up-country killing and chilling depôts, and the enterprise and energy in this instance also of Messrs. Geddes, Birt, and Company, and their sub-tenants, Messrs. Thompson, Manning, and Jeremy, the fresh meat trade, so long and so earnestly looked for by many of our stockowners, has at last been successfully established; and when we consider that it will, as compared with the live stock trade, reduce the suffering and starvation of the animals to a minimum, and save the great waste and deterioration of the meat which takes place under the live stock trade, there is no doubt but that, if it receive anything like the support it deserves from our stock-owners, it will, as it has done in America, prosper and increase.

INSPECTION

INSPECTION AND GRADING OF MEAT.

Under directions from the Minister all stock intended for export are now examined by the Inspectors both before and after slaughter at the various works in the country districts, while in the County of Cumberland this duty is carried out by officers of the Board of Health. The grading hitherto done has been by the exporters themselves; but the question of establishing an official system of grading, such as exists in New Zealand, Canada, and other parts of the world, is under the consideration of the Government.

PREVENTION OF SCAB IN SHEEP ACCOUNT.

A detailed statement of receipts and expenditure by the Department in connection with the above Fund for year 1894 will be found in Appendix Q hereto, and will be published annually in the same form.

APPENDIX A.

RETURN of Stock in the several Sheep Districts.

Districts.	Year 1893.					Year 1894.				
	Acreage.	Horses	Cattle.	Sheep.	Pigs.	Acreage.	Horses.	Cattle.	Sheep.	Pigs.
Albury .....	877,028	7,102	15,513	801,672	.....	874,216	7,081	16,308	783,544	.....
Armidale .....	3,136,922	12,153	87,997	1,601,620	.....	2,927,857	12,330	96,812	1,453,586	.....
Balranald .....	3,187,741	2,144	4,142	456,873	.....	3,565,308	2,402	4,448	618,796	.....
Bathurst .....	1,561,106	15,825	43,988	653,166	.....	1,545,394	15,392	50,536	575,890	.....
Berrima .....	266,384	4,085	28,643	40,333	.....	263,027	4,100	28,836	37,105	.....
Bombala .....	563,755	3,764	22,641	443,407	.....	511,754	3,624	23,227	436,710	.....
Bourke .....	9,017,535	8,132	15,630	2,493,362	.....	8,995,314	8,639	14,541	2,436,226	.....
Braidwood .....	396,412	5,212	45,804	85,520	.....	384,761	5,352	45,193	61,867	.....
Brewarrina .....	3,510,127	4,709	18,577	1,317,859	.....	3,777,242	4,765	16,164	1,371,470	.....
Bronlee .....	237,103	3,166	31,651	5,112	.....	261,846	3,362	32,446	1,933	.....
Cannonbar .....	3,482,516	5,653	22,042	1,447,576	.....	3,488,545	6,416	21,418	1,530,589	.....
Carcoar .....	1,170,021	8,389	25,926	852,935	.....	1,113,171	8,483	27,082	799,468	.....
Casino .....	1,445,134	9,345	130,261	1,135	.....	1,296,497	9,716	138,807	907	.....
Cobar .....	5,441,670	2,882	5,341	1,255,075	.....	6,761,640	3,317	5,600	1,311,647	.....
Coodobolin .....	5,044,404	5,546	11,434	1,829,318	.....	5,769,271	5,536	11,336	1,837,408	.....
Cooma .....	1,699,483	8,849	46,327	951,883	.....	1,693,945	8,969	57,378	874,215	.....
Coonabarabran .....	2,454,055	5,495	15,140	1,220,084	.....	2,293,061	5,723	14,998	1,159,561	.....
Coonamble .....	2,718,692	6,934	16,989	1,829,205	.....	2,713,004	7,269	21,842	1,882,466	.....
Corowa .....	1,129,231	4,789	7,982	987,667	.....	776,044	3,671	6,320	697,636	.....
Deniliquin .....	2,506,100	6,403	16,262	1,453,565	.....	2,231,379	6,022	17,147	1,396,315	.....
Denman .....	314,235	4,121	38,811	40,693	.....	290,500	4,272	34,329	46,948	.....
Dubbo .....	3,688,344	12,499	33,116	1,977,458	.....	3,854,665	14,185	37,576	2,168,880	.....
Edon .....	447,846	4,573	53,206	5,010	.....	446,817	4,214	51,943	2,922	.....
Forbes .....	2,786,049	11,196	34,434	2,080,255	.....	2,797,456	11,838	33,049	2,180,808	.....
Glen Innes .....	2,070,647	14,078	109,134	734,131	.....	2,119,594	14,617	132,783	693,073	.....
Goulburn .....	923,354	9,238	54,366	357,029	.....	926,015	9,806	62,413	278,739	.....
Grafton .....	800,484	18,198	76,645	5,239	.....	863,950	17,498	77,136	2,847	.....
Gundagai .....	1,402,056	9,785	48,934	1,067,846	.....	1,254,118	10,773	64,310	1,054,595	.....
Hay .....	4,963,337	6,564	9,755	1,756,567	.....	4,635,291	6,935	9,509	1,758,757	.....
Hillston .....	3,835,528	3,021	5,723	862,019	.....	3,758,309	3,206	4,811	934,429	.....
Hume .....	1,294,720	5,776	24,320	624,759	.....	1,238,604	5,796	25,562	554,388	.....
Ivanhoe .....	5,651,658	2,103	2,138	934,230	.....	5,333,766	2,020	2,399	891,616	.....
Jerilderie* .....	.....	.....	.....	.....	.....	1,272,697	3,945	5,765	851,660	.....
Knarna .....	269,555	7,987	61,240	2,353	.....	280,699	7,865	61,489	1,913	.....
Maitland .....	481,288	11,204	57,514	3,415	.....	582,927	14,306	69,192	2,407	.....
Mceniadie .....	9,711,542	4,295	7,747	1,166,601	.....	9,492,035	4,211	7,576	1,096,048	.....
Merrina .....	733,915	4,568	17,098	554,211	.....	722,338	5,060	17,828	513,075	.....
Milparinka .....	6,577,781	2,200	7,160	851,486	.....	6,324,346	2,843	6,771	928,672	.....
Molong .....	1,661,163	11,599	25,339	1,233,621	.....	1,643,915	11,172	24,487	1,289,864	.....
Moree .....	3,217,533	9,010	72,903	1,481,867	.....	2,991,472	9,344	70,748	1,462,495	.....
Moulamein .....	2,092,214	1,605	6,133	810,328	.....	1,611,811	1,581	9,880	685,024	.....
Mudgee .....	1,544,254	10,899	45,184	732,301	.....	1,513,394	11,762	49,703	746,433	.....
Murrurundi .....	81,197	8,143	35,111	566,192	.....	778,120	8,302	31,802	549,499	.....
Narrandera .....	2,745,900	4,887	14,816	1,434,666	.....	2,840,456	5,112	16,338	1,520,232	.....
Narrabri .....	1,829,000	5,981	17,882	809,249	.....	1,410,650	6,326	20,598	795,275	.....
Pieton .....	230,852	4,594	31,354	3,317	.....	227,751	4,311	29,699	1,883	.....
Pilliga .....	1,579,810	3,238	20,194	639,548	.....	1,540,725	3,206	18,191	688,753	.....
Port Macquarie .....	514,071	8,556	46,765	1,136	.....	434,328	7,951	44,715	795	.....
Port Stephens .....	583,766	6,862	52,300	1,426	.....	605,880	7,402	52,100	1,187	.....
Queanbeyan .....	819,120	4,642	28,143	565,274	.....	800,479	4,873	30,774	504,079	.....
Singleton .....	481,063	7,245	51,373	72,491	.....	534,106	7,326	57,320	50,817	.....
Sydney .....	210,540	21,021	20,241	6,972	.....	212,060	21,723	20,265	7,010	.....
Tamworth .....	4,222,603	24,118	98,713	3,004,065	.....	4,159,221	25,779	105,965	2,851,245	.....
Tenterfield .....	1,418,834	7,392	78,665	178,143	.....	1,599,004	8,360	92,152	183,264	.....
Tweed-Lismore .....	1,265,917	7,609	33,136	565	.....	228,647	7,090	30,029	277	.....
Urana .....	1,418,209	2,973	5,401	1,111,760	.....	1,023,098	2,680	4,218	956,232	.....
Wagga Wagga .....	2,836,949	14,074	35,374	2,012,070	.....	2,797,815	14,099	39,137	1,986,133	.....
Walgett .....	5,024,047	7,496	16,971	2,324,403	.....	5,073,628	7,919	20,283	2,407,590	.....
Wanaring .....	4,521,312	2,174	2,415	887,860	.....	5,868,209	2,332	3,639	875,629	.....
Warialda .....	3,124,523	12,487	66,869	1,502,084	.....	3,113,990	12,686	73,350	1,505,540	.....
Wentworth .....	6,538,538	2,090	2,856	612,304	.....	6,625,371	2,208	3,252	628,031	.....
Wilcannia .....	9,993,140	5,155	7,941	1,570,959	.....	10,026,862	5,789	9,534	1,575,409	.....
Windsor .....	188,140	7,774	19,523	2,469	.....	196,883	7,604	17,557	1,903	.....
Yass .....	781,678	5,482	21,102	558,897	.....	791,337	5,591	21,512	501,386	.....
Young .....	2,213,919	12,020	40,237	2,051,840	.....	2,141,814	11,930	41,979	1,972,170	.....
Total .....	157,746,047	481,399	2,155,500	56,980,688	240,860	153,230,199	500,068	2,200,112	56,977,270	273,290

\* New District.

## APPENDIX B.

## BLINDNESS IN HORSES ON THE DARLING.

To Acting Chief Inspector Jones, Stock Branch, Mines Department, Sydney.

Sir,

Sydney, 16th June, 1893.

In compliance with your instructions, I have the honor to report that I left Sydney on the 12th of May last for the district of Ivanhoe, with the object of inquiring into and investigating an alleged outbreak of disease of a mysterious character amongst the horses in that district. I visited Kilfera Station, also the adjoining stations Clare and Manfred. I also, on receipt of your further instructions, visited Baden Park and the out station Moama.

At Kilfera I examined about fifty horses, several of which I found affected with partial blindness and loss of co-ordination of movement, particularly of the hind extremities. Four of the horses I found totally blind and partially paralysed, evidenced by weakness in the muscular action of the hind legs. None of the animals were in blooming condition. Several were decidedly poor.

On inquiry, I learned that several losses had occurred through complete blindness and paralysis, necessitating their destruction. I had five of the worst cases separated and placed under close examination. The symptoms of each leading to one common cause, and of unusual occurrence, they were eventually destroyed, and *post-mortem* examinations held.

The same morbid appearances were found in each case, namely, modular tumours of various stages of growth in the stomach, duodenum, evidently worm cysts, from which issued from a small orifice in the centre a yellow matter. On cutting into these tumours I found numerous small white worms. The stomach was also highly inflamed, and myriads of these worms infesting the whole of the lining membrane. I found nothing remarkable or unusual in the other organs. I made a *post-mortem* of one of the horses at Baden Park, the appearances of which were identical with the Kilfera horses.

The disease, in my opinion, is not of a contagious or epidemic nature, but is entirely due to depasturing on inundated and swampy paddocks.

Several of the animals were submitted to medicinal treatment with satisfactory results, but it is imperative that the horses should be kept on sound upland country. It is noteworthy that the horses kept off the inundated country have not been affected.

I have to acknowledge the able assistance of Mr. Webb, of Kilfera, who kindly permitted me to destroy any animal I deemed necessary; also Mr. Proctor, Inspector of Stock, Mossgiel, who rendered every assistance in his power.

I am, &c.,

A. E. G. ROBINSON, M.R.C.V.S.

I recommend the following treatment for cases affected same as Kilfera and Baden Park horses:—

Removal from inundated or swampy land on to upland country; a more generous feed, in the shape of daily allowance of chaff and bran; and the administration of the following medicine, viz.:—Raw linseed oil, 1 pint; spirit of turpentine, 2 oz., for each animal every alternate day for one week.

The following preparation to be given in the feed:—Common salt, 2 lb.; powdered sulphur, 2 lb.; black antimony, 1 lb.; tartar emetic,  $\frac{1}{2}$  lb.; sulphate of iron, 1 lb. Dose, two tablespoonsful for each horse, mixed in the feed.

A. E. G. ROBINSON, M.R.C.V.S.

(Veterinary Surgeon Scott to the Chief Inspector of Stock.)

Sir,

Victoria Barracks, Sydney, 20th January, 1895.

I have the honor to inform you that, in accordance with instructions, I visited the Western districts from December 7th, 1894, to January 5th, 1895, to inquire into a form of blindness amongst horses in the Darling River district.

The first case that came under my notice was an unbroken draught colt, the property of Mr. Hugh Cameron, of Tori Station.

*History of First Case.*—The history of the case, as furnished by Mr. Cameron, was: The horse, which had been feeding on the lake lands, had been gradually getting blind for about twelve months past, had been totally blind by day and night for a few months, but had been gradually getting better for the past three months, although still totally blind at night. The colt could see well enough not to run against the stock-yard fence, and to keep his head out of the neck-rope.

*Appearance of the Eyes.*—After casting the colt, no distinct pathological lesions of the eye could be noticed excepting a dilated glassy appearance of both pupils. The colt being unbroken, I could not examine the eyes at night. The eyes had all the appearance of a horse suffering from partial amaurosis.

*Nature of Country.*—Swampy lake flats, with any amount of native melons and tobacco.

*Cause assigned in District.*—The Chinese melon is looked upon by residents, and also by Mr. McPherson, of Paika Lake Station, as the cause of the disease. The latter proprietor informed me he had six partially blind horses on his own run; but as the station was a long way back, I did not examine them. On arrival at Balranald I examined two Kilfera horses, which had been sold six months previously. One horse, the property of Mr. McKenzie, I examined by day and night, using the catoptric test, also ophthalmoscope. On inspecting the horse standing in the stall, the eyes appeared like a cat's eye at night—pupils very dilated, and the whole eye had a bluish-green appearance. On turning the horse round, with his head directly under the light, the pupils contracted but slightly, and the whole eye had a glassy appearance. On reflecting the sun's rays on to the pupil, they contracted slightly, but did not dilate or respond to the atropine which I dropped into the eye. The eyes presented no signs of organic change. The catoptric test revealed the reflections as in a healthy eye. The bay horse was a very well marked case of amaurosis. The grey, also a Kilfera horse, was suffering from partial blindness by day but totally blind at night; the pupil of near eye was dilated, and the pupil of the off eye was normal, although affected with a lenticular cataract.

*Herbage*

*Herbage of Country.*—I visited Cannally Station, near Balranald, on the 12th instant, and was informed by the proprietor that though they had any amount of tobacco plant and Chinese melon on the station they never had a case of blindness. I visited Euston Station and was informed by Mr. Robertson Bertram, who has been thirty years in the locality, that he considered the melon a capital feed for horses, but that stock or horses would not feed on the tobacco plant. I was also informed by Mr. M'Leod, late Inspector, and Mr. Dargin, the present Inspector, that they have never known horses to feed on the tobacco plant. On arrival at Wentworth, accompanied by Mr. Inspector Morgan, I proceeded to Tarcoola Station, where several horses were affected with the same sort of blindness, viz., partial amaurosis.

*Post-mortem Examination.*—I destroyed one of the horses which was totally blind and had a cataract on the off eye. I made a *post-mortem* examination on carcass, and found all the organs in a healthy condition, excepting that the small intestines were full of different sorts of lumbrici. The brain and optic nerves presented no pathological lesions visible to the naked eye. All the horses except the above could see in the day-time, but were totally blind at night.

*Nature of Country.*—On Tarcoola Station the horses that were first noticed to be affected about last March, 1894, had been feeding on swampy box flat country, without any tobacco plant whatever, but any amount of indigo and native melon. One horse which was unbroken and was feeding in the same paddock, and which was almost totally blind, became partially paralysed in lund quarters last March and totally paralysed about last September, when he died. This horse, however, was in very low condition and weak all through, and, in my opinion, a favourable subject for paralysis.

*Cases at Cuthero Station.*—On arrival at Cuthero Station I examined both by day and night over forty horses partially and totally blind. Sixteen cases were affected with cataract, but all those were totally blind—had the same characteristic glassy bluish-green appearance.

*Cases destroyed.*—I made *post-mortem* examination on the four totally blind horses, viz., grey mare, aged, large cataract near eye and small cataract off eye, had been blind for twelve months; brown colt, 4 years old, blind for eight months; brown mare, aged, blind for two years; grey mare, 7 years old, cataract near eye, blind for twelve months.

*Post-mortem Appearances.*—The *post-mortem* appearances were similar to those noticed in the Tarcoola horses, viz., a large quantity of round worms in the small intestines and worms cysts, full of minute thread worms, varying in sizes from one-sixteenth to one-half of an inch in length. These worms do not seem to affect the stock in the slightest, as those that contained the greater number of parasites were in the best of condition. I removed the brain, eye, and optic nerve from each case, and have submitted them for microscopic examination.

*History of Disease.*—According to information supplied me by Stock-Inspectors Morgan and Dargin, the history of the disease is as follows:—

*Distribution.*—It has been noticed to a small extent in horses in the Darling River District for the past eight years, but ever since the 1890 flood it has become very pronounced and prevalent. It is prevalent on the river flats of the following districts, viz., Albermarle, Tolarno, Dry Lake, Traveller's, and Chinaman's Lake, on Pile Brothers' holdings, Cuthero Station, skips Moorara, and crops up again on the river frontages at Tarcoola, and again on the Wentworth Common, which is also subject to inundations from the river Darling.

*General Symptoms.*—Out of a mob of forty (40) horses, of all ages, that were affected, very few, except those totally blind, exhibited any marked symptoms in the day-time, except continually pricking their ears, and a more or less anxious expression about the eyes. They seem to acquire much more knee and hock action, and move with an uncertain gait. After having driven several of the affected horses I noticed that towards dusk they showed the following very marked symptoms:—Occasional stumbling if the ground was any way rough, continually running off the pole, inability to judge distances, and occasionally starting back and shying from imaginary objects. When examining several handled horses at night-time, I found them very nervous and hard to catch. Several horses that were supposed to be deaf were the first to start on hearing the gates opened, or in stealing up to them and suddenly clapping the hands. I also saw several horses that were reported to me as having been totally blind by day and night sufficiently recovered to see by day.

*Causes.*—The chief causes, according to stockmen and veterinaries, are the tobacco plant, the native melon, indigo plant, and intestinal worms. On Tarcoola Station, Mr. Darchy informed me that they have had the tobacco plant on the station, and he never knew of any cases of blindness previous to the 1890 flood. He also mentioned that horses having a few mouthfuls move off and will not feed on it. This I proved on Cuthero Station, by hobbling several horses on patches of the tobacco plant, and in every instance, after a few mouthfuls, they moved off and would not feed on it. The tobacco plant has been on Cuthero Station for twenty-five years, and Mr. David Power, manager, informed me they never had any cases of blindness previous to the great flood of 1890.

*Information.*—I was informed by Mr. Bertram, of Euston Station, and Mr. M'Kenzie, of Balranald, who has been a long time in the district, that horses do well on the native melon, improve in condition, and get very fond of it. Numbers of horses, from time to time, on which I have held *post-mortem* examinations, have been infested with the same variety of worms and worm cysts in the intestines, and they have never produced this form of blindness. The indigo plant stock will pick at, but it, like the tobacco and onion plant, has been in the locality for years past.

*Personal Opinion.*—The horses are, in my opinion, suffering from partial or total paralysis of the optic nerve (amaurosis of the eye), the result of feeding on swampy lake lands and river flats, which have become infected by a specific organism of a malarial nature, which has been generated in the low lands subject to inundation by the Darling. The organism has so far not been isolated, but I shall forward in my next report the result of microscopic examination of eye and optic nerve, also experiments which I intend to conduct with a quantity of the tobacco plant which I have just received.

I have, &c.,  
WILLIAM SCOTT, M.R.C.V.S.  
Second

## Second Report of Veterinary Surgeon Scott to the Chief Inspector of Stock.

[Subject:—" Amaurosis in Horses." ]

Sir,

Victoria Barracks, April 4th, 1895.

I have the honor to inform you that, since my last report on blindness in horses in the Western districts, I have made experiments on horses with decoctions of the tobacco plant to which is attributed by stockmen and veterinary experts the blindness amongst horses in the above-mentioned districts.

I have also received from the Board of Health Microscopist, Dr. Tidswell, sections of the optic nerves and his report on the same.

*Experiments with Tobacco Plant on Horses.*—Through the kindness of Mr. D. Morgan, Stock Inspector, Wentworth, I obtained a quantity of the tobacco plant, with which I made a very strong decoction.

*Symptoms.*—On Wednesday afternoon, February 6th, I obtained two horses from Mr. Powell, Manager of the Zoological Gardens, to experiment on. To ensure the horses getting all the decoction, I had them cast and drenched, the first subject, a bay gelding, about 16 years old, with half the quantity of an infusion of 6 lb. of the plant. Ten minutes after drenching the horse he broke out in a profuse sweat, chiefly about the flanks, the respirations became very quick and shallow. Twenty minutes after drenching I administered the remaining half of the decoction, with the result that in fifteen minutes the horse's temperature rose to 103°, pulse 110°, and respiration about 110°, and very shallow.

The horse was greatly distressed, the surface of the body was covered with sweat, and the extremities became very cold, and the pulse almost imperceptible.

The horse made several attempts at vomiting, and appeared very sick and prostrated. I removed the hobbles at 5-20 p.m., and after rousing the horse he staggered to his feet and moved listlessly about in a half-comatose condition. At 6 p.m. the respirations had decreased considerably, and the pulse slowed down to 60°. At 8 p.m. the horse had a bran mash, and after inspection the following morning seemed in good health.

*Second Subject of Experiment and Symptoms.*—The next subject for experimenting was a bay stallion, about 18 years of age. After securing the horse and drenching him with a similar quantity of the decoction, the symptoms were almost identical with those noticed in the previous case, except that the symptoms were not so marked, and the pupils were decidedly contracted, a condition that was not noticeable in the previous case. The horse appeared as well as ever the following morning.

*Post-mortem Appearances.*—*Post-mortem* examination revealed the following changes in both cases:—

The intestinal and gastric mucous membranes were discoloured with dark patches and slightly congested.

The spleen was very congested and dark coloured.

The lesions were most marked in the lungs. In both subjects they were very congested and full frothy mucous.

No other pathological lesions were noticeable.

*Concluding Remarks.*—In my opinion the following facts prove conclusively that the tobacco plant has nothing whatever to do with producing this disease amongst horses:—

- (1) In the first place it is impossible to make even starving stock feed on this plant.
- (2) Secondly, the tobacco plant has been known for years past in different parts of the Colony, besides in the western districts, before ever a case of amaurosis was reported or heard of.
- (3) *Post-mortem* examinations on horses affected with partial or total blindness failed to reveal any characteristic appearances noticeable in the two *post-mortem* examinations on horses which had been previously drenched with decoctions of the tobacco plant.

*Microscopic Report—Actual cause of Disease.*—The microscopical report of Dr. Tidswell, which has been forwarded to you, and the transverse sections of the nerves which I examined, proves conclusively that although no specific organism was found, the structural changes, and the growth of interstitial tissue must be the result of some specific organism affecting the nervous system or the blood supply to the optic nerve.

I have, &amp;c.

WM. SCOTT.

*Report on Specimens left by Veterinary Surgeon Scott—6th February, 1895.*

The specimens were in three preserving jars, in spirit. On examination it was found that the contents of two of these had putrefied, and they were destroyed. In the third jar decomposition was commencing. The contents were removed, and by dissection, three eyes with optic nerves attached were isolated, together with a portion of the left cerebral hemisphere—occipital lobe.

None of these parts presented any naked-eye appearances of abnormality.

Portions were removed, hardened, strained, and cut into sections.

*The eye itself presented no abnormal change. The brain,* as seen in the sections, was perfectly normal in appearance. *The optic nerve.*—In transverse section, there was apparent a slight increase in the amount of the interfascicular connective tissue, and the fasciculi exhibited a general want of compactness as compared with normal nerves. Under the high power the interfascicular interstitial tissue appeared slightly increased. Some of the nerve fibres showed a distorted irregular outline and were shrunken and granular.

The great majority of the fibres, however, appeared to be normal. There was nowhere seen any indication of an inflammatory change.

The condition presented would be compatible with partial loss of sight, but probably the animal would have sufficient normal nerve left to see fairly well.

I am of the opinion that the appearance presented is due to partial (commencing?) degeneration of the optic nerve. It must be remembered that the original bad state of preservation of the tissue would render the finer pathological change difficult to determine.

With regard to the probable cause of this condition, the most likely that occurs to the reporter, is some change in the condition of the blood, such as the circulation of some toxic substance.

FRANK TIDSWELL,

Board of Health Laboratory.

RE

April 2nd, 1895.

## RE BLINDNESS IN HORSES.

Sir,

Board of Health Offices, 127, Macquarie-street, Sydney, 11 May, 1895.

In connection with departmental papers 3,574-95, *re* blindness in horses, from the Mines Department, I have the honor of submitting the following remarks:—

The affection dates from the year 1890, following unusual floods and occurring only where horses have grazed on flooded paddocks.

Horses removed from the flooded country for several months improved in their vision, but on returning to the old paddocks, re-established the disease with disastrous results.

There is nothing to show that the disease is contagious, or even hereditary, as the foals of blind mares are said to have good eye-sight.

Animals of all ages and conditions are attacked, but a large percentage enjoy immunity.

The result of the disease is every degree of impaired vision, with in some cases total blindness.

Recoveries do occasionally occur, but such happy results depend on the extent of the structural changes in the affected parts, and the longer the disease has existed the less chance there is of restoration.

The disease as described in these papers is unique (it must not be confounded with epizootic conjunctivitis, *i.e.*, ophthalmia periodically seen in horses, cattle, and sheep).

The affection is very insidious in its invasion, persistent and slow in progress, with the development of chronic changes of a degenerative character in the optic nerve; atrophy of the fibres, with increased connective tissue between them; the symptoms indicating amblyopia, and sometimes ending in amaurosis, *i.e.*, blindness without apparent changes in the eyes.

The cause of this disease is not apparent. I am disposed to think it is diathetic, probably some toxic agent has been introduced or developed by the flood-waters; it may be some fungi on the herbage, some deposit of mineral salts, some growth of noxious herbage, or the toxine of parasitic worms.

There is nothing in the reports on which I can form any opinion.

Treatment of a specific character, applicable to bush horses, is out of the question, as the nerve medicines strychnia or arsenic, &c., could not be given without skilful supervision, and might even then be only attended with temporary benefit. The slow and chronic nature of the disease, with the structural changes noted, hold out very slight hope that medicinal remedies will prove beneficial.

The rational measures are to keep horses off the contaminated country during the seasons that are known to favour the disease, and avoid pasturing horses on swampy flats, especially after wet seasons.

In recently-affected animals, purgative medicine followed by tonics, and a complete change of pasture, might be beneficial in arresting the progress of the disease.

I have, &c.,

EDWD. STANLEY, F.R.C.V.S.,

Chief Veterinary Inspector.

## APPENDIX C.

## INFLUENZA IN HORSES.

(By E. Stanley, F.R.C.V.S., Government Veterinarian.)

*Character.*—It is a contagious equine fever, due to germinal matter invading the system, producing disastrous changes in the blood, which interfere with nutrition, excite congestion, and occasionally inflammation of important organs or tissues.

*Cause.*—The germs of this disease are always lurking about, and epidemics are due to exceptional climatic changes that have a lowering effect on the health of horses, and at the same time favour the vitality of the disease germs.

The worst cases are amongst hard-working horses in overcrowded sheds, with bad sanitary surroundings; next come fat horses, and the least susceptible are horses that are in good working condition, cleanly kept, and well cared for; if such have the disease at all it is in a mild form, and they speedily recover.

*Symptoms.*—In the onset loss of appetite, drowsy headache, pain in the limbs, general weakness; in many cases the eyelids are swollen, tears trickle down the face; there may be discharge from the nostrils, and occasionally coughing: the eye will be found scarlet and orange colour, the tongue furred, breath offensive, the heart beats feebly but quick, the pulse is small and weak, the dung is soft, and the urine high-coloured; there is a general rise of the bodily temperature.

As the disease progresses the symptoms will depend on its course, which is very variable, as the numerous names given to the disease indicate. The vital forces in many cases overcome the toxic effects and excrete the poison from the system; it is to assist this process that we have recourse to treatment.

*The Treatment.*—This should consist of rest, pure air, shelter from sun, rain, or wind, bran mashes, and cut green food with drachm doses of chlorate of potash, carbonate of ammonia, or nitrate of potash given in the drinking water; if the case has been taken early enough, and the surroundings are good, the fever will abate, and recovery be complete in a very few days.

Unfortunately many horses are worked at the commencement of the illness; then they are completely knocked up, and they present a variety of bad symptoms, owing to the mischief being located in individual organs, such as those of respiration, or the bowels, liver, spleen, lymphatic glands, or cerebro-spinal system. The location can only be diagnosed by the educated veterinarian, and every case should be treated to suit the nature and stage of the illness; dropsical swellings are a favourable indication, but time and patience must be allowed for recovery. No case is cured until the horse is playful at exercise.

I would caution owners to beware of amateur veterinary advice, as far more harm is done by ignorant treatment than by the disease. To illustrate my meaning, a horse with this sickness often has an anxious countenance, dilated nostrils, rapidly panting flanks due to acute pain, which may be owing to congested liver, laminitis, or other obscure complication, but the charlatan says he has got it on the lungs, and proceeds to torture the poor brute by blistering his sides, bleeding, setoning, &c. Such treatment as bleeding, blistering, or purging is very antiquated and erroneous.

My advice is to employ the best qualified veterinary surgeon available, and to see the poor animal has a good nurse, with pure air, cleanliness, rest, and comfort. It is cruel to turn sick horses out to shift for themselves.

## APPENDIX D.

## INCREASE and Decrease of Sheep, year ended 31st December, 1894.

Number of sheep, on 31st December, 1893	...	...	...	...	56,980,688
Lambs marked during 1894...	...	...	...	...	12,330,917
Number of sheep imported during 1894	...	...	...	...	530,664
					69,842,269
Slaughtered for food for local consumption (excluding sheep killed on stations)	...	...	...	...	2,112,709
Do for food on stations, &c.	...	...	...	...	960,487
Do for meat preserving	...	...	...	...	1,106,330
Do for freezing for export	...	...	...	...	848,510
Do for boiling-down in boiling-down works	...	...	...	...	2,757,940
Do do do on stations	...	...	...	...	312,432
Lambs slaughtered for food for local consumption	...	...	...	...	154,470
Total slaughtered	...	...	...	...	8,252,878
Exported during 1894	...	...	...	...	905,783
Killed by dogs	...	...	...	...	181,617
Loss by mortality and missing sheep	...	...	...	...	3,524,721
Total deduction	...	...	...	...	12,864,999
Number of sheep on 31st December, 1894	...	...	...	...	56,977,270
Decrease on previous year	...	...	...	...	3,418

T. A. COGHLAN,  
Government Statistician.

## APPENDIX E.

## AUSTRALIAN Stud Sheep offered for Sale by Auction in Sydney during the Year 1894.

*Australian Stud Sheep.*

	Number of Rams.	Number of Ewes.	Total.	
			Rams.	Ewes.
By J. N. Brunker, Esq., on account various Tasmanian breeders	104	76	104	76
Messrs. Goldsbrough, Mort, & Co. (Ltd.), on account various New South Wales breeders	29	.....	.....	.....
Messrs. Goldsbrough, Mort, & Co. (Ltd.), on account various Tasmanian breeders	893	205	.....	.....
Messrs. Goldsbrough, Mort, & Co. (Ltd.), on account various Queensland breeders	60	.....	.....	.....
Messrs. Goldsbrough, Mort, & Co. (Ltd.), on account various New Zealand breeders	427	381	1,409	586
Pastoral Finance Association (Ltd.), on account various New South Wales breeders	1	.....	.....	.....
Pastoral Finance Association (Ltd.), on account various New Zealand breeders	58	20	.....	.....
Pastoral Finance Association (Ltd.), on account various Tasmanian breeders	375	97	434	117
F. S. Weaver, Esq., on account various New South Wales breeders	105	3	105	3
Messrs. Pitt, Son, & Badgery (Ltd.), on account various New South Wales breeders	27	.....	.....	.....
Messrs. Pitt, Son, & Badgery (Ltd.), on account various Tasmanian breeders	6	20	.....	.....
Messrs. Pitt, Son, & Badgery (Ltd.), on account various New Zealand breeders	1,403	354	1,436	374
Messrs. Hill, Clarke, & Co., on account various New South Wales breeders	54	21	.....	.....
Messrs. Hill, Clarke, & Co., on account various Victoria breeders	26	16	.....	.....
Messrs. Hill, Clarke, & Co., on account various Tasmanian breeders	362	86	.....	.....
Messrs. Hill, Clarke, & Co., on account various New Zealand breeders	382	166	824	289
The New Zealand Loan and Mercantile Agency Co. (Ltd.), in conjunction with Warden Harry Graves, Esq., on account various New Zealand breeders	2,092	379	2,092	379
Messrs. Harrison, Jones, & Devlin, on account various New Zealand breeders	376	.....	376	.....
Total			6,780	1,824

## APPENDIX F.

*The Best Material for Branding Sheep.*

In order to ascertain which is the best material for branding sheep, that is, a material which will remain legible for twelve months without injury to the wool, and come off the wool with ordinary hot-water scouring, inquiry has been made from various wool-brokers and manufacturers, and their replies are as follows:—

*Henry Austin, 29, Bligh-street, City.*—We are unable to recommend anything better than lamp-black and oil. Even this material is but little soluble in the course of wool-washing, if it has been long exposed to weather.

*John Bridge & Co., Sydney.*—We have found the best mixture, and one that will remain legible and come out in hot-water washing, is tattoo oil. Not much wool consigned to us is tar-branded.

*Campbell, Nimmo, & Co., Sydney.*—It is the opinion of the writer, based on many years' experience, that there is no effective substance in use which will successfully stand in all districts and yet be amenable to the scouring which removes ordinary grease. Therefore, it is injudicious to meddle with the fleece or to mark it in any way.

*Fahrman & Co., Melbourne and Sydney.*—Tattoo oil seems to be the least objectionable. We should prefer branding on the wool abolished. Tar is the worst, though a mixture of lamp-black and oil or lamp-black and tallow is often as objectionable. We suffered heavy loss owing to the rejection in Europe of a parcel of scoured (fellmongered) wool on account of the tar stains.

*Goldsbrough, Mort, & Co. (Ltd.), Sydney.*—This subject is one of the highest importance to wool-growers and the trade generally, but so far as we are aware no material has yet been discovered that, while lasting as a discernible brand for twelve months, can also be removed in the scouring. We know that these qualifications are claimed for several specifics, and we think the testing of such claims might with advantage be taken up under Government auspices.

*Harrison, Jones, and Devlin, Sydney.*—We know no material that would be legible for twelve months and then dissolve in hot water. A very small proportion of owners use tar. Buyers mistake for tar a hard substance, very probably lamp-black and oil, which will not dissolve in hot water at a safe temperature.

*Johnson and Vicars, Sydney.*—Tar is indissoluble. Colouring matters mixed with boiled oil,—These are only paints, and form hard crusts which cannot be cleaned from the wool. As to other marking liquids there are none that do not very seriously injure the wool. Some get gluey, and the wool is invariably quite tender or rotten under the brand.

*R. Lhoest & Co., Sydney.*—No substitute for tar for branding. The portion of the fleece usually branded consists of the best wool. In washing establishments on the Continent, women are employed clipping off the tarred portion. This proves what expense and loss the buyer has to submit to through this deplorable custom.

*B. Molineaux, Sydney.*—I regret that, whilst deprecating the use of tar in the branding of sheep, I am unable to recommend any specific material for that purpose.

*The Pastoral Finance Association (Limited), Sydney.*—It is doubtful whether there is any substance that will remain legible for twelve months after exposure to weather and then come out in scouring. We have not noticed many traces of tar on the wool, and think tattoo oil, which is generally used, is often mistaken for tar.

*Jules Renard & Co., Sydney.*—No brand should be used beyond an ear-mark. However, if a brand is a necessity, a mixture of raddle, tallow, and beeswax would answer if applied directly after shearing. It would probably get indistinct towards next shearing, but would do no damage to the wool. Pitch and tar are the objectionable pigments. A combination of ear-mark and outside-mark with raddle (red ochre) would be most practicable, and it would pay the grower to renew the latter if it is absolutely necessary.

*John Sanderson & Co., Sydney.*—Most of our clients use lamp-black and oil or tattoo-oil for branding sheep, while others use a fire-brand, and in the case of travelling sheep, grease and lamp-black. The first two are preferable. In no case do our clients use tar.

*Winchcombe, Carson, & Co., Sydney.*—We are unable to say which is the best material for branding sheep. Only a small proportion of the wool comes forward branded with tar; a number branding with lamp-black and oil, which also seems objectionable. We would like to see the Government take this matter up and have a good test made of the different branding materials used for branding sheep, and thus settle this vexed question.

*R. Vicars, Sydney.*—No material fulfils the conditions named, for, if the brand withstands the ordinary climatic conditions for a year, it is always deleterious and insoluble under ordinary manufacturing conditions, and the cheapest way is to clip the branded portions off as so much waste. Cannot say whether tar or paint mixtures are most used, but all are detrimental. This matter of brands has been fully referred to by home and continental buyers, and must certainly result in a very serious annual loss.

*Schwartz & Co., Mulhouse.*—As consumers of a very large amount of Australian wool annually, we are able to speak as to evil effects of tar-branding, and regret that we cannot suggest any alternative substance, as experience has proved any kindred mixtures used in certain districts in France always depreciated value of fleece. We notice many stations use no tar brands as it is believed ear-marking suffices for nearly every purpose. In the Argentine Republic no tar or other mixture is used, they only employ ear-mark. We trust that the pains the Department is taking in this matter will lead to good results, and the bitter complaints of so many years will at last bear fruit.

APPENDIX G.

STATEMENT showing the result of Vaccinations for Anthrax as performed by J. A. Gunn and A. A. Devlin respectively during year 1894.

Lots Vaccinated.	Number of Sheep Vaccinated.	Were any Sheep dying when they were vaccinated?	Number of vaccinations, 1st, 2nd, and 3rd.	Number of deaths after 1st vaccination.	Number of deaths after 2nd vaccination.	Number of deaths after 3rd vaccination.	State of Weather during Vaccination.	Remarks.	
<i>Vaccinated by J. A. Gunn.</i>									
1	2,250	No	1st 2nd & 3rd	4	320	10	Cold, wet	None vaccinated previously.	
2	2,082	"	1st & 2nd	Nil	50		"	"	
3	3,560	Few	"	60			Cool	"	
4	58,000	Yes	"	20	17		Very hot, 100° in shade	"	
5	3,420	Few	"	Nil	60		Cool	"	
6	1,700	No	"	"	Nil		Cold and drizzly	1,100 vaccinated in 1892.	
7	12,983	"	"	"	"		Showery	900 " "	
8	37,000	Yes	"	"	"		Very hot	None " previously.	
9	4,000	No	1st 2nd & 3rd	"	400		Warm and showery	"	
10	1,500	"	1st & 2nd	"	Nil		Cool	"	
11	4,000	Yes	"	"	"		"	"	
12	5,936	"	"	"	"		"	"	
13	19,650	"	"	"	"		"	"	
14	20,846	"	"	"	"		"	"	
15	14,985	"	"	"	"		"	"	
16	3,140	"	"	"	"		"	"	
17	4,304	"	"	"	"		"	"	
18	6,592	"	"	"	"		"	"	
19	6,665	"	"	"	"		"	"	
20	4,800	"	"	"	"		"	"	
21	7,000	"	"	"	"		"	"	
22	10,500	"	"	"	"		"	"	
23	8,232	"	"	"	"		"	"	
24	1,116	"	"	"	"		"	"	
25	16,296	"	"	"	"		"	"	
26	14,552	"	"	"	"		"	"	
27	1,004	"	"	"	"		"	"	
28	7,966	"	"	"	"		"	"	
29	4,170	"	"	"	"		"	"	
30	500	"	"	100	40		Hot	None vaccinated previously.	
31	10,265	"	"	Nil	Nil		Cool	"	
32	39,600	"	"	"	"		"	23,000 vaccinated in 1892.	
33	8,463	"	"	"	"		Hot	None " previously.	
34	12,037	No	"	"	"		Cool	4,000 " in 1893.	
35	10,860	"	"	"	300		Wet	"	
36	5,942	Yes	1st 2nd & 3rd	"	200		"	"	
37	826	"	1st & 2nd	"	Nil		Cool	"	
38	2,000	Few	"	"	"		Fine	"	
39	15,200	"	"	"	"		"	"	
40	26,470	"	"	"	"		"	"	
41	21,114	"	"	"	"		"	"	
<i>Vaccinated by A. A. Devlin.</i>									
42	35,000	"	"	Nil	Nil		Fine	"	
43	4,200	"	"	"	"		"	"	
44	2,500	"	"	"	"		"	"	
45	3,000	"	"	"	"		"	"	
46	2,800	"	"	"	"		"	"	
47	23,000	"	"	"	"		"	"	
48	14,000	"	"	No do tails.	"		"	"	
49	8,230	No	"	30	Nil	Nil	Hot	Losses estimated 2,000. About 200 vaccinated in 1893.	
50	2,100	Yes	"	"	"		Mild	"	
51/9	79,930	No particulars given.							Said to be successful, except on one holding where the vaccination was done in the heat of summer.
	616,406								

APPENDIX H.

FOOT-ROT.

DRESSINGS recommended by Mr. E. Stanley, Government Veterinarian. (For further details see *Agricultural Gazette*, July, 1891):—

*Arsenic Dressing.*

Arsenic, from 1 to 2 oz.

Potash, " 2 to 4 "

Water, 1 gallon.

To be used in troughs for the sheep to walk through. The mixture to be boiled slowly for half-an-hour at least, till the arsenic is thoroughly dissolved.

*Sulphate of Copper (Bluestone) Dressing.*

Sulphate of copper, from ½ lb. to 1 lb., dissolved in a gallon of water, may be used instead of arsenic.

The following healing dressings may be used by hand after the above caustic applications:—

*Tar Dressings.*

Stockholm tar, 20 parts; carbolic acid, 1 part; or,  
 Stockholm tar, 8 parts; bluestone in powder, 1 part; or,  
 Oil of tar, 10 parts; carbolic acid, 1 part; olive oil, 1 part.

*Lime*

*Lime Dressing.*

Quick-lime, sprinkled on a dry surface, and the sheep walked through it frequently, will be found very beneficial. Before any dressings are used, the whole of the loose horn should be pared carefully from the diseased feet. It is of the greatest importance that the sheep's feet should, on the dressing being applied, be kept thoroughly clean and dry for at least three hours afterwards. They should, therefore, on leaving the troughs, or being dressed, be passed directly on to a battened or wooden floor, if it can be got, and, where neither of these is obtainable, they should be passed into a dry yard, in which there is a good coating of straw, cut grass, or dry bark taken from trees which have been rung, or, in fact, any other thing which will keep their feet clean and dry.

The following are the remedies reported by the Inspectors to have been used and the results:—

Application.	Result.	Application.	Result.
Arsenic in troughs .....	Good.	Carbolic sublimate and bluestone .....	Good.
„ bluestone and carbolic acid .....	Not given.	Carbolic acid .....	Good.
„ and bluestone.....	Good.	„ and oil and butyr antimony ..	Good.
„ and lime.....	Fair.	„ acid bluestone and arsenic ..	Not given.
„ and saltpetre .....	Not given.	Kerosene.....	Good.
Bluestone and corrosive sublimate .....	Satisfactory.	„ and bluestone.....	Good.
„ and arsenic .....	Good.	Lime and tar .....	Not given.
„ and kerosene .....	Good.	Lime and arsenic .....	Not given.
„ and lime .....	Good.	Sulphur and bluestone .....	Good.
„ and sulphur .....	Good.	Saltpetre and arsenic.....	Not given.
„ arsenic and carbolic acid .....	Good.	Tar and turpentine .....	Not given.
Butyr of antimony .....	Good.	„ and quick-limo .....	Good.
„ „ carbolic acid and oil ..	Satisfactory.	„ and bluestone.....	Good.
Corrosive sublimate .....	Not given.		

*Specifics.*

Cooper's Dip .. .. .	Satisfactory.	Pottie's Specific .. .. .	Not satisfactory.
Hayward's Dip.....	In some cases.	Quibell's Foot-rot Cure ..	Good.
Little's Dip .. .. .	Satisfactory.	Graham's Foot-rot Powder ..	Not very satisfactory.

## APPENDIX I.

REPORT by Mr. S. C. Pottie, M.R.C.V.S., on Mr. McCormack's Alleged Cure of Fluke.

Sir,

232, Castlereagh-street, Sydney, 2 April, 1895.

I have the honor to submit my report on the examination of sheep in reference to Mr. Hugh McCormack's alleged "Specific" for Liver Fluke (*Distoma Hepaticum*) and Stomach Worms (*Strongylus Contortus*).

On Friday, 22nd March, 1895, with Mr. Bruce, Chief Inspector of Stock, I visited Crookwell Show Ground for the purpose of examining sheep, the property of Messrs. Dudley, Hay, Marsden, and Shepherd, and which sheep were said to have been under the treatment of Mr. Hugh McCormack for the past fifteen months, and said to have been cured by Mr. McCormack's "Specific" of Liver Fluke (*Distoma Hepaticum*) and Stomach Worms (*Strongylus Contortus*).

This took the form of a public examination, held on Crookwell Show Ground on second day of show, and many pastoralists were present, including representatives from Yass and Carcoar, and stock inspectors from Yass, Young, and Goulburn districts.

The sheep presented numbered thirty-three, and varied in condition from fair to good. By good, I mean that they were lively, free from dropsical conditions, including bottle, and would range as medium for butchers. They were of the merino breed, and full-mouthed—some broken-mouthed. When examined alive they present the following conditions:—

1. Pleece short and fair.
2. Lining membrane of eyelids (*conjunctiva*) abnormally red or pink.
3. Skin of some pink, others scaly and dirty.
4. Some were fatter and better in condition than others.

We held *post-mortem* examinations on five (5) sheep, the first three the property of Mr. Hay, two of which we chose, and the third was chosen by those present as the best conditioned among the number (33). The fourth was chosen by us, and was the property of Mr. Shepherd, and the fifth by one of the pastoralists, the property of Mr. Marsden. I now give the following *post-mortem* appearances:—

*Sheep No. 1.*—Blood in colour and quantity very fair. On laying the internal organs and abdominal viscera intact upon a table, it was at once observed that the liver bore unmistakable signs of having been at one time invaded by fluke by the much enlarged and thickened bile ducts, which, on being opened, were packed full of living fluke. Larger and active fluke were found also in the gall bladder and small intestines. The walls of these ducts were much thickened, thus showing that fluke had been present for a considerable time. The liver itself otherwise was in fair condition. Some of the tubes in the lower part contained a dark semi-fluid substance, which may be either the natural discharge of the fluke, or else the thickened substance of the bile, as a result of having been filtered as it passed through the tubes, consequent upon the fluke being in such large numbers. The fourth stomach contained stomach worms (*Strongylus Contortus*), but not numerous. A fair amount of caul-fat and fat surrounding the kidneys was present. The mesenteric glands appeared pale and watery. The pelt, or hide, was easily torn—always met with in flukey sheep of any standing.

*Sheep No. 2.*—Similar in every respect to sheep No. 1, but fluke hardly so numerous.

*Sheep No. 3.*—This sheep was in good condition, but the liver contained excessive numbers of fluke, and exhibited, like the former, distinct signs of previous invasion. Stomach worms were also present, but not in large numbers. In other respects the sheep resembled Nos. 1 and 2. This sheep was chosen as the best conditioned of thirty-three.

*Sheep No. 4.*—Aged, broken-mouthed. Precisely similar to Nos. 1 and 2.

*Sheep*

*Sheep No. 5.*—Full-mouthed; but claimed to be the youngest examined. The liver of this sheep was in fair condition, and exhibited but few fluke, which were either of very recent invasion, or else they had never been numerous in the liver, because the bile ducts passing through the liver and leading from it were not in the slightest degree thickened or otherwise altered. I may say that enlargement and thickening of these tubes is, without exception, a result of fluke, if of old standing and in large numbers.

Not having seen these sheep when placed under Mr. MacCormack's care fifteen months ago, I cannot give my opinion as to their condition; but on reliable authority I may say that when placed under his (Mr. MacCormack's) care they were in a generally bad, debilitated condition; and in some cases dropsical (bottle) about the throat. They have, therefore, greatly improved. They have been kept upon a cultivated paddock and given his "specific," and this general improvement is the result—general improvement in spite of the fluke, which no doubt have all along been present.

To the pastoralists generally this trial is of considerable importance, especially to those who are troubled with flukey and unsound country. They may hereby learn a great practical lesson, and that is to bring their sheep into a marketable condition instead of allowing thousands to die annually.

In my opinion Mr. MacCormack's treatment as a cure for fluke is a failure, but as a preventive, or aid to fatten sheep it may possess good qualities.

In regard to this test, I do not consider it a proof of the efficacy to remove sheep to a different locality from where they became affected, and there treat them, as my experience teaches me that if flukey sheep are removed from their unsound paddocks, and put upon sound and dry pasture, they will eventually become strong and in some cases fat sheep.

I advise the following lick to be kept always in reach of the sheep as a preventive, and which I think will produce similar results to those obtained by Mr. MacCormack. Place in troughs, allowing at the least one trough to each 500 sheep, and protected from weather in the usual way:—Salt (Liverpool), 200 lb.; sulphate of iron, 15 lb.; sulphur, 10 lb.; powdered charcoal, 10 lb.; powdered gentian, 2 lb.

The following day, Saturday, March 23rd, Mr. Bruce and I visited Moss Vale to ascertain in a similar manner, the efficacy or otherwise of the alleged cure by Mr. W. F. Gabriel's drench. We were met by Mr. Gabriel and his assistant, and proceeded to the station belonging to Mr. Morrice, and there examined two of his sheep said to have been drenched with Mr. Gabriel's "specific" on the Tuesday previous.

The sheep which were drenched numbered thirteen, their ages varying from 2-tooth upward. We examined two in the morning, and in the afternoon other two, in the presence of some of the leading pastoralists in the district, including the Honorable H. E. Kater, M.L.C., Messrs. Nicholson, Morrice, and others; and now briefly describe our autopsies:—

*Sheep, No. 1.*—2-tooth ewe, half-bred; general condition, poor; mucous membrane of eye (conjunctiva), pale and watery; skin, pale; fleccc, poor; blood, pale and watery; liver, containing excessive numbers of fluke, large and active; fourth stomach, *strongylus contortus* present in small numbers; large bowels contained in large numbers the round white worm *strongylus dochmius*.

*Sheep, No. 2.*—4-tooth merino wether; condition better than No. 1; blood, fairly good; pelt, easily torn; flecco, poor and open; worms precisely similar to No. 1.

*Sheep, No. 3.*—6-tooth merino wether, precisely similar to No. 2.

*Sheep, No. 4.*—Similar to former.

As the fluke were very numerous, &c., and quite unaffected by the drench, I need hardly say that his drench, also as a specific, is a failure.

I am, &c.,

STUART POTTIE, M.R.C.V.S.

#### MEMO.

##### *Mr. McCormack's alleged Cure of Fluke.*

In the early part of 1894, Mr. Hugh McCormack, of Wheeo, stated with much confidence that he had discovered a cure for fluke, and his statement had the support of several well-known sheep-breeders in the Wheeo and Goulburn districts. For this reason, and because Mr. McCormack was anxious to demonstrate the efficacy of his treatment, arrangements were made to have it tested under the supervision of the directors of the Goulburn district.

The test was made on the 12th July, 1894, before several of the Directors and Mr. Inspector Henderson, when the sheep, which had in the meantime been kept on cultivated ground, all showed considerable improvement, and the sheep which were killed for examination were said to be but slightly infested with fluke.

Nothing further was done with regard to the balance of these sheep, by way of test, until it was arranged that they should be brought to the Crookwell Show, and some of them killed to prove the efficacy of Mr. McCormack's treatment, and that they were free, as he said, from fluke.

The *post-mortem* examination was made by Mr. Veterinary-Surgeon Pottie, on the 22nd March last, when the three sheep killed were found to be still infested with fluke, that the treatment had failed, and that the question of a cure for fluke was as far from a settlement as ever. But while this is the case, Mr. McCormack made a very decided improvement in a portion of the sheep, and considering they were badly infested when they were delivered to him, it speaks well for the means he adopted that they were in such good condition when they were killed.

This, however, is no more than has been done on many occasions at home, and at times in this Colony (especially when the sheep are taken to salt-bush country). In these cases, by removing the sheep from wet and infested land to drier and comparatively uninfested land, even where the country was not salt-bush, but where the pasture was fairly sweet and nutritious, and the sheep were freely supplied with salt and sulphate of iron, or what would be better, with the lick prescribed by Mr. Veterinary-Surgeon Pottie,

Pottie, not only have their lives been saved but they have been brought into marketable condition; and my chief object in referring to what Mr. McCormack has done is to induce other owners, whose sheep are unfortunately infested with fluke, to adopt measures similar to those here noticed; and instead of allowing, as they now too frequently do, things to take their course and many of the sheep to die, to give them such a lick as recommended by Mr. Pottie, and remove the sheep from the badly infested, if possible, to salt-bush country, and if not to other drier and sounder land.

If this course is taken in time it will be as successful as regards the badly infested sheep as in Mr. McCormack's case, and in the others referred to; and if the owner is, as he ought to be, on the watch for any symptoms of the disease, and on detecting the first appearance of it among his sheep, takes the necessary measures, he would thus prevent it from spreading to any extent in his flocks, through the treatment acting as a preventive in the case of those which are not infested, and would check the disease in the sheep which are but slightly affected.

But while suggesting that the owners who hold unsound and doubtful country should adopt these measures, I would earnestly urge them to go to the root of the evil, and, acting on that very wise but much-neglected maxim, that "prevention is better than cure," get rid as far as possible of surface water from the land, and where possible systematically burn the grass. Except in a very few cases these most important duties are entirely neglected, and all through the country infested with fluke and worms we see hollows, flats, and crab-holes allowed to remain soaking and saturated with water on the holdings, as if it were the right thing in management to set apart portions of the different paddocks as breeding grounds for fluke, worms, and foot rot, to which the sheep are certain to be attracted by the greenness and succulence of the grass.

Need we wonder under such circumstances and with such wet seasons and so frequent summer rains as we have had during the last three or four years, that the ailments mentioned have been so very rife.

It was scarcely to be expected that in the country generally free from these scourges the danger of surface water would be so well known as it ought to be to the owners in those parts of the Colony in which fluke, worms, and foot-rot are frequently prevalent, and to whom my remarks here mainly refer, and when it is considered how very easily these ailments can be largely prevented by surface draining, and how very inexpensively and effectively that again can be carried out by means of plough-furrows, I think it will be seen that those owners who allow these seed-beds of disease to remain on their holdings are very seriously to blame, for they not only suffer serious losses themselves, but when their sheep leave their own runs and travel into other districts which would naturally be free from fluke and worms, these infested sheep leave the germs of disease as they go, and if the country is not true salt-bush, or otherwise high, dry, and very sound, it becomes infested in drooping seasons such as we have lately had.

Of course there are portions of land in the unsound country where surface draining as here suggested would not be practicable, such as in those bordering on lakes and lagoons and around black springs and bogs; and in such cases it would be best to give the country up to cattle and dairying. Indeed, there are considerable portions of land of this description on which sheep should never have been put, except perhaps temporarily in seasons of extreme drought to save their lives, and even in those cases it would be well, if the sheep brought the fluke back with them, to sell them off as speedily as the management of the station will allow unless it be in true salt-bush country.

Systematical burning the grass is also very much neglected.

While the course here indicated is the most advantageous to take where the land is under natural pasture, there is no question but that where the soil is of good quality, the best remedy by far for the ailments to which allusion has been made, would be to adopt the New Zealand system of growing turnips, rape, and other green crops, and feeding them off with cross-bred sheep after providing for carrying off the main run of water by means of leading open or surface drains; for in those portions of the Colony troubled with fluke, worms, and foot-rot, there are considerable tracts of land similar to a great deal of the country in New Zealand, and the climate and rainfall are also very much alike; and as the advantages of the system here advocated, have, since 1883, been patent to our sheep-owners, it is strange that those who have good but unsound country should be so slow in following the example of their fellow owners in that Colony.

The result of their doing so would be—

1. That in cultivating the land they would effectually surface drain it.
2. They would reduce the liability of the sheep to fluke, worms, and foot-rot to a minimum in all but exceptionally wet seasons.
3. They would carry more than double the number of sheep which they now do, and increase its capacity for fattening to more than a like extent.

*Gabriel's Specific for Fluke.*

I can fully endorse Mr. Pottie's statement, that this specific was quite a failure, and we have to thank Mr. Morrice for the trouble he has taken in allowing the test to be made, and supplying the sheep.

ALEX. BRUCE,

The Under Secretary for Mines and Agriculture.

Chief Inspector of Stock.

APPENDIX J.

REPORT by Mr. S. C. Pottie, M.R.C.V.S., on "The New Disease in Sheep."

The Chief Inspector of Stock, Sydney.

Sir,

232 Castlereagh-street, Sydney, February 19, 1895.

I have the honor to say that, in obedience to instructions, I proceeded to sheep stations in the southern districts to examine a disease (not understood by the Inspectors or the members of the Stock Board) now prevalent there, and as I am assured in several other parts of the Colonies.

I examined the sheep on several stations extending about 100 miles one way and 50 miles the other, and made *post-mortems* on over 100 sheep. I have selected out of these the best sample cases, most clearly illustrative of this new disease.

*History*

### *History of the Disease.*

The evidence collected by me goes to show that the disease originated through the introduction of sheep from other districts, and that it is spread by sheep from place to place, not in the sense of direct contamination, but in the sense of sheep being shifted from infected ground to other land suitable for its propagation. I give this as the opinion of several practical observers, but have not had sufficient to demonstrate even the truth of this, or of its infectious or contagious character. It is, however, perfectly clear that the disease has spread from certain centres. This phase of the subject is an important one, as it bears on the best method of extermination; but, of course, no quarantine action could be adopted until the Department ascertains the geographical extent of the disease. If it is all over the greater part of the Colony, the quarantine would be useless. I should, however, certainly recommend a closer inspection of store sheep taken from one part of the Colony to another, as the most observant squatters in the district agree that the disease is not more than five years old. The disease in question has been prevailing in parts of the above districts for the past five years, but it assumed its present aspect during the past two; and it was a very serious one, for one pastoralist estimates his loss, as the direct result of this disease, at at least 5,000 of his best sheep. The disease is almost confined to 4 and 6 tooth, and full-mouthed rams, wethers, and ewes, the two latter much more so than the former. I did not meet with nor ascertain a single instance in which lambs or weaners were affected. Sheep affected with foot-rot or worms, and thereby kept comparatively thin through pasturing with affected flocks and subject to similar influences, are not affected. Cattle and horses pasturing in same paddocks are not affected, though they are fat and of various ages. Stations apparently overstocked are claimed to be perfectly free from the disease. Sheep suffering from foot-rot, worms, or fluke, are not attacked, presumably because the microbe can only act on a blood in a highly enriched condition.

### *Nature of the Disease.*

From facts observed and gathered I concluded that I had to deal with an established form of disease, yearly on the increase, and which, at the past rate of death progress, would soon destroy the profits from sheep husbandry; therefore, I spent more time in the investigation than at first seemed necessary, as I was anxious to see the geographical variations of the disease, and discover, if possible, any means of prevention suggested by natural or artificial conditions. Our great difficulty to contend against is the fact that no standard work deals scientifically with this disease. They give hints at investigations, &c., but bunch up diseases, similar in some respects but widely different in others, under one head, as "anthrax" or "braxy." That there is a likeness among several diseases during part of their progress, I admit; but if the mode of death does not dispel the illusion, I am quite sure a careful autopsy will. I, therefore, say that the distinction between parasitical diseases, liver and fluke diseases, &c., and the disease which I have been investigating, is very pronounced even to the naked eye. In parasitical cases the mode of death is one of three, either by "pining," anæmia and debility, or dropsy, or by acute inflammation. In splenic anthrax both the symptoms and mode of death are more or less violent, and attended with convulsions. This disease is much more virulent in some paddocks than in others, so much so that some pastoralists leave these paddocks totally unstocked, or utilise them as cattle or horse paddocks. The affected paddocks are either swampy, or have swamps or low-lying flats on one part or another, or have natural springs manifesting themselves. I may state that these springs have noticeably increased in numbers during the last two or three years, and must be a cause of direct or indirect causation. Sheep generally die on camp. In many instances these camps are from twenty to thirty years old. The carcasses are left to be destroyed or demolished by nature; they are never buried or otherwise destroyed; therefore, I believe these camps to be hotbeds of disease.

### *Post-mortem Examinations.*

I may also state that I had an opportunity of holding a *post-mortem* examination on two travelling sheep belonging to different flocks and going in different directions. One was a true sample of this obscure disease; the other, a 2-tooth wether, a true sample of splenic anthrax, giving a very much enlarged spleen, which, in weight, was nearly four times heavier than that of a sheep affected with this disease, the other organs being apparently healthy. I will now describe the result of one of many similar *post-mortem* examinations held:—

A 4-tooth Merino wether, pasturing on undulating land and flats; flock, 4,000; dropped, and was dead within two minutes; general condition, very good; blood, would not flow; lungs, slightly congested in patches, superficially, and of a somewhat pinky leaden colour; heart and surrounding fat apparently healthy; heart contained *ante-mortem* clots of dark-coloured blood; pericardial sac contained about two tablespoonfuls of amber coloured fluid, which coagulated on cooling; thoracic cavity contained about a cupful of same fluid; lymphatic glands, dark in colour; connective tissue between skin and abdominal wall much congested; caul fat, in large quantity, pinkish in colour, in others of a dark, dirty, grey colour; mesentery, congested; first and second stomach, normal, and contents normal; contents of third stomach, hard and perfectly dry; (I do not consider this a cause, but a result of the disease); fourth stomach, does not contain much food, and is somewhat congested towards pyloric orifice; small intestines, congested throughout, and in parts thickened in long patchy manner but not ulcerated; they contain no food but a sticky, semi-fluid substance resembling a mixture of bile and mucus adhering to mucous membrane; mucous membrane easily detached; between mucous and submucous coat is a layer of this lymph, about  $\frac{1}{8}$  inch thick; the intestines improve towards normal condition as it nears its termination; large intestines appear normal; contents appear normal in quantity and quality; liver, dark-coloured, congested, and friable; covering membrane, easily detached, containing blood very dark in colour; gall bladder, greatly distended with bile; bile, darker and thicker than normal; spleen, slightly congested, dark-coloured internally and somewhat soft and flabby; weight, 2½ oz.; weight of spleen in similar sheep, but healthy, 2 oz.; kidneys, somewhat darker in colour, but firm; brain appears normal; carcass, readily undergoes decomposition.

In one autopsy I found the large bowels affected, being congested in small round spots about the size of a split pea, coat thickened, &c., other organs affected as above with the exception of small intestines which appeared normal. From the above description I am inclined to believe that the animal must be affected some time prior to death, as this state of the bowels cannot be brought on in a moment, and the secretion of lymph into the abdominal cavity must take some time to be accomplished. I

I wish to draw your attention to a disease described by Yowatt, page 479, which he terms inflammatory fever. This term may be used for this disease but is a misnomer. In his description he mentions the fact that in some districts the death rate is 25 per cent., precisely the same proportion as that met with by me. He does not give the post-mortem appearances, but some of the symptoms such as that described at death are precisely the same as those met with. Nor does Mr. Yowatt give the direct cause, but states that some paddocks are affected badly, others are not. Old sheep with bad mouths do not become affected, because they cannot crop the short succulent grasses and thus fatten, but feed on long non-nutritious grasses. This also bears out my observation, viz.:—Sheep affected with foot-rot or worms do not fatten, and do not become affected with this disease, also pastures overstocked are perfectly free from this disease. The following is a brief description of the two post-mortems held on the travelling sheep before mentioned which had died at the station at which they camped during the previous night, and at which I also stayed or visited the following day.

*No 1.—Affected with disease in question.* Wether, 6-tooth; condition, very good; blood, dark; abdomen, not tympanitic; liver, dark and congested; 3rd. stomach, extremely hard, and contents dry; 4th stomach, congested in parts; mesentery and small; intestines, congested throughout; spleen, dark, weight 2½ oz.; kidneys, almost normal; caul fat, discoloured; heart, contained anti-mortem clot, dark in colour; congestion, deep, of muscles of base of neck and chest; died without struggling or signs of pain, as asleep.

*No. 2.—Splenic anthrax.* Wether, 2-tooth; condition, fair; blood, dark; abdomen, tympanitic; liver, almost normal; 3rd. stomach, not hard, contents not dry; 4th. stomach, not congested; intestines, normal; spleen, much enlarged, and substance very broken down; weight, 7½ oz. (full); kidneys, normal; caul fat, normal; heart, contained post-mortem clot, dark in colour; congestion and exudation of lymph between skin and muscles of hind legs or inside of groin; died, preceded by convulsions and pain.

As this class of miasmatic diseases is due to various forms of bacilli which develop in low-lying, moist, and swampy ground, but which cannot invade the system, producing fatal effects, unless the system is changed or upset by an unbalanced condition of the life powers, this of course occurs when sheep are fat and exposed to the contagion. The excess of fat, in some cases extending to fatty degeneration, or the destruction of tissue at the expense of fatty deposits, hence the fattest sheep are the first to become a prey to this disease. There is, however, a practical aspect of the question which I may mention here. You will notice in my report that I have found sheep which are affected with foot-rot or worms free from the fatal effects of this disease. Now as a principle of an established discharge on any part of the body has been found to neutralise the bad effects even of anthrax, it is possible that by a series of experiments carried out on these lines, with setons, or rowels, or blisters, we may obtain an exceedingly simple and cheap method of combating these specific diseases.

The direct cause is obscure. I believe it to be an anthracoid affection, that is a disease closely resembling splenic anthrax, and belonging to the same family. It is not however splenic anthrax, as the characteristic symptoms of anthrax are absent. It also resembles Texas fever.

#### *The Cause of the Disease.*

The cause I believe to be a miasm, a form of vegetable or animal microbe evolved from damp parts after rains, and germinated by heat, and act upon the blood of sheep when in a certain rich state, and I account for its prevalence this year, and the past few, because of so much rain, and the outbreak of springs, while the land depends upon natural drainage, which is insufficient. Old sheep camps I believe to be a source of infection, as carcasses in large numbers are allowed to decompose on these and have never been cleared up or burned. The disease dies out in the winter altogether, because the grass at this time is very innutritious, and having passed through a winter when the feed is poor, and at spring the grass becomes rich, the sheep are then shorn, which fact also greatly assists the sheep in putting on condition, and the spring rains keep the grass fresh and green. The result being the blood is brought into a suitable condition for the miasms to take effect. Disturbance or excitement hastens death. The blood is first affected and this secondarily deranges the vital organs. The animal dies from syncope the result of ante-mortem blood clot in heart. The third stomach becomes hard and dry and consequently inactive, and no doubt hastens death, for it of itself in this condition would in time cause death; but the blood and system generally being in such a state, almost to fermentation, these conditions play an important part in producing death. The fæces and contents of large intestines appear quite normal, therefore the condition of stomach is a rapid symptom or result of the disease and not the cause, as the symptoms of impaction of third stomach are absent, except the very last preceding death.

#### *Treatment of the Disease.*

Curative treatment I cannot recommend, as it would be impracticable with the absence of prophylactic systems, and exceedingly sudden death of patients; and the idea of yarding and drenching a flock of sheep, numbering many thousand, would be both expensive and, I think, inadvisable, therefore I confine myself to preventive measures. As it is confined to low-lying pastures, improve them by draining, &c. Clean up thoroughly and burn old camps, or destroy them or fence them off for twelve months, and burn when opportunity presents itself. All dead sheep should be burned as near to spot where death took place as possible. Dead sheep must be taken from creeks and water-courses and burned, as they must be a source of contamination even though the water continually flows. Pasture more cattle on affected paddocks to keep the grass down, as it is perfectly clear that where stations are overstocked, or where the sheep suffer from fluke or worms, this disease is absent. I do not recommend overstocking, but this is a plain fact, and we may gain some end in a more judicious manner. A by-law should be introduced compelling persons, under a heavy penalty, to burn any of those in their charge that may die while travelling from one part to another. These animals are left dead on the roadside or in paddocks or elsewhere, and may be a source of contagion. Keep continually in troughs in affected paddocks, both spring, summer, and autumn, the following lick made up in the following proportions:—Common salt, 100lb; Glauber's Salts, 25lb; Sulphur, 10lb; Hypersulphate of soda, 1lb.; Quinine sulphate, 1lb. Charcoal powdered may be added with great benefit to this lick, about 10lb to 20lb.

Remove affected flocks to high lands with comparatively poor feed.

Another

Another lick may be composed of equal quantities of Liverpool salt, and Epsom or Glauber's salts, Sulphur, and Ginger.

Rowelling or scatoning in the dewlap, worsted or tape saturated with some irritant, such as one part of powdered cantharides to eight parts of lard, has been found to act a beneficial preventive in somewhat similar diseases in cattle, both here and in Great Britain.

Another lick I may advise is :—Liverpool salt, 200lb. : Glauber's salts or Epsom, 25lb. ; nitre, 25lb. ; sulphur, 20lb. ; chlorate of potash, 2lb. Mix thoroughly, and place in troughs in easy access of sheep. Should the sheep refuse these licks at first, add more salt till they become accustomed to the change.

I may add that the stations I visited did not appear overstocked this season, as feed appeared abundant, and all kinds of stock looked well. I do not intend to advise any name to be given to this disease, unless we follow in the steps of our forefathers and call it "Braxy." I advise a closer inspection of all travelling sheep, and the absolute destruction by burning of all sheep which die from whatever causes while travelling from one part to another. Pastoralists should place all new sheep in such a paddock where they may be easily observed every day, for at least two or three weeks, before placing them among their flocks. I have much pleasure in placing the specimens obtained by me of this disease, and those of splenic anthrax, at the disposal of the department.

I have, &c.,

STUART C. POTTIE, M.R.C.V.S.

#### APPENDIX K.

##### *Sheath Disease in Wethers.*

To the Acting Chief Inspector of Stock, Stock Department, New South Wales.

Sir,

Victoria Barracks, Sydney, New South Wales, 29 October, 1894.

I have the honor to inform you that on the completion of my duties at Bourke I proceeded to the Lower Macquarie, arriving there on Sunday, 21st instant.

*Inspection.*—On Monday I inspected over 400 (four hundred) wethers that were more or less affected with disease. I also minutely examined and operated upon 20 (twenty) of the worst cases, with a view to ascertaining the nature of the complaint and the best treatment to adopt. Ten of the latter which were too far gone for treatment I directed to be killed, preserving for your inspection the ulcerated organs of generation, as also the sheaths and their contents.

I photographed one sheath before and after it was operated upon, showing the immense size to which it grows as a result of the inflammatory changes.

*Inoculation.*—On Tuesday and Wednesday I operated upon another lot of affected sheep by simply squeezing as much matter as possible out of the sheath and injecting a solution of sulpho carbolate of zinc 1 to 30 strong. I redressed the cases I operated on with injections of Joy's Fluid 1 to 40 and carbolic oil 1 to 10 strong, and I inoculated six healthy wethers on the outside of the point of the sheath with some of the pus from one recently killed. On Friday, assisted by Mr. Hunter, I inspected and redressed the worst cases, and found those which I operated on (by laying the sheath open and washing it out with the fluid) were on the road to recovery. On Friday before starting for Sydney I inspected those I inoculated, but did not notice any change. I left word with Mr. Hunter to have them inspected every day, and report to me if they showed signs of developing the disease. I inoculated with a view to determining whether the disease is of a contagious nature or not.

*History of Disease.*—The history of the disease according to the information afforded by Mr. Hunter is as follows:—It was first noticed three or four years ago, and has meantime gradually become more pronounced and prevalent. It exists to a more or less extent on "Combardillo" and "Glenroy" Stations. It appears to be chiefly confined to four-tooth wethers, rams being exempt. Several reasons are locally assigned for its origin. It is presumed by some to be due to contagion, and by others to grass seeds and flies, but in my opinion it is caused by the abnormal and gradually increasing growth of the belly fleeco. The wool is kept continually wet in this part by the urine, consequently there is an accumulation of droppings and dirt, acting as a source of irritation to the point of the sheath which eventually passes through the various stages of inflammation and mortification.

*Disease. 1st Stage.*—The first symptoms are slight redness and swelling at the point of the sheath, together with a little moisture on pressure. This condition may last for five or six weeks, becoming gradually worse, until it arrives at what may be called the second stage, which was the form of the disease I chiefly noticed.

*2nd Stage.*—The orifice becomes progressively smaller, the point of the sheath much congested and covered with purulent substance, the whole sheath is immensely enlarged resembling a swollen cow's teat, although not nearly as painful or hot to the touch. When the sheath is seized by the hand and forcibly squeezed, a quantity of thick, dirty, slate-coloured, high-smelling matter is ejected from the orifice. The long hairs at the point easily break away, the wether gradually looses condition, looks anxious and restless, continually strains and tries to micturate, and indicates its painful condition by alternately lying down and getting up. On inserting a "Symes" abscess knife into the gradually closing orifice, and laying the sheath open by a bold sweep, backwards and upwards from the point, a quantity of thick pus (too thick to escape on manual pressure from the small natural aperture) mixed with urine is freed from the interior walls. On examining the point of the worm or thread, I found it to be in some cases half eaten away, and in others, showing merely a small ulcer at the point. (*Vide specimens.*)

*3rd Stage.*—In the third or last stage, the orifice was all but closed, and the abovementioned systems were much more intensely marked. On compressing the sheath nothing came away except highly-coloured urine, which had been evidently imprisoned; hard, dirty excrescences like soft corns, appeared around the top and were easily removed. On laying open the enlarged sheath of several of the worst (some I found to be four inches long), a few tablespoonfuls of thick, inspissated, dirty slate-coloured

coloured matter, of a cheesy consistency slipped gradually out of its case. In a few instances the whole interior of the sheath (like the finger of a glove) came away. (*Vide specimen*). The penis is ulcerated and gangrenous, and the sheep succumbs from its inability to micturate, combined with mortification of the part.

*Diagnosis.*—To summarise, the disease may be termed an aggravated form of "Balanitis" (or dirty sheath) which, unless duly attended to, results in retention of urine, gangrene of the penis, and death.

*Curative Treatment.*—I found the simplest and most expedient manner of treatment to be as follows:—The sheep should be held by an assistant in a sitting posture, on the top of a P. and R. fence, with the belly facing the operator. The operator seizes the sheath with the left hand, inserts a "Symes" abscess knife into the point, makes an incision downwards and lays the sheath completely open. Syringe the sheath well with Jey's fluid, diluted 1 to 40 from a bucket suspended at hand, and when clean inject about a spoonful of carbolic oil, 1 to 10. The wound should be redressed in 48 hours, and inspected a few days later.

*Preventive Treatment.*—Sheep with long belly-fleeces should be dipped after shearing. That portion of the belly-fleece, which grows over the sheath, should be clipped a few months before shearing and washed with Jey's fluid.

I have, &c.,

WILLIAM SCOTT, M.R.C.V.S., Lond.

#### APPENDIX L.

FROM Inspectors' Reports the following results have been gathered regarding the efficacy of the various Drenches and Licks used for Sheep for Worms:—

##### *Drenches.*

*Arsenic.*—For the stomach and tape worms the arsenic and soda drench is still reported as the most effective, and has been by far the most generally used. It has, however, been recommended that potash, as being less severe on the lining of the stomach, should be substituted for soda in its preparation. The arsenic and soda drench is reported by several of the Inspectors as having been also efficacious for lung-worms. No authenticated information has been received of this drench affecting the health of the sheep or injuring the wool.

*Turpentine.*—Turpentine, with various mediums, has been very generally given for stomach, tape, and lung worms, with good results, when repeated.

*Fumigation with Sulphur* is reported to have been tried in one case for lung-worms with the best results.

*Sulphate of Iron, Horehound, Sulphur, Salt and Iron* are reported to have been given, but not with satisfactory results.

*Hayward's Specific* has given very good results for lung-worms; but the reports as regards stomach and tape are conflicting.

*Pottie's and Weaver's Drenches* are reported to have been used in several districts with fairly satisfactory results.

While it can be said that a decided improvement follows the administration of most of the drenches generally used, it is a fact that even in the case of the most effective the *post-mortem* examinations disclose that generally where the sheep are at all badly infested some worms are still alive; and this again, it is believed, arises from the owners delaying too long in drenching, and allowing the worms to have too great a hold on the sheep before they are drenched. The consequence is that some worms are left, which keep the sheep from thriving, and, with the introduction of fresh eggs from the water and pasture—if the weather is at all favourable for the development of the worms—in the course of a few months make the sheep as bad as they were before they were drenched. To make the cure effective, therefore, sheep which have been badly infested should, on receiving one drench, be kept as near the drenching yards as possible, and receive a second drench in the course of twelve or fourteen days after the first.

But, while licks and drenches should be provided and given at as early a date and as often as required, owners should give their earnest attention to the removal of what may be termed the contributing causes of the pest by avoiding overstocking, attending to the proper nourishment of the lambs and weaners, burning off old pasture, and getting rid by draining of surface and stagnant water, as suggested in Vol. II, part 2, of the *Agricultural Gazette*.

##### *Licks.*

It is reported that the following licks have been used with good results:—

Salt and sulphur.	Salt, sulphate of iron, and Hayward's specific.
Salt and sulphate of iron.	Salt, tar, and turpentine.
Salt and turpentine.	Pottie's Preventive Lick.
Salt, sulphate of iron, and turpentine.	Salt and lime.
Salt, sulphur, and sulphate of iron.	

It is scarcely necessary to point out that a lick, if it is efficacious in warding off an attack of worms, is far preferable to a drench; and as owners in all but the purely saltbush country are now aware that it pays them well to give their sheep a liberal supply of salt, it would add very little to the trouble or expense to give once a month with the salt some of the other ingredients here mentioned which they found from experience was to any extent effective in protecting their sheep from the worm pest.

## APPENDIX M.

PROGRESS REPORT by Dr. N. A. Cobb, Government Vegetable Pathologist for the Department, on the Life History of Parasites which affect our Stock.

Wagga, May 30, 1895.

Sir,

I beg to make the following outline progress report concerning the experimental work being carried out at Bong Bong, in connection with the parasites of sheep and other stock.

The work is carried on in the intervals between seed-time and harvest time, at which times I am engaged at the experiment farm at Wagga. It is also carried on simultaneously with much other departmental work connected with my duties as Pathologist to the Department of Agriculture. These facts explain the delay in the preparation of a full report of the work done. I may add that this report is in a forward state, as will be seen by the following :—

1. Copy ready for printing, amount equal to over 150 pages, as printed in the *Agricultural Gazette* of New South Wales.
2. Wood-engravings, already cut and ready for the printer, nearly 200 figures.
3. Drawings and sketches prepared, over 400.

I may add that the engravings are of a superior nature, the drawings being the result of the most careful and assiduous labour. It is my opinion that as an aid to the practical recognition of the various parasites, and their effects in causing disease, and of their own structure, these drawings have never been equalled.

It is my intention to devote the coming months of this winter to completing the full report, which will deal with :—

1. Parasites in general, popular discussion, containing many new ideas.
2. Life histories of various parasites of sheep and other stock.
3. Distribution of various species of parasites.
4. Preventive measures.
5. New species of parasites, &c.

As heretofore the cost of the work is being kept strictly within economical limits.

I have, &c.,

Harrie Wood, Esq., J.P., Under-Secretary for Mines and Agriculture.

N. A. COBB.

[For Appendix N see Diagram.]

APPENDIX O.

STATEMENT of the number of the different kinds of noxious animals killed during years from 1881 to 1894; the amount of assessment collected; the amount of Government subsidy paid; and the total expenditure for each of these years.

Year.	† Kangaroos.	Wallabies.	Native Dogs.	Hares.	Wild Pigs.	Amount of Assessment collected.	Amount of Government subsidy paid.	Amount of Expenditure.	
	Number killed.			£ s. d.	£ s. d.				
1881	581,753	43,724	2,250	.....	.....	17,648 19 10	749 11 2	15,517 5 4	
1882	1,452,829	347,842	6,980	.....	.....	45,772 12 8	25,299 19 2	61,191 14 3	
1883	750,846	330,109	7,195	.....	.....	32,781 14 2	16,381 19 6	58,132 7 1	
1884	1,403,233	473,609	7,336	.....	.....	48,069 15 8	21,606 10 6	62,121 0 0	
1885	855,676	506,372	8,474	.....	922	61,754 15 4	23,753 3 8	64,672 8 2	
1886	1,106,478	594,603	9,560	.....	562	41,585 0 0	16,168 3 0	67,783 6 6	
1887	476,438	388,088	7,739	.....	664	32,651 13 8	9,589 9 5	37,354 11 1	
1888	607,436	653,285	9,619	176,732	12,041	25,474 2 10	9,117 7 6	52,121 9 6	
1889	495,673	642,782	9,142	329,683	9,700	33,257 0 3	10,000 0 0	50,525 14 3	
1890	267,769	506,161	9,955	397,439	5,292	33,649 0 11	8,792 0 0	30,663 11 6	
1891	402,053	705,510	11,550	649,131	20,206	31,664 8 9	8,336 4 1	46,794 10 9	
1892	428,295	726,669	11,838	786,230	45,173	37,733 19 8	8,408 17 4	49,987 4 5	
1893	284,082	743,017	14,148	734,212	8,802	39,116 15 7	1,766 5 10	46,688 5 8	
1894	250,455	796,667	11,279	708,581	25,851	39,466 13 3	675 19 10	44,635 6 3	
	9,423,016	7,458,438	127,045	3,873,137	129,213	520,626 12 7	160,645 11 0	697,248 14 9	

\* N.B.—The whole of the accounts of expenditure for 1894 are not yet to hand. † Includes Kangaroo Rats.

APPENDIX P.

STATEMENT of the Operations of the Pastures and Stock Protection Boards during the year 1894.

	Amount of Assessment collected.	Amount Expended.	Kangaroo.	Kangaroo Rats.	Wallabies.	Wallaroo.	Wombats.	Paddamellons.	Bandicoots.	Native Dogs.	Hares.	Opossums.	Figs.	Eagle Hawks.	Crows.	Emus.	Foxes.
Albury*	£ s. d. 11 4 4	£ s. d. 634 10 2	.....	4,771	.....	.....	.....	477	.....	14	15,055	.....	.....	.....	.....	.....	3
Armidale	896 6 8	1,165 9 6	.....	101	38	.....	.....	.....	.....	925	5,758	.....	.....	.....	1,977	.....	.....
Balranald	146 19 11	154 12 7	.....	.....	.....	.....	.....	.....	.....	95	.....	.....	.....	.....	.....	.....	.....
Bathurst	1,135 19 5	1,325 5 5	803	3,755	48,196	.....	.....	.....	.....	108	77,460	.....	.....	.....	.....	.....	.....
Berrima	.....	143 10 1	.....	.....	.....	.....	.....	.....	.....	17	.....	.....	.....	.....	.....	.....	.....
Bonubala	583 11 0	633 15 11	.....	.....	13,825	.....	.....	.....	.....	298	.....	.....	.....	402	.....	.....	.....
Bourke	.....	225 4 7	.....	.....	.....	.....	.....	.....	.....	178	.....	.....	.....	.....	.....	.....	.....
Braidwood	276 9 4	147 11 0	.....	.....	.....	.....	.....	.....	.....	86	2,141	.....	.....	.....	.....	.....	.....
Brewarrina	203 3 10	341 18 0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10,418	.....	3,615	.....	.....
Broulee*	1 15 0	237 17 4	.....	4,611	5,097	.....	.....	.....	1,351	67	618	28	.....	.....	.....	.....	.....
Cannonbar	709 5 6	554 13 9	.....	.....	.....	.....	.....	.....	.....	170	.....	.....	.....	.....	.....	.....	.....
Carcoar	557 1 4	1,380 2 2	.....	19,751	22,850	.....	.....	.....	.....	27	51,024	.....	.....	.....	.....	.....	.....
Casino	.....	31 5 6	66	.....	.....	.....	.....	.....	.....	8	.....	.....	.....	.....	.....	.....	.....
Cobar	364 7 2	353 14 9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Condobolin	1,989 1 5	1,962 12 6	1,363	265	39,826	.....	.....	748	.....	231	.....	.....	.....	.....	.....	.....	613
Cooma	312 16 0	396 1 11	.....	.....	.....	.....	.....	.....	.....	639	.....	.....	.....	.....	.....	.....	.....
Coonabarabran	2,816 17 3	3,020 0 0	.....	16,509	150,241	.....	.....	.....	.....	153	25,761	.....	.....	80	.....	.....	.....
Coonamble	540 8 8	562 5 7	.....	.....	.....	.....	.....	.....	.....	492	.....	.....	.....	.....	.....	.....	.....
Corowa	505 12 4	307 6 0	.....	2,785	.....	.....	.....	.....	.....	67	.....	.....	3,577	77	6,020	405	.....
Deniliquin	213 14 0	206 4 5	.....	.....	.....	.....	.....	.....	.....	19	4,200	.....	.....	.....	2,907	.....	.....
Denman	926 11 7	835 4 5	.....	7,936	9,839	.....	79	.....	.....	75	13,206	.....	.....	21	206	.....	49
Dubbo	408 16 10	634 0 2	.....	.....	.....	.....	.....	.....	.....	246	17,438	.....	.....	.....	.....	.....	.....
Eden	239 8 9	144 5 2	63	.....	.....	.....	.....	.....	.....	85	.....	.....	.....	.....	.....	.....	.....
Forbes	1,351 2 2	1,192 19 4	34	17,425	5,489	.....	.....	.....	.....	243	25,396	.....	.....	.....	.....	.....	.....
Glen Innes	605 7 6	475 9 5	.....	4,328	7,461	.....	.....	1,764	.....	367	257	.....	.....	.....	.....	.....	.....
Goulburn	1,500 10 4	1,531 19 0	.....	5,932	.....	.....	.....	.....	.....	11	115,885	.....	.....	.....	.....	.....	.....
Grafton	.....	23 13 8	.....	.....	.....	.....	.....	.....	.....	79	.....	.....	.....	.....	.....	.....	.....
Gundagai	509 14 1	1,487 16 2	.....	.....	.....	.....	.....	.....	.....	151	59,962	.....	.....	.....	.....	.....	.....
Hay	128 12 7	218 15 4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hillston	545 8 11	270 18 2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hume	653 2 0	740 12 4	3,576	.....	.....	.....	.....	.....	.....	243	.....	.....	.....	.....	.....	.....	.....
Ivanhoe	541 9 9	364 2 4	.....	.....	.....	.....	.....	.....	.....	174	21,137	.....	.....	.....	.....	.....	.....
Jerrilderie†	.....	.....	.....	.....	.....	.....	.....	.....	.....	181	.....	.....	.....	.....	.....	.....	.....
Kiama	129 19 6	267 9 6	26	.....	6,285	.....	.....	21	.....	22	785	3,443	.....	.....	.....	.....	.....
Maitland	239 14 8	279 9 5	.....	.....	13,412	.....	.....	.....	.....	176	.....	.....	.....	.....	.....	.....	.....
Menindie	1,064 10 11	1,100 2 7	.....	.....	.....	.....	.....	.....	.....	826	.....	.....	.....	.....	.....	.....	.....
Merriva	360 18 10	425 15 7	.....	.....	.....	.....	.....	.....	.....	60	933	.....	.....	.....	423	.....	.....
Milparinka	47 8 1	268 1 8	.....	.....	14,830	.....	.....	.....	.....	451	.....	.....	.....	.....	.....	.....	.....
Molong	1,529 7 7	1,531 6 9	4,863	23,850	23,891	.....	.....	594	.....	131	68,300	.....	.....	.....	.....	.....	.....
Moree	2,024 9 9	1,827 8 11	841	11,714	81,546	.....	.....	.....	.....	224	.....	.....	.....	330	3,001	.....	.....
Moulameen	144 11 0	53 8 2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mudgee	1,247 13 6	1,881 9 4	.....	80,100	42,515	.....	.....	.....	.....	77	50,081	.....	.....	198	615	.....	.....
Murrumbidgee	774 0 4	1,050 11 9	.....	15,242	32,170	.....	.....	.....	.....	145	8,837	.....	.....	261	1,660	.....	.....
Narrandera	662 16 8	483 8 0	.....	.....	13	.....	.....	.....	.....	178	.....	.....	.....	973	.....	.....	.....
Narrabri	592 6 11	664 8 9	.....	1,750	39,822	.....	.....	.....	.....	201	.....	.....	.....	122	906	.....	.....
Pieton	418 9 8	176 2 10	.....	.....	6,701	.....	.....	.....	.....	84	3,655	.....	.....	.....	.....	.....	.....
Pilliga	530 9 4	319 19 8	.....	.....	2,236	.....	.....	.....	.....	233	.....	.....	.....	.....	.....	.....	.....
Port Macquarie	221 1 7	289 3 5	.....	.....	1,110	51	.....	9,652	816	100	.....	.....	.....	.....	.....	.....	.....
Port Stephens	238 13 5	178 15 2	.....	.....	.....	.....	.....	4,256	.....	289	100	.....	.....	.....	.....	.....	.....
Queanbeyan	352 5 8	427 5 6	.....	.....	.....	.....	.....	.....	.....	57	32,014	.....	.....	.....	.....	.....	.....
Singleton	403 17 5	633 4 1	.....	.....	.....	.....	.....	.....	.....	397	10,300	.....	.....	.....	.....	.....	.....
Sydney	291 6 1	244 3 9	.....	.....	18,272	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tamworth	1,284 1 9	2,161 1 3	.....	20,083	41,468	.....	.....	82,927	.....	640	1,340	.....	.....	442	8,632	.....	.....
Tenterfield	491 19 9	613 4 6	.....	.....	2,236	.....	.....	.....	.....	328	.....	.....	.....	.....	.....	.....	.....
Tweed—Lismore.	394 3 11	413 15 3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Urana	172 1 5	216 16 0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wagga Wagga	778 11 10	490 3 0	.....	8,403	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Walgett	524 5 4	229 4 2	.....	.....	.....	.....	.....	.....	.....	.....	2,745	.....	.....	.....	.....	.....	.....
Wanaaring	638 15 0	369 4 6	.....	.....	.....	.....	.....	.....	.....	19	.....	2,530	.....	13	177	.....	.....
Warialda	2,083 0 2	1,983 18 11	.....	3,924	129,505	.....	.....	.....	.....	362	.....	.....	.....	.....	.....	.....	.....
Wentworth	769 3 9	1,357 15 10	.....	.....	.....	.....	.....	.....	.....	307	.....	.....	.....	312	2,301	.....	.....
Wilcannia	316 13 2	430 9 8	.....	.....	.....	.....	.....	.....	.....	213	.....	.....	.....	1,649	23,639	.....	.....

## APPENDIX Q.

STATEMENT OF RECEIPTS AND EXPENDITURE in connection with the Trust Fund Account  
"Prevention of Scab in Sheep" from the 1st January to 31st December, 1894.

Dr.	<i>"As per Treasury Account."</i>			Cr.			
	£	s.	d.		£	s.	d.
1894.				1894.			
January 1—				January 1—			
To Balance .....	547	5	9	By Amount of Accounts paid from Pre- vention of Scab in Sheep Account...	19,096	12	9
January 1 to December 31—				December 1 to 31—			
To Amount of Assessment, &c., received	*18,912	17	11	By Amount of Accounts paid from Treasurer's Advance Account.....	2,228	10	2
December 31—							
To Balance .....	1,864	19	3				
	£	21,325	2 11		£	21,325	2 11

\* This is exclusive of outstanding assessment on 1st January, 1895, which amounted to about £180.

## DETAILED STATEMENT OF AMOUNTS VOTED AND EXPENDED for 1894.

*"As per Mines Department Account."*

AMOUNTS VOTED.			AMOUNTS EXPENDED.		
	£	s. d.		£	s. d.
<i>Salaries—</i>					
1 Chief Inspector, at .....	£650	0 0			
10 Inspectors, at .....	344	0 0			
5 " " .....	299	0 0			
1 " " .....	263	0 0			
2 " " .....	260	0 0			
26 " " .....	254	0 0			
5 " " .....	245	0 0			
2 " " .....	160	0 0			
1 " " .....	25	0 0			
1 Quarantine Keeper, at ...	110	0 0			
1 Messenger, at .....	120	0 0			
1 Clerk, at .....	281	0 0			
1 " " .....	250	0 0			
1 " " .....	236	0 0			
1 " " .....	150	0 0			
1 Draftsman, at .....	236	0 0			
	15,889	0 0	Salaries .....	15,156	14 9
Travelling Expenses of Inspectors .....	2,500	0 0	Travelling Expenses to Inspectors .....	2,425	13 11
" " Sheep Directors .....	300	0 0	" " Sheep Directors.....	368	14 0
Allowances to Inspectors for Stationery .....	225	0 0	Allowances to Inspectors for Stationery...	196	12 0
Medicaments for Dressing Sheep .....	10	0 0	Medicaments for Dressing Sheep.....		
Rent of Offices .....	500	0 0	Rent of Offices.....	497	6 5
Incidental Expenses .....	1,000	0 0	Incidental Expenses .....	2,759	16 1
To meet Abatement which should, in terms of Civil Service Act, be deducted from pension payable to Mr. A. McCollough, Inspector of Stock, Deniliquin, on his retirement from the Public Service ...	152	10 8	To meet Abatement which should, in terms of Civil Service Act, be deducted from pension payable to Mr. A. McCollough, Inspector of Stock, Deniliquin, on his retirement from the Public Service ....	152	10 8
Amount Expended in excess of Amount Voted	980	17 2			
	£	21,557 7 10		£	21,557 7 10

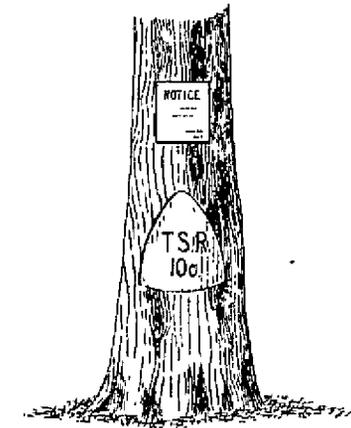
N.B.—From the above Statements it will be seen that the Treasury and Mines Department Accounts do not agree, for the reason that the contingent vote covers claims irrespective of date, and the account kept at the Treasury is balanced on 31st December in each year while it is not so at this Department, as accounts which come in during 1895 for services rendered in 1894 are charged against the 1894 vote.

[One Plan.]



APPENDIX. N

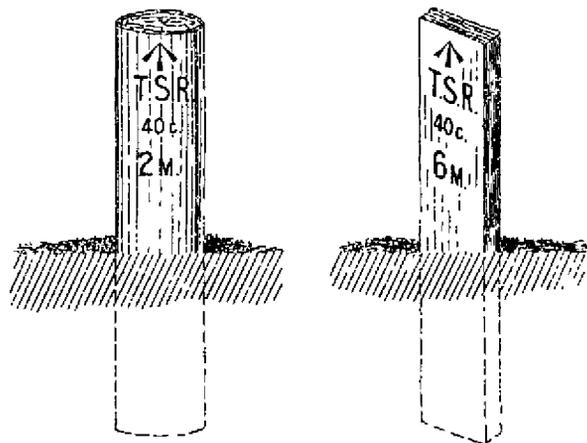
MARKING OF TRAVELLING STOCK RESERVES



*Re-marking of existing Travelling Stock Reserves.*

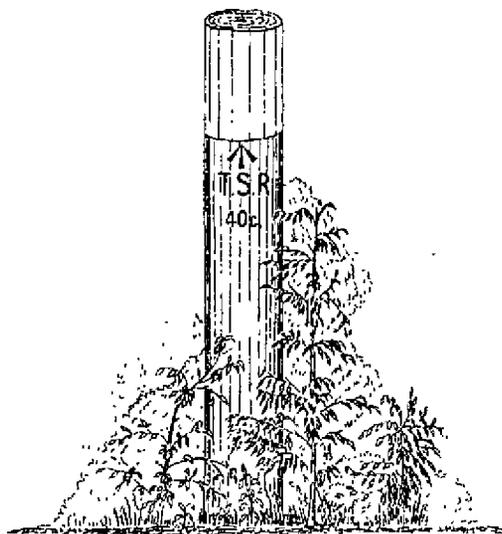
*Tree in conspicuous position as a guide post with printed notice*

*Position not determined relatively to traverse*



*On Plains.*

*Reference posts to be erected and marked*



*On Plains covered with low scrub.*

(Sig 12)

1895.

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

**AGRICULTURE AND FORESTRY.**

(REPORT ON, FROM 1 JANUARY, 1894, TO 1 JULY, 1895.)

*Ordered by the Legislative Assembly to be printed, 28 November, 1895.*

To The Honorable Sydney Smith, Esq., M.P., Minister for Mines and Agriculture.

Sir,

1st July, 1895.

I have the honor to submit the following report respecting the work performed in the Department of Agriculture during the past eighteen months. In doing so I desire to acknowledge the very able assistance rendered to me by Mr. W. S. Campbell and the officers of the Department, both scientific and administrative.

The number of communications received amounted to 24,459, showing how widely the advice of the Department's experts is sought after on all manner of subjects. The letters despatched amounted to 9,242, in addition to a large number of seed-advice, circulars, and acknowledgments of letters and specimens.

Judging by the large demand for the *Agricultural Gazette* the usefulness of that publication is fully recognized, and it is satisfactory to note that many of the articles are reprinted in various country newspapers. The information given is thereby disseminated far more widely than could be done through the limited issue of the *Gazette*. The number of *Gazettes* distributed gratis to farmers in the Colony, and to foreign departments, amounts to 64,722, in addition to 31,051 miscellaneous pamphlets.

The following is a *précis* of pamphlets issued between January, 1894, and 30th June, 1895:—

- Diseases of the Sugar Cane. By N. A. Cobb.—A description of the disease known as "Gumming of the Sugar Cane," and remedies and preventives recommended. Also a description of various fungus diseases of the sugar cane. Illustrated. From vol. 4, part 10, of the *Gazette*.
- Orchard Manures. By A. H. Benson.—Describing what plants are made of; how plants obtain and assimilate their food; what foods are essential to the proper development of plants; the value of potash, nitrogen, and phosphorus as manures for fruit-trees. From vol. 4, part 12, of the *Gazette*.
- Host and Habitat Index of the Australian Fungi. By N. A. Cobb.—An index based on Dr. Cooke's "Australian Fungi."
- Experiments with Pulses No. 2. By Geo. Valder.—Results of experiments carried out by Mr. Valder with a view to testing the comparative value of pulses cultivated in the Colony. From vol. 5, part 1, of the *Gazette*.
- Notes on Ringbarking and Sapping.—Based on Foresters' reports. Compiled and annotated by J. H. Maiden. From vol. 5, part 1, of the *Gazette*.
- Poultry, No. 10. By S. Gray.—Description of the "Orpington" fowl. General characteristics. Principal breeders in New South Wales. Illustrated. From vol. 5, part 1, of the *Gazette*.
- Silk-growing.—Suggestions and notes for the assistance of novices in silk culture. From vol. 5, part 2, of the *Gazette*.
- Report of the Department of Agriculture and Forests for 1893.
- Walking Sticks and Umbrella Handles from New South Wales. By J. H. Maiden.—Showing the possibility of developing in this Colony an industry in sticks and umbrella handles for export. From vol. 5, part 3, of the *Gazette*.
- Report on Farms entered for the National Prize Competition for the year 1893. By F. B. Kyngdon.—From vol. 5, parts 2 and 3, of the *Gazette*.
- Drainage. By G. R. McMinn, C.E.—Describing why, how, and when land should be drained. From vol. 5, part 5 of the *Gazette*.
- Australian Sandarach. By J. H. Maiden.—A description of. Also describing experiments on Australian Sandarach of varying quality, from various species. From vol. 5, part 5, of the *Gazette*.
- The Spaying of Cows. By Dr. W. J. Stewart McKay.—A description of the method of performing the operation. Remarks on the results obtained after spaying forty-two head of cattle. Illustrated. From vol. 5, part 5, of the *Gazette*.
- Precautions to be taken in the use of Artificial Manure. By F. B. Guthrie.—From vol. 5, part 5, of the *Gazette*.
- Hints for detecting Adulteration in Artificial Manures. By F. B. Guthrie.—From vol. 5, part 5, of the *Gazette*.
- Poultry, No. 11. By S. Gray.—Description of the "Cochin" fowl. General characteristics. Principal breeders in New South Wales. Illustrated. From vol. 5, part 5, of the *Gazette*.
- Analyses of Commercial Fertilisers. By F. B. Guthrie.—Gives value and price asked, and from what firm each fertiliser is to be obtained. From vol. 5, part 7, of the *Gazette*.
- Contributions to an economic knowledge of Australian Rusts. By N. A. Cobb.—Improving wheat by selection. Points to be considered in selecting the best wheat. Directions for harvesting experimental wheats. Illustrated.—From vol. 5, part 4, of the *Gazette*.
- A new Australian Fungus. By N. A. Cobb.—Description of a species of fungus found by Mr. J. J. Fletcher, secretary of the Linnean Society of New South Wales. Illustrated. From vol. 5, part 6, of the *Gazette*.

Colonial

- Colonial Timbers for Wine Casks. By J. H. Maiden.—Drawing attention to the various colonial timbers that should be suitable for making casks, and recommending that each should be thoroughly tested. From vol. 5, part 6, of the *Gazette*.
- Our Timber Trees and Forest Culture. By W. McDonald.—Notes by Forester McDonald on Forest Conservancy, Forest Laws, Waste and Reproduction of Red Cedar, Thinning-out, Bush Fires, Ringbarking, &c., &c. From vol. 5, part 6, of the *Gazette*.
- Report of the Hawkesbury Agricultural College for 1893.
- Apple Culture. By A. H. Benson.—Origin of the apple. Uses of the apple. Climate and soil most suitable. Propagation and stocks. Selection of site for orchard. Drainage. Preparation of the land. Laying out the orchard. What to plant and how to plant. Pruning, cultivation, and manuring. Thinning and gathering. Grading, packing, and marketing. Diseases of the apple. Illustrated. From vol. 5, parts 5 and 6, of the *Gazette*.
- Notes on the Diseases of Plants. By N. A. Cobb.—A description of bean anthracnose, bean rust, peach freckle, and black spot on the tomato, with remedies recommended. Illustrated. From vol. 5, part 6, of the *Gazette*.
- Report on Extracting Perfumes from Flowers by the Enfleurage and Maceration methods. By B. G. Hardy.—From vol. 5, part 7, of the *Gazette*.
- The Turpentine Tree. By J. H. Maiden.—A description of this tree, together with a table showing its distribution throughout the Colony. Illustrated. From vol. 5, part 7, of the *Gazette*.
- The True Star Thistle. By J. H. Maiden.—A description of this weed, and directions as to the best means of getting rid of it. Illustrated. From vol. 5, part 7, of the *Gazette*.
- Budding. By B. M. Lelong.—Reproduced from the Annual Report for 1891 of the Board of Horticulture of the State of California. Gives directions for budding the peach, apple, almond, apricot, cherry, citron, lemon, olive, pear, plum, and various other fruits. Illustrated. From vol. 5, part 7, of the *Gazette*.
- Tobacco as a Farmer's Crop for N.S.W. By G. F. Sutherland.—With appendices by F. B. Guthrie and Dr. Forbes Watson. Description of pipe, cigar, and cigarette tobaccos. Soil and climate most suitable. Manuring. Selection of varieties. Diseases of the tobacco plant. Seed beds, transplanting, and cultivation. Method of "hilling," "topping," "pruning," "suckering," &c. Best method of constructing a curing-house. Harvesting. Curing dark and bright tobaccos. Sorting, bulking, and packing. Illustrated. From vol. 5, part 7, of the *Gazette*.
- On a species of Moth destructive to Red Cedar and other timber trees in N.S.W. Illustrated. From vol. 5, part 7, of the *Gazette*.
- Notes on burning Trash, as a remedy against Parasites and Disease. By Dr. G. Kottman.
- The Silk Industry.—Information regarding the silk industry. From vol. 5, part 8, of the *Gazette*.
- Notes on Colonial Timbers for Carriage-building. By J. H. Maiden.—A description of the various colonial timbers that would be suitable for coach-building. From vol. 5, part 8, of the *Gazette*.
- Deep Culture. Reprint of a lecture delivered before the Balloon Society of London, by Sir A. Cotton, Madras Engineers, in which he relates the results of various experiments carried out under his supervision in Deep Culture. From vol. 5, part 8, of the *Gazette*.
- Poultry, No. 12. By S. Gray.—Description of the "Langshan" fowl. General characteristics. Principal breeders in New South Wales. Illustrated. From vol. 5, part 8, of the *Gazette*.
- Paddy's Lucerne or Queensland Hemp. By J. H. Maiden.—Description of the plant. Considered as a noxious weed, as a fibre plant, and as a fodder plant. Illustrated. From vol. 5, part 8, of the *Gazette*.
- The production of Sugar Beet. Reprinted from the Bulletin issued by the Perdue University Agricultural Experimental Station, United States, America. Factory requirements. Method of raising beets. How the beets are handled, and other information. Illustrated. From vol. 5, part 7, of the *Gazette*.
- Club Root of Cabbage and its allies. By B. D. Halsted.—Nature of club root. Club root in weeds. Precautions and treatment. Illustrated. From vol. 5, part 8, of the *Gazette*.
- Australian Honey. By F. B. Guthrie.—Notes on the constitution of various samples of honey. From vol. 5, part 6, of the *Gazette*.
- Analysis of Turmut Tobacco. By F. B. Guthrie.—With notes on manuring and on the exhaustion of the soil by tobacco. From vol. 5, part 9, of the *Gazette*.
- Poultry, No. 13. By S. Gray.—Description of the "Minorca" fowl. General characteristics, and principal breeders in New South Wales. Illustrated. From vol. 5, part 9, of the *Gazette*.
- Cultivation of the Sugar Beet. A lecture delivered at Tenterfield, Guyra, and Armidale, by Principal J. L. Thompson. From vol. 5, part 9, of the *Gazette*.
- The Vineyard and the Collar. By J. A. Despeissis.—General directions for the cultivation of the vine. Treatment of oidium, anthracnose, &c. Raisin making. Management of the cellar. Wine fermentations. Racking wine and other information. Reprinted in one pamphlet from various parts of the *Gazette*.
- The Dorrigo Forest Reserve. By J. H. Maiden.—An account of a week spent at the Dorrigo Forest Reserve, also a list of plants collected, with descriptive notes of those of economic or botanical interest. From vol. 5, parts 4 and 9, of the *Gazette*.
- On the Choice of Artificial Manures. By F. B. Guthrie.—Describing the chemical composition of plants. Soil analysis. Crop requirements. Cereals, grass, root crops, leguminous crops. Green manures. Composition and action of manures. From vol. 5, parts 6 and 7, of the *Gazette*.
- Oidium on Grapes. By J. A. Despeissis.—Results of experiments carried out at Rocky Mount, with a view to testing what effect sulphur applied in the liquid form, would have in checking the appearance and spread of oidium. From vol. 5, part 10, of the *Gazette*.
- Agriculture in the Lower Yang-tse Basin. By F. B. Parkinson.—A description of the Chinese methods of cultivation in this district. From vol. 5, part 10, of the *Gazette*.
- Poultry, No. 14. By S. Gray.—A description of the "Wyandotte" fowl. General characteristics and principal breeders in New South Wales. Illustrated. From vol. 5, part 10, of the *Gazette*.
- Horse-breeding for Military Remounts and Horses for the Indian and European Markets. By Major-General Hutton, C.B., and J. L. Thompson.—Extract from a lecture delivered by Major-General Hutton before the United Service Institute of New South Wales, in which he points out the capabilities of soil, climate, and economic facilities possessed by Australia for breeding horses for military purposes. In "Horses for the Indian and European Markets," Principal J. L. Thompson describes the class of horse suitable; selection of the dam; selection of the sire; horse-breeding in India; endurance of the Australian horse, &c. Illustrated. From vol. 5, part 10, of the *Gazette*.
- Improving Wheat by Selection, No. 2. By N. A. Cobb.—Description of the experimental plots. Directions for selecting the best plants. Harvesting experimental wheats. From vol. 4, part 7, and vol. 5, part 4, of the *Gazette*.
- Ringbarking in the Western New South Wales. By Forester T. Kidston.—Pointing out the advantages of ringbarking. From vol. 5, part 11, of the *Gazette*.
- The New South Wales Blue Gum. By J. H. Maiden.—Description of. Aboriginal names. Value of the timber for building purposes. Illustrated. From vol. 5, part 11, of the *Gazette*.
- Grass Tree Gum. By J. H. Maiden. Botanical origin. Collection. Commerce and uses. From vol. 5, part 11, of the *Gazette*.
- Poultry, No. 15. By S. Gray.—Description of the "Houlan" fowl. General characteristics and principal breeders in New South Wales. Illustrated. From vol. 5, part 11, of the *Gazette*.
- The Silk Industry. By J. Fry.—Pointing out the mistakes that have been made in starting the industry in other countries, and stating that if started well, Australia should become one of the largest silk-growing countries in the world. From vol. 5, part 11, of the *Gazette*.
- Winter Food for Dairy Cows. By J. L. Thompson.—Drawing attention to the claims of Silage as a most suitable and economical food for milch cows. Description of the Silo at the Hawkesbury Agricultural College. Illustrated. From vol. 5, part 11, of the *Gazette*.
- Weeds. By C. T. Musson.—Definition of. Their advantages and disadvantages. Tells where weeds come from, how they become distributed, and how to exterminate them. From vol. 5, part 12, of the *Gazette*.
- Poultry, No. 16. By S. Gray.—A comparative study of Poultry statistics. From vol. 5, part 12, of the *Gazette*.
- Ayrshire Breed of Cattle. By J. L. Thompson.—Origin, description of, &c. Scale of points for a modern Ayrshire cow. Notes with regard to the breeding and breeders of the Ayrshire. Illustrated. From vol. 5, part 12, of the *Gazette*.

- Canning, Drying, and Preserving Fruit. By A. H. Benson.—Containing information and instruction with reference to "Commercial Canning," "Home Canning," "Drying" (1st Sun-drying; 2nd Evaporating or Machine-drying), and "Jam-making." From vol. 5, part 12, of the *Gazette*.
- Shivers in Horses. By E. Stanley, F.R.C.V.S.—A description of this disease. Its symptoms. Etiology. Best known remedies. From vol. 6, part 1, of the *Gazette*.
- The So-called Mahogames of N.S.W. By J. H. Maiden.—Gives full description of four distinct timbers which go under the name of Mahogany in this Colony, and an illustration of *Eucalyptus resinifera*, Sm. (the red or forest mahogany), including the fruits of other mahogamies. From vol. 6, part 1 of the *Gazette*.
- Marram Grass. By J. H. Maiden.—Description of. Its value as a sand-binder. How to propagate, &c. Illustrated. From vol. 6, part 1, of the *Gazette*.
- Poultry and Eggs for Export. By S. Gray.—The breed of poultry most suitable. Suggestions re fattening, killing, packing, branding, &c. From vol. 6, part 1, of the *Gazette*.
- The Brittany Cow. By J. L. Thompson.—Description of. Illustrated. From vol. 6, part 1, of the *Gazette*.
- Phylloxera of the Vine. By A. Despeissis.—An article on the evolution of this insect. Gives best methods for checking its spread, and a list and description of phylloxera-resisting vines. Contains numerous illustrations, including a plate of the insect in all its stages. From vol. 6, part 1, of the *Gazette*.
- Native Plants Poisonous to Stock. By J. H. Maiden.—List and description of plants supposed to possess poisonous properties. From vol. 6, part 2, of the *Gazette*.
- Polled Breeds of Cattle. By J. L. Thompson.—Description of. Origin. Recognised breeds of Polled cattle. The dishorning of cattle. From vol. 6, part 2, of the *Gazette*.
- Experiments with Potatoes. By G. Valder.—Results of experiments carried out by Mr. Valder at the Wagga Wagga Experimental Farm. From vol. 6, part 3, of the *Gazette*.
- Poultry-keeping on Farms. By S. Gray.—Containing information regarding the selection of birds, housing, time to breed, feeding, hatching, and diseases of ordinary fowls. Also an article on the breeding and care of ducks, turkeys, and geese. From vol. 6, part 3, of the *Gazette*.
- Notes on the Milling Qualities of Different Varieties of Wheat. By F. B. Guthrie (assisted by E. H. Gurney).—Containing complete results of experiments carried out by the Analytical Chemist, for the purpose of ascertaining the milling qualities of different varieties of wheat. From vol. 6, part 3, of the *Gazette*.
- Stud Cattle Breeding. By J. L. Thompson.—Notes on. Avatism. In-and-in breeding. Selection of animals for breeding, &c. From vol. 6, part 3, of the *Gazette*.
- Direction for Bottling Wine for Private Use. By P. F. Adams.—From vol. 6, part 3, of the *Gazette*.
- Prospectus, Regulations, Rules, and Syllabus of Instruction of the Hawkesbury Agricultural College, Richmond.
- The Honey Bee. By R. Helms.—Series of articles on certain phases of bee life. From vol. 6, parts 3 and 4, of the *Gazette*.
- Some Fruit Pests. By A. H. Benson.—Description of, and remedies for, "Black Spot of the Orange," "A New Scale on Peach Trees," "The Fruit Fly." From vol. 6, part 4, of the *Gazette*.
- Export of Poultry to England. By C. R. Valentine.—The prospects of a trade in this direction being established. Hints with regard to the preparing and packing poultry. The selection of breeds. From vol. 6, part 5, of the *Gazette*.
- Beech or White Beech. By J. H. Maiden.—Description of, and information concerning, this plant. Illustrated. From vol. 6, part 5, of the *Gazette*.
- Report on an Investigation into the Potato Diseases prevalent in the Clarence River District. By R. Helms.—Cause and nature of the diseases. Prevention and remedies. The potato moth. Illustrated. From vol. 6, part 5, of the *Gazette*.
- Fruits to Export and how to Export them. By A. H. Benson.—Containing a list and description of the varieties most suitable for export purposes of each of the following fruits:—Apples, pears, plums, oranges, lemons, and mandarins. Also full information in regard to gathering, grading, packing, branding, &c.

### Value of *Gazette*.

Owing to limited space it is impossible to quote the many letters received from all parts of the Colony testifying to the practical value of the *Agricultural Gazette*. The following are a few that may be of interest:—

A Quirindi correspondent writes:—"I had black spot in my vines, and the treatment recommended in the *Gazette* has nearly cured them. I believe it is a certain cure."

Martinsville.—"Last autumn's crops of potatoes were attacked with caterpillars, which cut the crops clean off. Noticing in the *Gazette* that Paris green and slack lime would check the ravages, I tried it. I never saw another straw cut off. It saved my crops, although great damage was done before I observed them. The 'Analysis and Price of Manures' is a great guide to people in the bush, as agents (who previously charged exorbitant prices) cannot contradict this authority."

Bega.—"I had a lot of trees badly blighted. I read in the *Gazette* how to take away the blight, and now my orchard is in first-class order. My trees are now bearing fruit again and look well."

Hawkesbury River.—"I have used the resin and soda solution for red scale with very satisfactory results."

Bowling.—"Spraying with Bordeaux mixture for shot-hole fungus I find a perfect cure."

Gosford.—"The use of resin and soda I have found particularly beneficial. As for woolly aphis, my trees were badly affected; but this season they show no signs of the pest—the result of three regular sprayings with the wash. Your suggestions on draining and deep cultivation have resulted in better crops, especially with maize, potatoes, cabbages, and swedes."

Orange.—"I find Bordeaux mixture very reliable for apple scab. Poultry and vegetable notes have been very valuable."

Mulgoa.—"A few years back my vines were badly affected with black spot. I followed somewhat closely to the instructions given in the *Gazette*, and have now a clean vineyard."

Uralla.—"Advice on grafting, pruning, and spraying trees, also on vegetable growing, have been followed with good results."

Mittagong.—"Great benefit received from *Gazette*. Instructions on draining and spraying trees followed with success."

Emu Plains.—"Peach-trees seemed benefited by application of copperas to roots for rust."

Mudgee.—"Application of Bordeaux mixture for pear scab very successful; also general receipt for anthracnose."

Upper Bankstown.—"Bandaging for Codling Moth.—Very good results by changing them every nine days. I have found three dozen in one bandage."

Mount Drutt.—"Much benefit from washing vines in winter with sulphate of iron as recommended for black spot, followed later on with Bordeaux mixture. The use of Paris green for codling moth has proved valuable."

Cowra.—"Followed advice on spraying and pruning trees with very good results."

Rooty Hill.—"I have followed advice contained in the *Gazette* re Bordeaux mixture for vines with splendid results. Some three years ago we could never get a crop of some kinds, notably the muscatels and muscat of Alexandria, but now, with a few sprayings of the mixture, we have no trouble. Bandaging and spraying with Paris green very beneficial for the codling moth. I don't think the pest will ever be got under until the Government steps in with an Act to compel growers to do their best to keep it down. One or two will fight it for all they are worth, but there are lots of others that won't bother their heads about it; only curse a bit when they find their crops on the ground. The *Gazette* is a great help to many of us that are striving to make both ends meet off the land."

Armidale.—"In budding the information acquired from *Gazette* compelled me to alter the time of performing operations; result excellent. In August I sprayed my fruit-trees with sulphur, lime, and salt, and wholly removed mussel-scab, lichen, American blight, and canker."

Moruya.—"The cure recommended for disease in strawberries proved efficacious."

Barrington.—"Advice on deep ploughing proved very beneficial; yield was 10 bushels more per acre."

Willoughby.—"Put in stone drains with marked improvement in growth of crops this year. I am busy fighting the codling moth, as directed, with Paris green and bandages, and will benefit fully 50 per cent this year."

Export

## Export of Produce.

The Department has devoted considerable attention to bringing the many valuable products of New South Wales under the notice of buyers in foreign markets. Owing to limited funds its aim so far has been mainly directed to bringing together producers and buyers, while leaving the trade to develop itself.

Samples of produce of all sorts—including wools, timbers, cereals, fruits, preserved meats, cheese, honey, &c.—have been sent to all parts of the world, and the Department is now recognised as a general inquiry office, which agents and buyers visit or write to, with the view of obtaining specimens and information concerning such products.

When, however, we look at the enormous quantity of food products imported into the United Kingdom annually, compared with the small proportion furnished by New South Wales, it appears probable that in the near future the Department will be called upon to take a more active part in providing markets for our surplus products.

Even with the small consignments of produce now shipped we frequently hear of gluts in the "home" markets. Yet we know that our exports are infinitesimal when compared with the "home" consumption, and that in the provinces of England our products are almost unheard of. The high prices asked for English meat practically confine its consumption to the upper and middle classes. When provincial markets become opened up, and Australian meat is sold on its merits and at its true price, it will be well nigh impossible to glut the market.

The following figures show the enormous market that awaits our producers in the United Kingdom alone, but in again bringing this under notice it cannot be too strongly urged that nothing but first-class goods be sent, and that they be offered at cheap rates. The first necessity is to create a demand for our products, and then see that large and constant supplies of an even quality be forwarded.

*Imports into the United Kingdom in 1893 and 1894.*

The following table gives reliable figures of the imports into the United Kingdom during 1894. It will be seen at a glance what an immense market there is for Australian produce, and that the market is rather increasing than diminishing. It is also to be noted that Australia is in a peculiarly favourable position to supply this market when there is a scarcity and therefore higher prices are ruling.

	1893.	1894.		1893.	1894.
Total value of—	£	£	Total value of—	£	£
Imported agricultural produce .....	153,834,743	158,751,537	Pears .....	347,180	411,325
Oxen and bulls .....	6,213,447	8,233,167	Grapes .....	530,448	470,423
Cows .....	48,996	59,938	Hops .....	1,141,294	774,378
Calves .....	313	680	Onions .....	783,405	765,049
Sheep and lambs .....	88,530	804,995	Potatoes .....	906,952	1,030,091
Swine .....	413	16	Vegetables .....	1,076,749	1,090,355
Butter .....	12,753,593	13,470,419	Total value of food.....	107,444,158	108,037,466
Margarine .....	3,555,344	3,014,781	Horses .....	376,819	548,058
Cheese .....	5,160,918	5,467,137	Wool—sheep and lambs ...	24,438,898	24,791,160
Milk (condensed) .....	1,069,755	1,079,425	Wool—goats .....	965,552	833,614
Eggs .....	3,875,647	3,786,320	Flax .....	2,517,953	2,526,207
Poultry and game.....	578,959	480,890	Hides .....	2,181,253	2,230,151
Beef, fresh.....	3,830,596	4,213,671	Tallow .....	2,161,407	2,344,773
Beef, salt .....	278,997	312,814	Seed—clover and grass .....	792,061	811,297
Mutton, fresh .....	3,873,863	4,341,227		140,878,101	142,122,726
Pork, fresh .....	455,544	436,546	<i>Manures—</i>		
Rabbits, not canned .....	287,737	206,918	Bones .....	198,592	412,627
Bacon.....	8,479,815	8,083,987	Guano .....	94,721	144,111
Hams .....	2,890,252	2,771,828	Nitrate of soda .....	806,197	1,169,153
Lard .....	2,808,549	2,758,416	Phosphate of lime or rock...	594,467	722,935
Meat, other than above, salted or fresh .....	399,912	410,724	Oil seed cake .....	1,938,774	1,707,350
Meat—preserved—chiefly ...	1,543,211	1,490,002	Indian corn and maize .....	7,892,629	7,952,237
Pork—salted .....	289,577	336,556	Indian corn meal .....	37,330	40,968
Wheat .....	21,070,023	18,762,569	Seeds—linseed.....	3,475,290	3,941,997
Wheat-flour .....	9,761,510	7,994,673	Seeds—rapeseed .....	343,424	319,153
Barley .....	5,776,038	7,090,079	Rice .....	2,139,688	1,978,956
Oats .....	4,297,985	3,900,096	Bark for tanning.....	121,523	124,356
Pease .....	729,294	647,191	Fruits, raw—other than above .....	447,979	563,794
Beans .....	1,127,559	1,346,096			
Fruit—raw .....					
Apples .....	843,532	1,376,411			
Cherries .....	194,584	166,163			
Plums .....	331,622	302,105			

Fall in prices since 1893—hence more imported.

Live animals.....	3·5 per cent.
Dairy produce .....	1·5 "
Eggs and poultry.....	8 0 "
Fresh meat .....	3·8 "
Salted meat .....	17·9 "
Cereals .....	16·2 "
Vegetables.....	2·9 "

Sheep, cheese, potatoes, and meats preserved and canned higher.

With

With the single exception of wool, it will be seen from the following figures that New South Wales contributions to these great imports are very insignificant. During 1893 the New South Wales supplies in a few of the leading lines were as follows:—

Nature of Imports.	United Kingdom.		Remarks.
	Total Imported.	N.S.W. Contribution.	
Dead meat of all kinds .....	9,304,664 cwt.	299,663	Over 5,250,000 cwt. were received from United States. Received from United States, 3,098,251 cwt.
Bacon and hams, included in above ...	4,187,298 „	Nil.	
Butter, value .....	£12,753,593	£101,345	
Cheese, value .....	£5,160,918	£7	
Milk, condensed or preserved .....	£1,009,755	£959	
Eggs .....	£3,875,647	Nil.	Domestic produce. 2,481 lb. Victoria, South Australia, and New Zealand sent 2,589,588 cwt. The small quantity sent from New Zealand fetched nearly top price for the year, viz., 25s. per quarter. Queensland, South Australia, Victoria, and New Zealand shipped 212,146 cwt. Australasia shipped 2,989,600 cwt.
Tobacco and snuff.....	84,218,342 lb.	2,481 lb.	
Wheat .....	65,461,988 cwt.	Nil.	
Barley.....	22,844,562 „	Nil.	
Oats .....	13,954,986	Nil.	
Total grain.....	142,246,980 cwt.	1,070 cwt.	
Wool .....	677,947,464 lb.	150,096,324 lb.	

Victorian exports, thanks to the direct assistance afforded by the Government, take a far more important place than those of this Colony in many of the lines in which we should certainly compete.

### Export of Poultry.

In connection with the export of poultry there is every prospect that a large trade might be done, provided that none but first class birds are sent. One or two inferior shipments might ruin the industry. Mr. Valentine, late Produce Commissioner for the Colony, in London, writes as follows on the subject:—

#### Prospects.

That there is an opening for an export trade in dead poultry from New South Wales to England may be regarded as certain. The value of poultry and game, alive or dead, imported into the United Kingdom in 1893 was £578,959, of which £300,000 worth was from France. But this import, moreover, is of an increasing nature, for the value in 1892 was £583,400, and in 1891 £456,979. Frozen poultry have come from Russia, but the way they were packed and marketed did not recommend them to the eye, nor did their breeding and feeding commend them to the palate.

#### Australasia possesses Advantages.

New South Wales and other Australasian Colonies, however, have opportunities that other continental nations are not possessed of. In the first place, a drier climate, more suitable for rearing chicks; secondly, the fact that the highest prices prevail here in the months March to May, just when the English farmers are unable to place young birds on the market; thirdly, they could be consigned in bulk readily and directly to the consuming markets. The shipments already made as trial shipments have proved successful, and we shall have occasion to refer to this below.

#### Finest Quality Required.

But, as in the matter of dairy produce, in quality and appearance the poultry should be the *best*, and neat and clean to the eye. I cannot do better here than quote the words of Mr. C. E. Brooke, Master of the Poultryers' Company:—“The better the appearance of a fowl (and this apart from feeding or fattening, depends upon its being properly killed and packed), the higher, of course, will its market value be, the difference in consequence being far greater than the ordinary amateur is apt to imagine.”

#### Preparation and Packing.

To obtain the highest prices the fowls then should be of the finest quality, large, and young. It is absolutely necessary that all poultry should be fasted before being killed, *i.e.*, kept without food and water for eighteen hours before killing. They must be carefully plucked, so as not to “bark” the skin, set up in the usual way for market—not trussed—then wrapped in absorbent paper and frozen. The freezing must be conducted that each bird is frozen separately, then packed in crates with latticed sides, and transferred to the freezing chamber of the steamship. Each crate should hold about three dozen of uniform size with shelves for each layer. The use of the absorption paper is a prime necessity, both for purposes of absorption and cleanliness. The paper prevents any moisture clinging to the goods and softening the flesh when they become partly thawed in course of transit from the ship to the place of sale. Improvement in packing, and consequently in appearance, has been accompanied always in all cases by an increase in the prices made far in excess of the cost of any extra labour and time involved. I cannot lay too much stress upon this fact, for on it depends the whole success of the trade. Ducks, fowls, and goslings thus sent should command high prices here in March and April.

As to the method of killing,—after the feet have been carefully washed, their necks should be wrung near the head. Then they are plucked, and drawn, and hung by the legs. Plucking must be carefully done, and the freezing take place as soon as possible after.

As to prices, birds carefully placed on the market with all these precautions can be counted upon to fetch not less than 2s. 6d. a head, whilst extra good might fetch a ls., and even more in excess of this price. These figures are those of an expert in the trade, and based on the results of the Russian frozen poultry trade, so that they are well within the mark, as from the quality already received the Australasian have been superior to Russian.

#### Feathers.

The feathers, too, should not be wasted, for these, when cleaned and sorted, will find a good market if there be a regular supply.

#### Selection of Breeds.

We now come to the selection of breeds to prepare for the English market. A Game-Dorking cross or Brahma produces the best birds, but most judges, as well as buyers for the table, seem to cling to a game strain, remote or otherwise, at least on one side. The best breeds then are the big ones with a game cross—Dorking, Plymouth Rock, and Brahma. Regularity in size and condition, good white flesh, white legs—which are considered a necessity for a table fowl, for yellow and black-legged fowls do not make such a high price in London. Mr. Tegetmeyer says if birds are required for the table, a strong infusion of Dorking blood is most essential. In hardihood and plumpness, the Dorking is improved by the cross with the Indian game, as it is now called, or with the old-fashioned English game, but not the elongated modern show bird which is now exhibited as a game fowl. The London market is largely supplied with a fowl called “Sussex,”  
itself

itself a kind of Dorking, large, square, and deep in body, with plenty of meat on the breast, and with little offal in proportion to the edible portions. These are crossed frequently with game or pure Dorking, and first-class fattened chickens make 6s. to 8s. from early spring to the beginning of May at 12 weeks to 14 weeks old. It is this early spring market which the Colony has so many natural advantages to help it to share. After June the prices begin to recede, and every farmer and butter woman has a "spring" chicken of some kind or other ready for market.

At Heathfield, Sussex, where the largest numbers of poultry for the London market are reared and fed, the system adopted is that of "forcing." It is stated that from Sussex something like 2,000 tons of poultry were mailed, to London principally, in one year from the fattening district. The forcing plan is as follows:—They are fed almost entirely on ground oats, mixed to a thick gruel with milk or porridge. When their natural appetite falls off in ten to fourteen days, they are fed by the aid of a cramming machine. The food is the same as before, with a little fat added, and this is pumped into the chickens crops through an india-rubber tube, which is put down their throats. The machine is on wheels, and can be quickly moved along the fronts of the rows of cages, and by its means about 200 chickens per hour are fed by one man. Mr. C. E. Brooke himself, the head of the firm of Brooke Bros., perhaps the largest poultry salesman in London, breeds and fattens poultry near Horsham, and he uses principally a cross between the Dorking and Indian game, and the Houdan and Indian game. He has achieved splendid results by giving all care to the high quality of the chickens that he breeds for fattening, and the way they are marketed. Frequent and regular feeding from the beginning, gradually reducing the number of meals, is necessary. In feeding, too, the good saleable birds should be picked out and kept separate, so that when killed and packed they are to all intents and purposes "graded" as regards size, as of course they are as regards quality. A good cross is the Dark Brahma hen and the Silver Dorking cock. In feeding it is important to note that the average increase is greatest in the first ten days. Some birds will, under favourable circumstances, put on as much as 2 lb. in three weeks, killing at from 8 lb. to 9 lb.

#### Capons.

With regard to the caponising of fowls, there is a considerable demand for capons in London, but it is met to a great extent by cockerels that have, as soon as their sex could be ascertained, been separated and kept apart from the hens. Any number of cockerels, if kept alone in this way, will agree together and develop into finer birds perhaps than if caponised. Experiments in America not very long ago showed, as the result of a series of careful observations, that caponising was practically of no advantage. The separation of the sexes of chickens intended for the table is most important.

There is a remarkable feature about the London market that must be mentioned. The first impressions created there are most vital to any good importer's chances of success.

#### Ducks, &c.

In conclusion, a word or two may be said about ducks, geese, and turkeys. The home producer can perhaps best hold his own here. It is at least suggestive that one great London dealer has received, however, for several years upwards of 5,000 turkeys from Normandy, which have fetched the top prices. The duck-feeding industry is mostly carried on in the counties of Bedfordshire and Buckinghamshire. Here, as with chickens, high quality is of first importance. For choice, the pure Aylesbury duck is almost wholly bred from on account of the fine quality of its flesh, and the rapidity with which the ducklings grow to size. They are killed when from ten to eleven weeks old, and weigh then 4½ lb. to 5½ lb., or more. For young well-grown ducks there should be a capital opening, and at most remunerative prices, for the Colonial frozen birds would be on the market when similar poultry is almost unobtainable in England. Pure Aylesburys then are to be recommended for early spring ducklings, whilst a cross of Pekin gives even more rapidly maturing birds.

In connection with this matter, I beg to strongly urge the necessity for the supervision of the export of perishable products being carried out by this Department in a somewhat similar manner to that adopted by the Department of Agriculture in Victoria, and, I understand, in Queensland. In the former colony, the work has been most successfully performed, and, I believe, has paid expenses.

So much injury has already been done to our trade by the sending home perishable articles, such as butter, cheese, honey, fowls, &c., of an indifferent quality, that it will be only by some decided efforts that we can hope to meet with the success attained by other colonies. As it is becoming more and more necessary for our producers to find markets in other countries, I feel that by the assistance of a careful supervision, and by supplying information as to the quality required, and the proper method of preparing, packing, &c., the Department will, in course of time, aid considerably in the building up of an enormous trade.

It appears probable that with proper care a considerable trade might be done in the export of eggs. A consignment forwarded by the Department to Canada turned out very well. Eggs were at the time worth 5d. per dozen in Sydney, but realised 10d. per dozen at Vancouver. None of the eggs were broken, and the consignment proved that New South Wales eggs can be sent into British Columbia in first-class order and condition at satisfactory prices during the early summer months.

### Export of Fruit.

Mr. Benson, the Department's Fruit Expert, writing on "Fruits to Export and how to Export them," says:—

At the present time we are not in a position to export any quantity of fruit from this Colony to the English, European, or other markets, as we have no surplus fruits available that are suitable for exporting to these markets, as all the fruit grown at present that is at all fit for exporting meets with a ready sale in our own colonial markets—in fact, it is insufficient to supply our local requirements. The fruit of which we have a surplus is entirely confined to inferior varieties which are totally unsuitable for exporting. It is essential that our fruit-growers thoroughly realise the importance of exporting nothing but the very choicest fruits, as the markets we have to supply require nothing but the very best, and the expense of getting the fruit on to those markets is so great that no fruit, except it be of superior quality, will realise a sufficient price to cover the expense of shipping and marketing, and leave a fair margin of profit for the grower. It costs just as much to pick, wrap, pack, ship, and sell a case of inferior fruit, which will never realise enough to defray expenses, besides injuring the reputation of our fruits, as it does to send a case of choice fruit, which sells readily at a remunerative price, and tends to establish a character for our fruits that will result in a profitable trade.

I cannot impress our fruit-growers too strongly with the importance of exporting nothing but the choicest fruits, as it is the primary and absolutely essential condition for the establishment and maintenance of a successful fruit export trade. It is the key-note of all the advice that we have received from the great fruit houses of London and elsewhere, their invariable advice being: send us nothing but choice fruit, grade it evenly, and pack it honestly, and we will have no difficulty in disposing of it at a profit; but inferior, badly graded, and badly packed fruit we do not want at any price, as it is hard to dispose of, injures the reputation of the whole Colony's fruit, and only results in loss to the shippers.

In order to establish and maintain a profitable export trade in fruit, it will therefore be necessary for our growers to lay themselves out especially for this trade, and to do this it will be necessary, in the first place, to grow only such fruits as are suitable for the markets to be supplied, and, secondly, to place the fruits on these markets in such a manner that they will sell most readily and fetch the highest price. It is absolutely necessary to limit the number of varieties of fruits to be grown, and no grower who lays himself out for the export trade should grow more than six varieties of any one kind of fruit, and in most cases three varieties would pay very much better than six. Limiting the number of varieties simplifies the trade for the grower and the buyer, as buyers always prefer to purchase certain recognised standard varieties, which are known and asked for by the fruit-consuming public, to kinds that the general public know nothing whatever about, as known varieties retail readily, and for more money than varieties that are not generally known, and the public are chary of buying anything new in the way of fruit till the quality of the variety has become fairly established.

#### Export

### Export of Passion-fruit.

A shipment of passion-fruit was made by the Department, but although the fruit arrived in excellent condition, it appears that considerable difficulty will be experienced before any large trade could be worked up in this direction. The following report was received :—

Samples of the fruit have been inspected by the leading fruit-brokers, merchants, and retailers in London and the provinces, and have been prominently exhibited in the shop windows of several leading retailers.

The general opinion of the trade is that there is very little prospect of a satisfactory demand being created for this fruit in Great Britain. The fruit is hardly known outside "Colonial" circles, and its general appearance is not sufficiently attractive to command business, especially as other fruits at the same time (12th December) are so cheap. For instance, English hot-house grapes at the present moment can be bought from London retailers at from 1s. to 1s. 6d. per lb. The firms to whom I sent samples chiefly distributed them in smaller samples to their leading customers, and most of the fruit bought in the retail shops when it was exposed for sale was taken chiefly as a curiosity, and the present low price of other soft fruits prevented repeated orders.

At present no successful return to shippers may be anticipated, but I am of opinion that the fruit would be taken up with much greater spirit if it arrived during the months of March to early May, when soft fruits and grapes are very scarce, and in order to cultivate a trade, I recommend that small uniform shipments be made to arrive about that time.

The drawback to the development of the trade with new introductions such as this is due to lack of interest taken by existing traders in taking up new things, which clearly illustrates the necessity for more direct representation of colonial produce on the market where more sympathy can be insured.

Only a very small proportion of the shipment was sold, as most of it was presented to the trade, with a view of introducing it, and the amount of the return defrays cost of dock and warehouse charges.

Passion-fruit is received from Madeira of a golden colour of attractive appearance and of choice flavour, but there is only a small demand for it.

A consignment of lemons and oranges, graded and packed at the Hawkesbury College, Richmond was forwarded to Canada in May, 1894, and reached their destination in good condition.

### Export of Honey.

Several shipments of honey have been forwarded both to England and Canada, but so far with no great success, owing to an unfortunate prejudice which appears to exist amongst the trade against Australian honey. The honey shipped by the Department was analysed by the chemist before being despatched, and was proved to be absolutely pure. Still, the trade reported against it, and it is evident that unless we can create a demand for our honey amongst the consumers in England the trade, which is very conservative, do not intend to depart from existing lines of business.

From figures it would appear that the supply of honey in New South Wales at present scarcely meets local demands. During the past eighteen months 70,000 lb. was imported, and only 27,000 lb. exported. Still, it must not be forgotten that our bee farmers are holding large supplies in the hope of getting a better price, and, also, that during the past few years the industry has been increasing very rapidly in extent. The total output during the last twelve months amounts to some 10,000 cwt.

Provided we can once create a demand for our honey in England, the market is very extensive. During 1893 the honey imported into that country amounted to some £30,000 sterling.

When we consider the thousands of acres of our forest trees, orchards, and clover paddocks, with their long-continued flow of honey, it is somewhat surprising that a larger number of people do not devote more attention to gathering this partly-wasted wealth, now lost through want of bees to gather it.

With a view to protecting the industry from the ravages of "foul brood" the preparation of a Bill dealing with this matter, and also with the protection of the wild bee, has been under consideration.

In connection with apiculture, it appears probable that a large market exists for beeswax in England. The Grocers' Association of London wrote for a trial shipment of one ton, for which they offered 150s. per cwt. Half a ton has been sent. Virgin wax is also inquired for.

### Manufacture of Scents and Essential Oils.

Samples of essential oils prepared from citrus fruits were sent to Canada, per favour of the Hon. Mackenzie Bowell. The reports received were very favourable, and should encourage private enterprise to take up this industry, and make use of surplus produce at present going to waste in our orchards.

Messrs. Elliott & Co., of Toronto, Ontario, one of the most extensive wholesale drug houses and manufacturing chemists wrote, "Australian distilled oil of lemon, &c., is quite equal to what generally appears in the market. In body the oils are fully up to the mark of pure natural oils. In order to hold this or any other market it is necessary that a standard of purity should be maintained by inspection of exports. One dishonest exporter could easily negative the efforts of a dozen careful honest producers. Respecting the oil of petit grain and the sweet orange flowers water there is a sale for them. In introducing their goods into this market dealers must be assured that sufficient quantities are available, and it would be necessary to consign a quantity in trade packages and make provision for samples being distributed to wholesale dealers and large consumers."

### Export of Cheese.

Two shipments of cheese forwarded to London from the Hawkesbury Agricultural College proved very successful. Both consignments sold at satisfactory prices. They were pronounced to be equal in make and flavour to any cheese ever imported from beyond the seas. The London experts pronounced them to be worth more than the best Canadian. The success of these shipments should stimulate private enterprise to capture a portion of this trade. As evidence of the value of instruction in cheesemaking, imparted at the Hawkesbury Agricultural College, cheese of this character is now being made by and under the direction of one of the students.

### Export of Wine.

A shipment of wine, the produce of a number of our vignerons, was forwarded, in May last, to London at the request of one of the leading dealers. It is, however, too early at present to get details of the result. Under proper direction, however, the wine industry must become one of the most important in New South Wales. Samples have also been forwarded to Canada with favourable results.

Export

### Export of Tobacco.

Samples of New South Wales tobacco cured under the Department's instructions were forwarded to England in August last. These were brought under the notice of Messrs. W. D. and H. O. Wills, who were good enough to have it prepared in several forms for consumption. The opinions of leading brokers and manufacturers to whom samples were sent were, on the whole, very encouraging. They reported that "it was the finest yet received from Australia, and was well dried." "It possessed great body and substance, a desirable requisite in all tobacco leaf."

A number of farmers have been carrying out further experiments under the guidance of the Department, and some splendid samples have recently come to hand, from which a selection will be made for further export. Reporting from the Richmond River district, Mr. Lamb says:—"Here (Baerami), as on the Upper Richmond, it is now demonstrated that really fine-flavoured leaf of good colour and texture can be produced if needful care and skill is bestowed upon it. From the Baerami leaf it was easy to select three grades—1st, Heavy, rich leaf, suitable for the best descriptions of twist and plug; 2nd, Thin, golden leaf, suitable for cigarettes; 3rd, Fine, silky, cinnamon-coloured leaf, suitable for cigar-wrappers. A sample band of the light golden leaf of the crop of 1895 has been manufactured for cigarette-making, and submitted to the judgment of several of the leading men of Sydney, who have pronounced it equal, and in some cases superior, to the best imported tobacco of its class." It should be mentioned that the tobacco here referred to sold easily at 1s. per lb., the current price in Sydney for colonial leaf at that time being 2½d. to 5d. per lb.

Seeing that 84,218,342 lb. of tobacco and snuff were imported into England during the year 1893, and that London merchants reported, "The characteristic body of your leaf proves that the climate and soil are suitable to the raising of a class of tobacco that would find favour with merchants here," there would appear to be a large field for enterprise in growing tobacco in New South Wales.

During the past eighteen months the Department has distributed nearly 3,000 packets of specially-imported tobacco seed. This year a considerable quantity of acclimatised seed is also being distributed, from which more favourable results, as regards percentage of germination, are expected.

### Export of Compressed Leather.

In response to applications from London, samples of above, with full particulars as to price, available supply, &c., were forwarded to the Agent-General in June last.

### Trade with Canada.

Amongst a number of other articles forwarded to Canada were several samples of Australian preserved meats. At the low prices at which these can be shipped it appears that they only require to be widely brought under the notice of consumers to ensure a lucrative trade.

### Vine Diseases Act.

This Act has now been in operation two years, but can scarcely be said to have worked satisfactorily. The Minister has therefore decided, in the interest of the vigneron, to abolish all Boards and Districts, and to take energetic steps to deal with the pest. Phylloxera is now known to be present in one vineyard near Liverpool. The vineyard is being treated with bisulphide of carbon, and trenched 2 feet deep.

While the disease is present in the Colony the markets of the other colonies are closed to our grapes and cuttings, and the advancement of the industry is seriously impeded.

A thorough inspection of suspected areas is now proceeding, with the view of ascertaining how far the disease has spread. The Government Entomologist made an inspection of the Murray vineyards some months ago, and it is satisfactory to note that no trace of the disease could be discovered.

The Department is arranging to cultivate at its experimental farms large areas of the best phylloxera-resisting vines. The planting of vineyards with these stocks has been proved to be the true solution of the phylloxera difficulty, and it is hoped that the Department will soon have sufficient cuttings to distribute to enable those planting out new vineyards to do so with confidence. Over a million acres in France had been planted out with these vines some years ago, and many vine-growing countries are discarding other methods and planting with resistant stocks.

### Experimental Stations.

The work in connection with the experimental farms and orchards at Wagga Wagga and Wollongbar, near Lismore, has been highly satisfactory, and I have no doubt that such experimental or demonstrating farms will do a vast amount of good, not only to the farmers and settlers in the particular districts in which they are situated, but to the Colony and, I may go so far as to say, the adjoining colonies. In his report on the Wagga farm Dr. Cobb refers to a field-day which was held on 1st December last. He says:—"Between seventy and eighty influential Riverina farmers assembled in the shed, many of them having taken long journeys (in some cases over 200 miles) in order to attend. The objects of the farm and the nature of the work being done having been explained, the whole party made an inspection of the farm. After lunch had been served all took part in a profitable discussion on what had been seen. The field-day passed off, in fact, a success; and I hope it is the forerunner of a regular annual or semi-annual gathering of a similar sort. It is only by farmers visiting the experimental farms and seeing what is being done, and learning by personal inspection the results of experimental crops, offering criticisms, making suggestions, letting the Department know their greatest needs,—it is only in these ways that the experimental farm can be made of most service to the farmers." From Dr. Cobb's and Mr. Coleman's reports it is clear that the demand for seed wheat true to name far exceeded the supply, and that small parcels have been sent to all parts of the Colony. Mr. Coleman also draws particular attention to the success of malting barley as a crop for the Riverina district.

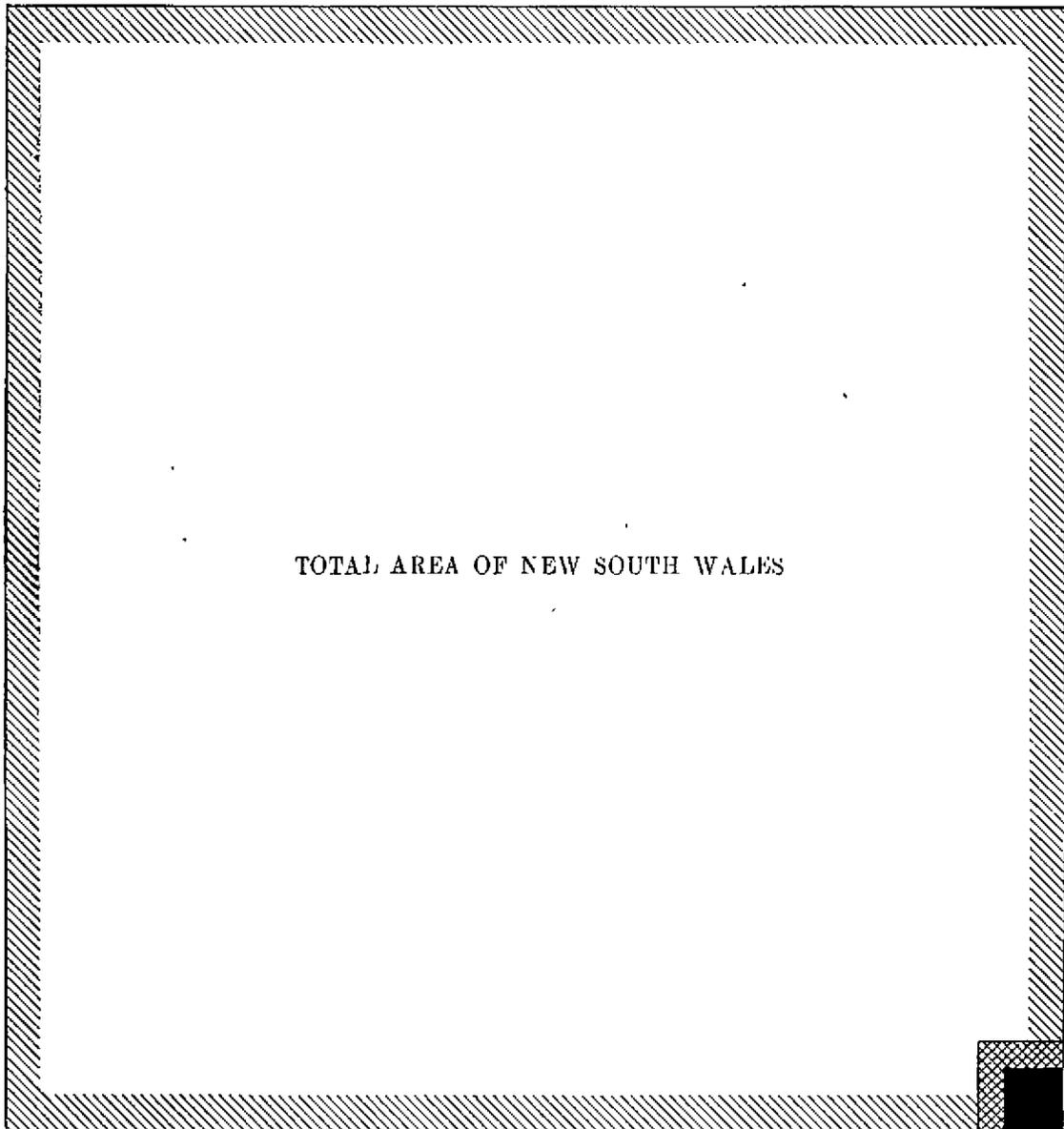
It is gratifying to me to report that the officers engaged in these farms are most capable and energetic; most ready and willing to supply information to all visitors, even to what must be considerable personal inconvenience to themselves. I have no hesitation in saying that I believe the establishment of these farms will do more to improve the agriculture and horticulture of this Colony than any other method that could be devised for imparting valuable information.

In

In a recent report to the Board of Agriculture, England, on the agricultural experimental stations and agricultural colleges of the United States, Major P. G. Craigie remarks:—"Great and practical energy is obviously being directed to the discovery of the best means of extending the field of agricultural and horticultural knowledge. It should not be overlooked that side by side with the growth of local stations a very extensive development of the scientific staff engaged on the special inquiries of the Federal Department at Washington has taken place during the last ten years. The American Government seems willing to face any cost to the community that promises the better to equip the farmer with a knowledge of his business. The authorities seem assured that in indicating methods of profitable production, and still more by the careful perfecting of the produce of the vast lands of the Republic, in whatever directions of extensive or intensive culture the economic circumstances of the moment may prescribe, they are providing a solid means of advancing the well-being of the nation as a whole."

I take the opportunity of submitting a diagram showing the exceedingly small proportion of land to the total area of the Colony which was under cultivation last year, being merely 0·6 per cent. The area under wheat was relatively exceedingly small. This is shown within the cultivated area, being only 0·3 per cent. of the total area of the Colony.

SHOWING the relative size of Areas under Cultivation (light shade) = '6 per cent., and under Wheat (dark shade) = '3 per cent., in comparison with the area of the Colony.



### Hawkesbury Agricultural College and Farm.

In relation to this Institution the progress made has been satisfactory, and the fourth year of its existence (1894) closed amid feelings of gratitude for the past and hopefulness for its future.

In February the seventh session of the College was commenced with fifty-four students; eleven of whom constituted the diploma class, eleven the third session, twelve the second session, and twenty the first session students.

On Saturday afternoon, the 10th March, the second distribution of diplomas was made. Out of twelve students who had completed their College term and presented themselves for their diploma examination, nine succeeded in obtaining it. Of these the dux of the College obtained an aggregate of 1,291 marks out of a possible 1,500. The presentation of the Minister's gold medal to the best student at practical work fell to the lot of Wm. M'Kee; that of the Principal, given to the dux of the College, was appropriated by student Wm. J. Little; while the "Burdekin" medal was presented to the nine students with their diplomas. A number of valuable book prizes, donated by various friends of the Institution, were also distributed.

The

The Principal, Mr. J. L. Thompson, reported most enthusiastically upon the very great improvement in every department of their work, particularly in all its practical branches.

Owing to an alteration in the division of the academical year, the eighth session commenced on the 20th July last. This session was inaugurated with a full complement of students, numbering fifty-four.

The examination for diploma, the third held, was very largely attended, nineteen students presenting themselves for it. The papers were, according to the custom established at the initial examinations for the diploma, set and examined by gentlemen of acknowledged standing in the several branches of their respective professions—gentlemen unconnected with either the College or the Department, and, with one exception, resident outside this Colony.

#### *The Examiners in Agriculture.*

The brief reports which accompanied the returns from the several examiners are very gratifying and encouraging.

Professor William Brown, of Victoria, writes thus: "I am gratified with the all-over high standing of the papers sent. As you will see, the mean percentage is 98, and this is not due in any one doing in excess of any other, but solely to general merit. I am also much pleased with the intelligent handling of many of the subjects, evidence, of course, of a liberal education, and that the information in question has been imparted by excellent methods; indeed, several of the students do not hesitate to express their own opinions in comparison with those given or implied in the examination paper."

Principal H. Pye, of the Dookie Agricultural College, who examined these diploma students in chemistry and entomology, the former of which subject, it may be remarked, is with that of agriculture a compulsory one, reports as follows:—"The papers sent in were excellent. The students showed that they had an intelligent grasp of the subjects they had to deal with, which reflected great credit on their lecturers."

The foregoing are fair types of the other reports received from the examiners, and which are complimentary to the highest degree to the Principal and his staff.

The examiners appointed to conduct the examinations in the practical work out on the farm, orchard, and dairy speak in very high terms of the qualifications of these diploma students in these directions. Mr. Conlon, who conducted the examination as to the farm work, reports:—"I am very well satisfied with the proficiency the students have attained in general farm work." Mr. Edward Whittaker, who more particularly paid attention to the vineyard and orchard work, reports:—"I am very pleased with the knowledge the students have gained so far as the management of the vineyard and orchard and the working and cultivation of the ground go."

The report of the gentleman who was appointed to conduct the examination of these diploma students in dairying work may be summarised in his concluding sentence:—"Great improvement in all from previous year. Cheese-making only began in October, 1894, and the general information upon all headings was satisfactory as understanding the primary basis of their studies in this branch." Mr. D. L. Dymock, of Jamberoo, was the examiner in dairying matters.

A new dairy with appliances of the most modern description has been erected on the farm, together with other useful and necessary buildings. The erection of pens, and the commencement of the poultry and bee farm under the care of Ex-student E. J. Rien, M.H.A.C., has been accomplished during the year. By or before the close of 1895, it is anticipated that the institution will be comfortably housed in its new buildings which are now in course of erection.

#### *Farm.*

It was anticipated that early in the year a good crop of Swede turnips would have been secured, but owing to the heavy rains which set in—16 inches of rain falling during March—the land was crusted, and consequently a great number of the young plants were unable to force their way through. The rain also washed the manure and seed together into heaps.

Still, notwithstanding this drawback, and a large yield being rendered thereby quite an impossibility, the quality of the small crop harvested was excellent, selling up to as high a figure as £3 per ton.

One hundred and fifty tons of sorghum was grown and chaffed into the silo pit. This was of very great value, not only as fodder, but as affording a valuable object lesson to the students in the art of silage-making.

The cropping upon the farm during the year has comprised 30 acres of Cape barley, 66 acres of oats, 66 acres of wheat which have now been thrashed. There was harvested a very good crop of melons and pumpkins, the quality of which was pronounced to be first-class. Cabbages, potatoes, mangels, buck-wheat, and linseed have been cropped off the farm during the year.

There is now a promising crop of maize standing, comprising 40 acres, while 40 other acres have been planted with late maize, sorghum, &c., for green food for the milch cows.

During the year 1894 the weather has been of a most trying nature. In the month of March, as already noted, there was an unprecedented heavy downpour of rain, 16 inches falling in twenty-three days, as a consequence the land was in such a condition that it was impossible to get on it for agricultural purposes, and when it was workable the season was too far advanced.

This deluge of rain was succeeded by nine dry arid months. The winter crop of potatoes, &c., was a failure, and the spring crop suffered very much for want of moisture, and when the rain did come it caused a second growth rendering them useless, not worth digging.

These disastrous results were felt by the holders of the thousands of acres in the Hawkesbury district.

So far as the College farm is concerned the need of extended drainage is very apparent, and it is anticipated that much more will be done in this direction during the year 1895.

#### *Orchard.*

The operations in the orchard have been conducted throughout the year 1894 with good results, both as to the product of the crops, and also from an educational standpoint.

During the months of June, July, and August, the students received each week special lessons in pruning, budding, grafting, and replacing fruit-trees and grape-vines. The majority of these students are reported as being very apt and willing to learn.

In the vineyard the vines planted the previous year are doing remarkably well for cuttings, a portion of them are trellised on wire, and the others are nearly all staked.

The older vines have been pruned principally by the students under the immediate control and supervision of the Orchardist, who reports that they are pruned very well.

The crop is a good one.

All the various trees in the orchard are doing well, of which may be enumerated Japanese plums, persimmon, figs, peaches, nectarines, and plums of many varieties, and walnuts.

The scent plants are doing well; especial mention may be made of the tuber roses, sweet basil, and mignonette.

#### *Experimentalist.*

The Experimentalist has grown during the year 16 varieties of peas, 3 of buckwheat, 5 of onions, 34 of turnips, 67 of wheat, 3 of barley, 5 of oats, 69 potatoes, 5 rock melons, 8 of water melons, 3 of pumpkins, 20 of sugar-beet, and 3 of carrots. There are growing on the experimental plots 7 varieties of tomatoes, 18 of tobacco, 38 of maize, and 8 of sorghum. In addition the following plants are thriving well:—Tagosaste, Lima beans, sheep's burnet, rape, arrowroot, castor oil beans, chicory, cow pea, canaigre, indigo, and lathyrus silvestris.

In the direction of grasses, in addition to keeping those in order which were sown last year, there have been sown this—Perennial rye, Poverty Bay rye, trefoil, white clover, paspalum dilatatum, macros-tachyum, and several mixtures.

Among the manurial experiments made during the year may be mentioned the following:—

Testing a variety of incomplete manures against a complete manure on a crop of wheat, differing the quantity of seed to the acre, and also the dates of sowing.

Testing thirty-nine different fertilizers offered for sale in Sydney on equal quantities of land, at an equal money value, on a crop of oats. A similar test of the same manures is now being made on a crop of maize.

Testing the effects of salt on a crop of mangels.

Testing the effect of different fertilizers on the natural pastures of the common.

A crop of maize is also in process of being tested by a variety of different methods of cultivation.

The tobacco-house being finished the small crop of tobacco taken off the plots has been successfully cured.

#### *Dairy.*

The progress of this branch of the work at the College, under the management of Mr. Thomas A. Wright, who was specially engaged to take charge of the dairy, has been satisfactory.

The new dairy building, with every modern appliance available, has for the past few months been taken possession of, with the result that already its advantages are beginning to appear.

Cheese-making, which was, until the new dairy building was available, carried on necessarily in a very uncertain manner, is now receiving attention six days a week.

A trial shipment has been despatched to England, and one to the Continent also, the results of which are anticipated with great hopefulness.

A small experiment was recently made to test the value of the lactic ferment for butter-making, and it was found that the butter made from cream scalded to 150° and cooled down afterwards to 75°, at which temperature the lactic ferment was added, proved to be the best in quality, having the best grain, the least water, and it kept the best. This lactic ferment was also tested in ripening milk for cheese-making, and so far as could be judged, it acted admirably, and the cheese made from this milk was proved to be of splendid quality.

As payment for milk by results, as determined by the Babcock, is becoming general, the Department decided to award certificates of competency to such candidates as should present themselves to the Dairy Instructor to be tested as to their knowledge of this machine. Four candidates have so far presented themselves, and have been examined by the Dairy Instructor, and received their certificates of competency. This method of testing milk will not only become general in butter, but also in cheese factories, as it has been demonstrated at the College dairy and elsewhere, that to a certain extent the higher the percentage of butter fat the greater the quantity and the better the quality of cheese is obtained.

During the year 1894 six certificates have been issued to dairy students for dairying. Five of the students who took their diplomas at the recent examinations obtained approval to remain and spend their vacation in prosecuting their studies in dairying. These students are reported as having taken good advantage of this special privilege; having gained knowledge, not merely in the various branches of dairying proper, but also in the general management of dairy stock, and are considered well worthy of receiving the certificate of the Institution in that respect.

The dairy herd consists of 242 head of stock. There have been milked morning and evening during the year an average of 53 cows, and for the eleven months terminating with the 31st December, 1894, 172,538 lb. of milk have been obtained. Besides the large quantity of milk consumed at the College, there has been manufactured 3,021 lb. butter and about 4,625 lb. of cheese.

With so satisfactory a commencement, it is anticipated that this important branch of the work at the College will realise its contemplated proportions and become of immense advantage to the furthering of the interests of this great industry, which is sure to be among the most prominent and important in this Colony.

#### *Bees and Poultry.*

During the year 1894 the poultry and bees were removed out to the farm. Suitable sheds, pens, and yards, designed for the most part by the Aviculturist, Mr. E. J. Rien, M.H.A.C., have been erected together with the store-rooms, workshop, extracting and incubator-rooms.

Among the varieties of pure-bred birds at the poultry farm may be mentioned the Houdan, Spanish, white and brown Leghorns, golden and silver Wyandotte, Plymouth rock, Langshan, Brahma, Colonial game, with other various breeds and a quantity of ordinary barndoor.

Of ducks there are white and black Muscovy, Pekin, Aylesbury, Rouen, and a quantity of cross-breeds, mostly Rouens.

There

There are some Toulouse geese, some cross-bred geese, and also some turkeys, besides a quantity of ducklings.

Several test shipments of eggs have been prepared for the foreign markets during the year. Various methods of packing have been adopted, and the results are looked forward to with great interest and expectation.

Preparations are being made to have some birds ready for export with a view of testing the English and other markets.

There are now three incubators on the farm, one a 50-egg Hearson, one a 200-egg Hearson, and the third, constructed upon the premises, capable of holding 400 eggs, and which appears to answer its purpose equally as well as either of the other two.

The Apiarist reports having fifty colonies of bees, all Italians, safely removed out to his bee farm. The native bees, however, did not survive the winter; a very general experience.

The heavy rains already referred to, and which are reported as lasting during the whole of the time of the honey flow, have so interfered with the production of the honey this season that little or no honey beyond that required by the bees to carry them over the winter has been made.

The experience of the College, however, in this respect, as with the failure of their crops, is identical with that of the entire district of the Hawkesbury.

#### *Improvements.*

During the year 1894 the following improvements have been carried out by the employees of the College, assisted by the students:—Construction of sheep drafting-yard with sixteen gateways complete, the construction of cow-yard secured with a three-rail fence, blocking the cow-shed, the making of the piggeries, wire and three-rail fencing, with six pairs of gates with posts.

The residence for the Principal, three cottages for workmen, the square of farm-buildings, a double-pitted silo, a large chaff-house, a building containing a tobacco-curing house on the most approved principle, with an experimental store attached, a two-storied building at the bee and poultry farm, together with milking-sheds, have been erected during the year.

The water service has been extended from the town main to the farm, thus securing a certain provision for its needs in every direction in which water may be required.

During the six months ending 30th June, 1895, there were three events occurred which may be said to be the most important since the College was initiated; first, the visit of the Minister of Mines and Agriculture, and many of the officers of the Department, also 150 visitors comprising the members of the Fruit Conference which had just been held in Sydney. The date of this visit was the 8th February.

A week later, viz., the 15th February, there was still a larger concourse of visitors, comprising the members of the Farmers' Conference, initiated by the Minister for Mines and Agriculture, numbering something like 250.

The 9th March, the anniversary of the opening of the College, was a red letter day in the history of this institution. Firstly, the foundation stone of the new College was laid by the Honorable Sydney Smith, Minister for Mines and Agriculture, and he was presented on the occasion with a very handsome trowel and mallet, by the Principal, officers, and staff of the institution.

The foundation stone bore the following inscription:—"This stone was laid by the Honorable Sydney Smith, Minister for Agriculture, 9th March, 1895. J. L. Thompson, Principal. Grant and Mathieson, Contractors."

It should be mentioned that Grant and Mathieson, the contractors, presented the stone and had it engraved free of charge. The Sydney morning papers of that day were deposited in a receptacle in the stone. Mr. E. Clarence Wood, M.A., Mr. Vernon, Mr. Mathieson, and Mr. R. H. Ducker, made complimentary speeches on the occasion.

In the afternoon the presentation of diplomas and medals, &c., was made by the Minister at the School of Arts, which was crowded with residents of the district and visitors. He spoke a few words before calling on Mr. J. L. Thompson, the Principal, to present his annual report. This was of a most satisfactory nature, the conduct of the students being all that could be desired.

The following students were presented with their diplomas in the order of merit given:—Amos, Hawdon, Kinross, Jas. Faulkner, Grieve, A. Wilson, Fielder, Savage, Gowing, Windeyer, Arthur, Warde, Dwyer, E. C. Faulkner, Ranken, and Dymock.

The following obtained their first year's certificate:—Muston, Evans, Laidman, Woolcott, V. D. Cox, and Kibble.

Valuable book prizes to the value of nearly £40, provided by voluntary subscriptions from the following gentlemen, viz.:—Messrs. S. Burdekin, Warde, Beckett, Cowles, Proctor, Crouch, D'Arcy, Greenwell, Kibble, the late Sir William Manning, Captain Deane, Captain Laidman, Hawdon, Rev. Dr. Kinross, and the Rev. Dr. Cameron. The Hon. the Minister's gold medal was awarded to Student C. R. Cassidy for the best all round dairy student. The gold medal presented by Mr. T. M. Slattery, formerly Minister for Agriculture, was awarded to Student C. L. Jeannerett for the best all-round student at farm work. The Principal's handsome gold medal was presented to Student John H. Amos, dux of the College. Handsome silver medals presented by Mr. Burdekin, and known as the Burdekin Medal, were presented to all students who obtained the diplomas; this gift is made every year. A handsome silver medal was presented to Student Muston for a collection of indigenous grasses and fodder plants, and a similar medal was also awarded to Student Evans for a collection of exotic grasses and fodder plants. After the presentation the Hon. Sydney Smith spoke a few words congratulating the successful students on the results of their efforts; he referred to the necessity for cultivating land to the same point of excellence that they did in other countries if they wished to take their place in the markets of the world. Addresses were also delivered by a few of the visitors.

Regarding the occupation of the new farm buildings we find them very convenient indeed, and a great saving of time in wear and tear.

The College building is being proceeded with as expeditiously as possible, and there is little doubt that it will be ready for occupation towards the end of October; when the whole of the students and staff will move out to the permanent quarters erected for their accommodation. There can be no doubt that the want of success in many industries has been caused by the want of proper supervision in having the industries scattered over so many places.

*Weather.*

*Weather.*

Since the month of January the weather has been almost unprecedented for dryness, as will be seen from the following tabulated form:—

Month.	Days.	Average for Months.
January ... ..	25	10.425
February ... ..	15	6.118
March ... ..	11	1.126
April ... ..	6	1.059
May ... ..	6	1.223
June ... ..	2	0.256

These observations, carefully taken by Mr. Rien, show that during the months of March, April, May and June, the rainfall did not exceed 1 inch per month, and the 16 inches that fell in January and February did more harm than good. The Principal reports that owing to the want of moisture the root crops, such as potatoes, mangels, and turnips, and also rape, and green fodders, such as barley, vetches, and rye, for green feed for the stock, were almost a complete failure.

During the six months 150 tons of green corn silage have been put away in the silo, which has just been opened and turned out to be in a most excellent condition, not two inches of waste anywhere. We are preparing 100 acres for wheaten and oaten hay. Some of this has been put in, and is now up, looking fairly well, but it sadly wants rain. A fine lot of hay has been harvested, nearly 150 tons, and we have been selling a considerable quantity at £3 10s. per ton at the stack, the purchaser finding bags and carting it away. The Principal, however, has stopped selling at present, as the serious drought staring us in the face does not warrant us in parting with any more of our fodder at present. The maize crop has just been harvested, and notwithstanding the severe drought has yielded fully 50 bushels per acre of excellent corn.

*Dairy.*

The work in the dairy has been satisfactorily carried on, and the success of the College cheese in England has been much appreciated by all who have the interest of the College at heart. Notwithstanding the abundance of feed provided for the cows, the amount of milk shrunk very considerably during the winter months, as many of the cows had been giving milk for some time previously, but we have been able to continue cheese-making for three or four days a week during the winter. A considerable number of our cows are due to calve in the spring, when we anticipate a large flow of milk.

*Orchard.*

The orchard work has been carried on in a satisfactory manner, the whole of the orchard being at the present time free from weeds, and the soil loose and open. This condition of affairs has been accelerated by the dryness of the weather.

*Experimental Plots.*

The experimental work has now been completed for the season, and full details will be found in the College Annual Report for 1894.

*Bee and Poultry Farm.*

The bee and poultry farm, under Mr. Rien, is progressing favourably, and steps are being taken to have all varieties of fowls represented for educational and experimental purposes. Eggs have been exported with very satisfactory results, also honey, and frozen poultry, the returns for which we are waiting anxiously for. A considerable number of fowls have been caponised, and have done well.

*General Work.*

The bullock team has been at all kinds of work during the six months, carting timber from the railway-station to the farm buildings, laying out timber on new lines of fencing, excavating big drain, subsoiling, and drawing logs for saw mill. We have now sixteen bullocks, and everything in good order and condition.

The saw mill has been in full work during the six months, in which time, besides other work, it has cut 80 tons of firewood, and 15,174 feet of building timber.

Fencing, under George Stead, has been going on in a satisfactory manner.

To further improve the place a contract has been let for grubbing and clearing 118 acres of additional land, also several miles of sub-division fences, draining, and other works.

**Experimental Farms.**

With respect to the crops at the Experimental Farm at Wagga Wagga, Mr. John Coleman reports that:—

*Turnips.*

On the 16th and 17th January, 1894, he drilled in the following varieties of turnips:—New Hardy Swede, elephant Swede, champion purple top hybrid, green top hybrid, purple top mammoth, imperial green globe, Devonshire grey stone, and crimson king Swede.

It was generally thought that turnips could not be successfully grown about here, the climate being too hot and dry.

Under good cultivation, with a slight dressing of bone-dust, a splendid crop of large bulbs was grown, and a weight of over 25 tons per acre, producing upwards of £27 in value, was obtained from two acres of land.

*Potatoes.*

On the 25th January there was planted a small selection of the following sorts of potatoes:—Brownell's beauties, snowflakes, imperators, magnum bonums, early rose, white elephant, and Sutton's flour balls.

These

These produced a very fair crop of good-sized sound tubers, particularly imperator, white elephant, and magnum bonums.

On the 6th of February sixty-six varieties were planted—these were from the Hawkesbury College farm—of about 3 to 5 lb. of seed each. About half of this number produced a fair crop of sound tubers, the others being very scabby and diseased, and greatly damaged by the potato-moth; some entirely failed.

#### *Wheat and Oats.*

On the 5th of April we began to drill the fifteen lots of wheat received from the Chicago Exhibition, varying in quantity from 2 lb. to half a bushel in each variety. After these were sown, and as fast as the land could be got in readiness, forty-two varieties were put in; some from seed grown on the farm last season, and the others being sent up from the Department, having been obtained from many different localities. These forty-two lots were put in from quarter acre areas up to fifteen acres in a lot.

The wheat sowing was finished on 2nd June.

In addition to these, Dr. Cobb had about ten and a half acres for his experimental plots.

The season was a very bad one for wheat; the long spell of dry weather in November and early part of December caused the premature ripening of the grain, giving it such a shrivelled appearance and lightness in weight that it is a difficult matter to find a really first-class sample throughout the Wagga Wagga district.

The manager at the Wagga Wagga Flour Mills informed Mr. Coleman that the average weight of the bags of wheat this year requires 12 to 14 lb. each bag to make four bushels; whereas last season the average weight per bag was nearly, if not quite, four and a quarter bushels. This seems to be a fair test for comparison of the quality of the wheats for the seasons of 1893-94. All of our varieties not being threshed out, our actual yield cannot be given. Some of the best varieties threshed, gave fairly good results for the year. The following are some of the best so far: Australian Talavera, Leak's R. R., farmers friend, Allora spring, Berthoud, Marshall's white, Grosse's prolific, Steer's early, purple straw the heaviest yield of any being Algerian.

About 10 acres were drilled in with Carters royal cluster oats—seeds grown on the farm last season.

A fair crop of good quality was obtained considering the lateness of the season when sown, and, the soil raw and green when they were put in, the green timber having been removed shortly before the land was ploughed, after which the seed was put in at once.

On the 20th of June, thirty-six small packets of oats were received from the Department; next day they were planted in 40-foot drills. They all came up well considering the lateness of the season. About six or seven are very good varieties, viz., Carter's royal cluster, red Texas, golden giant, improved American, badger queen, white Belgian, and white Swedish. The others are only ordinary varieties. All other oats had a dressing of about 4 cwt. of bonedust per acre, which had a very marked effect, increasing the crop by quite one third.

This soil with a proper preparation, and if the crop were sown early, would produce extra heavy crops of splendid oats, and this would pay far better than wheat-growing.

#### *Barley.*

Three varieties of barley were drilled in this year with seed grown on the farm last season. A small plot of skinless barley was grown with very fair results (this is the sort used for the manufacture of pearl barley). Goldthorp, a Chevalier variety for malting type, was sown on a plot of about  $\frac{1}{2}$  acre, the yield being four bags of splendid grain; Carter's prize prolific, a Chevalier malting variety, was grown on about 6 acres which produced a splendid crop of from 35 bushels and upwards per acre.

It seems likely that malting barley will become one of the leading grain crops of this large district. The soil and climate being very suitable for the production of big bold grain, good colour, and heavy quality, just the sort the practical maltster and brewer is on the look out for for pale ale brewing; this always commands a better price on the market than the best wheat.

#### *Turnip seed.*

On 25th July some 300 of the very best shaped turnips were selected and planted out for seed. There not being any sale for white-fleshed turnips, only the two best varieties of Swede—viz., elephant Swede and hardy green top, were taken. The result was a very good crop of seed of good quality, but rather small in size through the excessive dry, hot weather.

#### *Maize.*

On 25th and 26th September 10 acres, on land previously occupied in 1893 by Dr. Cobb's experimental wheats, was planted with the following varieties:—90-day corn, a good sample locally grown at Lake Albert; Canadian golden drop and white carrago, two varieties presented by Mr. W. Wren, manager of Kameruka, Candelo, as being the two best varieties for upland culture out of a large number of the best American varieties imported by the late Robt. Tooth, Esq., and tested by Mr. W. Wren, at Kameruka.

The crop was rather uneven, caused through the old stump holes.

A dressing of bone-dust was given here also, which leaves a decided mark where applied and where not; the crop only being about half the height where no manure was put.

Of the three varieties planted for the main crop, Canadian golden drop and the American hard flint ninety-day yielded very fair crops of about 30 bushels per acre. The white carrago variety ripened prematurely, through the long continued drought, and produced but a light crop.

The other varieties which were tried (a few grains of each) varied very much, some growing good cobs of fair size, other sorts of no use at all.

This ordinary red soil forest land is not so suited for maize as the river-flat land, which retains the moisture so essential to maize at tasseling time.

This season, through the long drought, was not a fair test for a crop of maize on this farm.

#### *Harvest.*

We commenced to cut some of the forward early wheats on the 11th of December, such as Canning downs, king's jubilee, early para, &c., &c., but the main harvest did not commence until about the 18th December.

There

There are a few leading varieties which will produce a very fair yield for the year, and will be very suitable to grow in this district, being far better croppers and equally as good milling varieties as the everlasting purple straw, now so universally grown about here. I would mention the following as likely to be sought after by the farmers:—Australian Talavera, Berthoud, white lammas, red straw, Gross's prolific, white Hogan, Allora spring, &c.

Very many of the sorts sent up by the Department for trial turned out very indifferent, and produced very thin, poor grain, some being very smutty and diseased, more particularly seed from South Australia, California, and Queensland, and only fit for experimental purposes.

#### *Permanent work done on the Farm.*

About 50 acres of the cultivation paddock was thoroughly cleared, ploughed, and sown with wheat, oats, and rye; also about 30 acres of lower portion of vineyard site had the roots run and taken out, ploughed, and was then sown with wheat and barley.

On about 35 acres in the paddock adjoining the cultivation paddock the trees have been grubbed, sawn, and cleft into posts. Some portions cleared, some partially so; to be proceeded with after the harvest operations are over, and threshing of grain completed.

About 2½ miles of new boundary fences have been erected since 1st January, 1894, also new fence with a pair of entrance gates around the water tank to enclose embankment from damage by stock.

A new fence around rick yard with slip rail entrances on either side has been put up. A new fence has been erected around the new shed with a pair of entrance gates leading to the front of the building.

Also about 2 miles now in progress of erection to complete the northern boundary fence of the middle paddock, and a division fence to form another cultivation paddock adjoining the one already in cultivation, of an area of about 130 acres.

#### *Water Tank.*

A water tank was excavated by contract, of 6,030 cubic yards capacity, at a cost of £207 6s., being 8½d. per yard, by James Watts, of Wagga Wagga. Tenders were accepted on 12th February, and the work was completed on 20th August, 1894, being done in a very satisfactory manner.

The tank is situated in the paddock adjoining the Sister Hills, and has a good catchment area for water. There has been a plentiful supply since October, and it is now nearly full.

It has been a great boon for our stock this summer.

#### *Harvesting.*

Although harvesting commenced on the 11th of December it was not completed, as to the late European and American wheats, until late in January, showing a difference of fully a month in their time of ripening. From the results obtained this season the second early sorts produced the best yield, and a few of the leading standard varieties, such as Australian Talavera, which is one of the best; farmer's friend, white lammas, Berthoud, Leak's R. R., Marshall's white, Hudson's early purple straw, Steer's early purple straw, Marshall's No. 3, Grosse's prolific, allora spring, and Canadian velvet chaff (the last being the best of the new Americans). These twelve varieties gave very fair crops for the year.

The American wheats from the Chicago Exhibition were nearly all hard red wheats, and are not yet very much in favour with our millers, being more difficult to mill and not making so white a flour as the purple straw wheats that are so generally grown in this district.

From this year's trial it is found that they are quite as liable to rust as any others experimented with.

#### *Threshing.*

Through the very numerous varieties of wheats that are grown on this farm, and no suitable buildings being erected, all the threshing of the small plots had to be done by hand labour in the field, the grain being threshed on sail-cloths on the various plots where grown, the cloth being turned and shaken before commencing a fresh one, so as to guard against the mixing of sorts.

The cleaning, also, had to be done by hand, as every possible care was taken to keep each pure and true to name.

About this time work was considerably delayed by thunderstorms, showing the need of suitable buildings to carry on the work without hindrance on an experimental farm like this.

#### *Ploughing.*

As soon as the crops were cleared from the land, ploughing was commenced for the turnip crop, the soil turning up very tough and bad, caused by the wet weather, followed by the extra dry summer heat, and the land became almost unworkable; but by extra rolling, harrowing, and ploughing, a fair seed-bed was made to receive the turnip seed. Ploughing was continued, but it became more difficult each day, as the drought increased and the land got harder; the only means of ploughing at all was to put more strength on the team and set the plough deeper. After the entire land previously cropped had been ploughed, it was cross-ploughed and rolled down, harrowed, &c., to work the land in readiness for the coming seed time. The sowing of wheat was begun on the 3rd May, and it was all sown in fairly good time, the seed having come up evenly and well, and, by the present appearance, is likely to produce a good crop for next harvest.

#### *Turnips.*

The Swede turnip seed was drilled in on the 15th and 16th January, the seed having been produced on the farm this season. It was sown in drills, 3 feet apart, on a fairly good seed-bed. About 2 cwt. of bone-dust from the boiling-down works was sown with the seed, and all rolled and harrowed in together.

A little seed of five varieties of purple top hybrids, which had been left over from last season, was drilled in as well. For six weeks after this no rain fell at all. Consequently the seed came up very badly, and, where it did come up, in many cases the drought killed the seedlings. By extra cultivation a portion of the crop on which there are some fair roots was saved; but nothing equal to last season, the long-continued drought being altogether too severe. The lower portion of crop was ploughed in and sown with Carter's royal cluster oats, which have come up and appear as if there will be a heavy crop this coming harvest.

#### *Wheat.*

*Wheat.*

All land sown with wheat last season, as well as about 50 acres of newly-grubbed land in adjoining new paddock, are now sown with various grain crops, as under.

The long-continued drought and the heavy, tenacious soil caused extra heavy labour in working a seed-bed for the reception of the grain.

*Varieties sown.*

On the 3rd May, 1895, was commenced the sowing of the following varieties of wheats for seed purposes, viz. :—Australian telavera, Berthoud, white Hogan, white lammas, Hudson's early purple straw, farmer's friend, Leak's R. R., Grosse's prolific, velvet chaff, Steer's early purple straw, Algerian, Marshall's white, Canning Downs, Polish, early para, white Tuscan, white velvet, in areas from 3 to 9 acres each; Blount's Lambrigg, on about 12 to 14 acres. Small plots, from  $\frac{1}{4}$  acre to 1 acre and upwards, are sown of the following sorts :—Quartz Lee, Marshall's No. 3 and No. 8, velvet pearl, Steinwedel and early Baart, early Baart and Jacynth, early Baart, early para, Jones' winter Fife, telavera de Bellevue, brown-eared mummy, white Tuscan, white Naples, white velvet, Sicilian square head, white lammas, red straw, red Russian, new red woudor, Mediterranean hybrid, winter nigger, Canadian velvet chaff.

These do not include Dr. Cobb's collection of wheats.

*Malting Barleys.*

Of malting barley only two of the best known kinds are sown—about 6 acres of each variety :—Goldthorp, which gained first prize at the Brewer's Exhibition held in London some time since; considered to be richer in saccharine matter than any variety grown.

Carter's prize prolific, a very heavy cropper, of good quality, and very extensively cultivated both in England and America, which produced the heaviest crop of the two varieties grown here last season.

Both these were sown in the early part of June, and have come up strong and vigorous.

*Oats.*

The main crop sown for distribution next season is Carter's royal cluster oats, considered to be one of the best, if not the very best, white oats in cultivation. In very many instances it has produced extraordinary crops of over 80 bushels per acre. There are also thirty-four varieties of oats sown in small plots; of American, European, Egyptian, Japanese, Indian, and other varieties.

*For Hay.*

Blount's Lambrigg wheat is sown on about 12 to 14 acres, and can be either cut for hay at the proper season, or left for seed purposes if thought desirable, as only selected pure seed was used in sowing the land; also about 10 acres of Carter's royal cluster oats, which can be either cut for hay or grain, whichever is thought to be desirable, as here also only the best seed was used.

*Peas.*

One variety only of peas, viz., large blue imperial, which is sold by the storekeepers of the Colony for soups and domestic purposes, has been sown. This sort is imported very largely from New Zealand, and may, perhaps, be profitably grown in very many of the districts of this Colony.

*Permanent Improvements—Fencing.*

The permanent improvements effected during 1895 are 50 to 60 acres grubbed, cleared, ploughed, and put into crop since 1st January, and more land is in process of clearing, some being nearly fit for the plough to begin.

The extra cultivation paddock is all fenced, and three new pairs of gates have been erected; also the northern boundary fence of the middle paddock is nearly completed. The fence between land owned by W. Mathew and Byman and this farm, on the northern boundary of the house paddock, is now being put up, and will be completed in a week or two.

*Building.*

A new stable and smithy combined in one building has been erected by our own hands. The want of a stable to feed the horses, and the need of a forge, caused a great loss of time to both men and horses, as well as waste in horse feed.

*Water Tank.*

A tender is now accepted for the digging of a 10,000 cubic yard tank in the middle paddock, for the water supply of that part of the farm, and may be useful for irrigation purposes on a small scale in the near future.

*Clearing new land.*

Tenders are also accepted for clearing and grubbing of about 200 acres of additional cultivation land for next season's crops.

*Seed Wheats grown for distribution.*

The wheats, barleys, and oats grown here last season for seed, were very carefully looked over several times previously to being cut and harvested, and all plants pulled out and removed from each plot that were not true to the variety grown there, and every care was taken to ensure a pure sample true to name of the different varieties.

*Distribution.*

These wheats were advertised in the *Agricultural Gazette* for sale, with the result that nearly all of the best varieties grown here have been sent to farmers in nearly every part of this Colony, thereby giving them a chance of trying fresh varieties of wheats, and seeing which sorts are best adapted and most productive in the various districts. The greatest inquiry was for the following sorts :—Australian telavera, white lammas, farmers' friend, Hudson's early purple straw, Leak's R. R., Grosse's prolific, and Berthoud. For poultry and pig feed inquiry was made for Algerian and Polish wheats.

*Oats.*

*Oats.*

A fair inquiry has been made for the only sort grown here, viz., Carter's royal cluster oats, and seed has been sent in small quantities to several districts of a wide range.

*Malting Barley.*

Two of the best known sorts of malting barley were grown for sale, viz., Goldthorp and Carter's prize prolific, and these have been sent to a number of districts thought to be suitable for the growth of first-class malting barley, a number of our extensive wheat-growers being of opinion that in the near future this will be one of the main crops for export to England, it being known that pale barley can be grown of a quality equal to any that can be produced in Europe, and the yield quite double that of wheat. Once a good export trade is established this should be a profitable crop.

**Experimental Orchard.**

Mr. Valder, who was in June, 1894, appointed experimentalist and manager of the orchard at Wagga Wagga, was, during the first half year of 1894, engaged assisting in starting the silk-farm at Booral, and he attended at the Sydney and Bathurst Agricultural Shows with an exhibit of silkworms; also took charge of and putting up the agricultural exhibits from the College and Artesian Bore Farms. In the intervals between his visits to Booral and the different agricultural shows he was occupied in distributing seeds and attending to other work in connection with the seed branch. The principal seeds sent out were—improved varieties of wheats, swedes, turnips, tobaccos, maize, and potatoes, also indigo, cow pea, pigeon pea, soy bean, Lima bean, broom millet, tagosaste, Bokhara clover, native grasses, and fodder plants, &c.

He left Sydney on the 4th June, 1894, to take up his new duties at Wagga Wagga, and was engaged in conjunction with the fruit expert (Mr. A. H. Benson) in laying out and planting the orchard, putting in about 1,000 fruit-trees and 3,000 grape-vines. In September and October about 5 acres of experimental plots were planted with crops of almost every description that are of value to agriculturists and horticulturists. Upwards of 600 varieties of different crops were put in, the seeds being obtained from nearly all parts of the world. The portion of the orchard not planted with trees was sown with crops of maize for horse-feed, cow-peas, Lima beans, &c.

Special attention was given to the working of the soil, both as regards the orchard and the experimental plots. The land was deeply ploughed and thoroughly pulverised before planting, and during the growth of the trees and plants the soil was well stirred, especially after heavy showers. The result was remarkably satisfactory, the trees and vines making a splendid growth. With regard to the crops in the experimental plots the result was even more marked, as during the hot summer months they were beautifully fresh and green, whilst all around the country was looking parched and dry. Within the short space of six months this piece of land, some 40 acres in extent (orchard, vineyard, and experimental plots), had been converted from a wilderness into one of the most flourishing spots in the southern district of the Colony. Water-melons of immense size, rock-melons, and upwards of forty other varieties of cucurbits were to be seen, the vines being simply loaded with fruit. Forage plants, pulses, and root crops were also strongly in evidence, also tomatoes, beans, and almost every description of vegetable.

At the show of the Wagga Wagga Horticultural Society held in February, 1895, we exhibited a trophy of agricultural and horticultural produce fully 50 feet in length, and composed of upwards of 150 varieties of crops. This was said to be the largest collection ever seen in Wagga Wagga, and it attracted a great amount of attention.

The success obtained with these crops caused farmers and others to turn more attention to the experimental farms, and, as a result, visitors from all parts of the district, and from nearly every town in the southern part of the Colony, were to be seen inspecting the crops and making inquiries as to the various methods of cultivation. During the months of February and March some hundreds of farmers visited the orchard and experimental plots, and much of Mr. Valder's time was taken up in attending to their inquiries.

A very large exhibit was made up from the crops growing in the experimental plots, and this was shown at the Cootamundra, Sydney, Wellington, Bathurst, and Dubbo Agricultural Shows. It contained nearly 200 varieties of farm and garden crops, many of which were entirely new. The great feature of this exhibit was that no manures or artificial waterings were given to the crops, the result being entirely due to the systematic and thorough working of the soil. The exhibits were a great surpris, especially to the farmers in the western district, and the newspapers stated that it was without doubt the finest collection of agricultural produce ever seen in the Colony. During his visits to these shows, Mr. Valder distributed upwards of 1,100 packets of seeds of the crops exhibited, and since his return he has had some hundreds of applications for different seeds and plants.

The following is a short summary of the experiments carried out:—

**1. Potatoes.**

A comparative trial of 60 varieties obtained from Sydney seedsmen resulted in proving without doubt that the varieties grown locally could not compare favorably with many of the new varieties. This experiment was watched with great interest, as, although this is not generally considered a potato-growing district, it was thought that possibly some of these varieties might be of special value for growing here. The following are the varieties which succeeded best, and farmers have been recommended to give them special attention:—"Bruse's Peerless," "Richter's Imperator," "Lapstone Kidney," "Albert Victor," "The Model," "Jeanie Dean," "Early Beauty," "Exeter Russet," "Lady Ife," "Magnum Bonum," "Dargavel Meril," and "Early Puritan."

**2. Sugar Beet.**

Nineteen varieties were under trial, and although they were sown late, and the season was a very unfavorable one, an average yield of 11 tons 8 cwt. per acre was obtained, several of the varieties giving upwards of 13 tons per acre. On analysis it was found that the 19 varieties gave an average sugar content of 16.2 per cent., two varieties (Vilmorin's improved and blanche elite) giving upwards of 18 per cent. This result is a remarkable one, and it speaks highly for the quality of the Wagga Wagga soil.

3. *Broom Corn.*

Four varieties were under trial, which yielded from 15 cwt. to 23 cwt. per acre of commercial broom-heads. Samples of these were submitted to Sydney merchants, who pronounced them to be some of the best samples they had ever seen, and were worth from £18 to £20 per ton. The seeds and the stalks after the broom-heads have been cut are of good feeding value for stock. It will therefore be seen what a valuable crop this is.

4. *Sorghum.*

Sixteen varieties were under trial, including several varieties, imported from the United States, which were said to be of superior qualities both as to yield and feeding value. The result was decidedly in favour of the varieties grown here as "Early Amber Cane," and "Planter's Friend," came out at the top. Among the American varieties "McLean" and "Black African" did the best. A variety known as "Dari," the seed of which had been imported from India showed its liking for the hot dry weather, but, although it produced a large amount of seed, could hardly compare with some of the others as to yield of forage. The following is the yield of the four best varieties:—

	Tons, cwt. qr.	
Early Amber Cane ... ..	18	2 0
Planter's Friend... ..	16	18 3
Black African ... ..	15	19 1
McLean ... ..	14	17 1

5. *Millet.*

Nine varieties were under trial. Of these, the variety known as "Pearl" gave the heaviest yield, but it took a very long time to mature. A new variety known as "Salzers Dakota," the seed of which was imported by the Department from Canada, was ready to cut in ten weeks after sowing and yielded 5 tons 13 cwt. of green fodder per acre. This variety somewhat resembles Hungarian millet, but is coarser, and yielded  $1\frac{1}{2}$  tons more green fodder in the same length of time. It is certainly a very valuable addition to our fodder plants. Among the other crops successfully grown in the experimental plots were the following:—

Fodder Plants.—Tagasaste, sulla, serradella, Wagner's flat pea, salt-bushes, and native and other grasses.

Root Crops.—Mangolds, artichokes, arrowroot, canaigre, sweet potatoes, salsify, and chicory.

Pulses.—Cow peas, pigeon pea, mung bean, Lima bean, soy bean, chick pea, Tangier pea, lentils, and a large number of varieties and species of Indian, Japanese, and Chinese peas and beans.

Cucurbits.—Melons, pumpkins, cucumbers, squashes.

A large number of these were new varieties and from them a quantity of seeds have been harvested, which are intended for distribution. Already upwards of 2,000 packets have been sent out and large numbers of applications are coming in.

Among the test now being carried out are the following:—

Comparative trial of 25 kinds of turnips and swedes.

"	"	21	"	onions.
"	"	36	"	peas.
"	"	10	"	tares.
"	"	60	"	potatoes.

Roots of rhubarb, asparagus, seakale, prickly comfrey, and liquorice have been planted out.

About 10 acres of the lower paddock in the orchard site is being laid out for experimental work. It will be divided into acre and half-acre plots for the purpose of growing in large quantities some of the crops which have done so well on a small scale.

The experimental farm at Wollongbar, near Lismore, Richmond River district, was placed in charge of Mr. G. M. McKeown, who arrived there on 16th November, 1893, and took up his residence in camp on the farm site on that day. The place was unimproved, except that on about 50 acres the timber had been felled about two years before, and the lighter portion burnt off leaving the logs and stumps.

This area was covered with a dense growth of saplings, wild raspberry, inkweed, Scotch thistles, and other plants, which, in many places, formed almost impenetrable thickets presenting anything but an attractive appearance.

The first work after forming a camp was the clearing and enclosing of a piece of land in which to plant a number of canes and other plants just received from Kew gardens.

The weather proving dry, the water necessary for these plants had to be carried a distance of half-a-mile in buckets; however, with one exception, representatives of all varieties of canes received were saved, and last season they supplied sets for planting on the farm in addition to a few for distribution.

While awaiting the acceptance of tenders, and during the progress of a portion of the various works performed under contracts, Mr. McKeown cleared the saplings and weeds from an area of about 10 acres, besides burning off a quantity of the dead timber. This area has since been entirely cleared and sown with grasses for use as a stock paddock.

Tenders for stumping, clearing, and ploughing 8 acres were accepted on 16th December, and for the erection of the necessary buildings on 31st December.

The former contract provided for the completion of the work and fencing, and preparing the land within two months. Owing partly to wet weather (50 inches being recorded in three months), but chiefly to labour difficulties, the work was not completed till June, and thus the autumn planting season was lost.

A small area was ploughed in February, but as the land was not enclosed nothing of value could be planted. However, a quantity of fodder for horse was raised in addition to vegetables, and a few permanent plots of grasses were formed.

Early in June the contractor for fencing and preparing land completed his work as follows, viz., 20 acres fenced with barbed wire, 10 acres of this being secured against noxious animals by wire-netting.

Of the latter area 6 acres was stumped to a depth of 2 feet, and ploughed and sub-soiled to a depth of 1 foot, and 1 acre was stumped 1 foot in depth, and ploughed 4 inches, so that the results of shallow and deep cultivation might be compared. The remaining 3 acres in this enclosure was used in its partly cleared condition for maize and other crops, and has recently been stumped and ploughed.

One acre, situated on the main road, at a distance from the block set apart for a plantation, was stumped, ploughed, and fenced as a site for the farm buildings, and is now laid out partly in ornamental grounds, partly in nursery beds, the former containing a number of economic plants.

The house, a comfortable, well-built dwelling of four rooms, kitchen, &c., with stable and shed, was completed in April.

In May, of last year, Mr. McKeown was granted an assistant, and in February last the staff was increased by the addition of a second labourer.

The following work has been done under contract during the current year, viz.:—25½ acres felled, 4½ acres stumped and ploughed, and 10 acres cleared of timber and laid down in grasses; 2 acres has been cleared by the farm-staff in spare time occasioned by the prevailing dry weather.

A small silage stack has been constructed, and, as hitherto little or nothing has been done in preserving fodder in this district by means of ensilage, much interest is shown in the result of the experiment.

During the past half-year Mr. McKeown exhibited collections of produce consisting of eighty-four varieties at the Lismore Show, and at Alstonville seventy-five varieties, many of the products being new to the district and to the Colony.

Exhibits were also sent to Casino and to the Royal Agricultural Society's Show in Sydney. The distance of the latter places prevented so large a number being exhibited as was the case at the shows which were more accessible.

The collections of produce at the local shows attracted much attention, and caused a large influx of visitors to the farm, which has steadily continued. Full explanations of the methods of working have been given, and the use of spraying-machines and improved implements practically demonstrated.

Instructions have also been given in budding and in pruning vines, citrus, and other fruit-trees.

Plants, most of them new to the district, have been raised and distributed, the number sent out reaching 1,322, and more are still available.

Experiments with manures have proved inconclusive in several cases, the crops having been partially destroyed by hail and wind. Those which reached maturity showed no appreciable improvement, probably owing to the manures having been leached through the upper layer of soil by the heavy autumn rainfall, the soil being very open.

Dry weather proves very trying, as the water rapidly drains through the subsoil, rendering frequent rains necessary for a continuance of growth, and in some cases for the existence of the plants. The rainfall is heavy and unevenly distributed throughout the year. Last year's record exceeded 93 inches, of which 50 inches fell during the first quarter. The record for the past half-year is 41.45, of which 31.13 fell during the first two months.

Insect pests have proved numerous and troublesome, many of them requiring hand-picking to destroy them. Many thousands of elephant beetles were killed in this way.

In the spring much damage was done by grasshoppers, even castor-oil plants being attacked by them; and with the means then at his disposal it was impossible to keep them wholly in check. However, as improved appliances have been furnished, Mr. McKeown hopes to be able to report satisfactory results of the treatment of these pests during the coming season.

Appended are details of experiments, crops raised, &c.

#### *Sugar-cane.*

According to the names supplied 61 varieties are under cultivation, but it is probable some of these are bearing more than one name.

So much confusion exists in regard to the nomenclature of canes that Mr. McKeown recommends the appointment by the Department of a committee of expert cane-growers, to fix beyond question the names of the numerous varieties now grown in the Colony, some of which in his own neighbourhood bear as many as three names.

The land in which the cane has been planted was ploughed and subsoiled to a depth of 12 inches, and afterwards tilled with a Planet, Junr. hoe, a small plot being planted in unbroken land in holes made by an ordinary hoe, and afterwards tilled with the same implement.

At this stage the result is largely in favour of deep cultivation, although the only plants of arabora and batse, which have survived the "rust," are in the shallow-worked land.

Single sets bearing two to four eyes were used, and the part of the cane from which they were taken carefully noted as a guide to future operations. So far as at present appears, where vigorous canes have been used, no particular portion of the cane has any advantage over another in growth, but of course the conclusive test will be that of yield and density at maturity.

A larger supply of plants being available for the coming season, the "plot" system of experimenting can be better carried out than has hitherto been possible.

Lime has been applied to a number of plants, but in only a limited number is any benefit apparent.

Ground limestone was applied to weak canes, but without beneficial results, the plants remaining stationary.

The transfer of plants from the hill country to the river flats, and *vice versa*, has so far not proved successful in preventing "gumming," although the disease is far less prevalent on the hills than on the riverside.

All of the plants which were procured locally came from riverside farms, but of these only five, representing two varieties, have "gummed." On the other hand, a considerable number of canes from the hills planted in shallow land on the riverbank, and cultivated in the most skilful and careful manner, have developed the disease to a serious extent.

No opportunity of noting results on farms where a greater depth of soil exists has yet occurred.

Several of the varieties imported from Jamaica are likely to prove valuable additions to our stock, foremost among them being Queensland, a hardy green cane of vigorous growth, averaging seventeen canes to each stool; Hope, a light coloured variety, somewhat resembling grey Fiji, averaging eighteen canes, and being perfectly healthy; and Morris seedling, a large green cane, now nine months old, bearing ten stalks on each stool, many of them showing 6 feet of cane, and reaching 7 inches in girth.

The original plants of Queensland and Hope have ratooned well. Several of the varieties comprised in this consignment have been grown here before—viz., lahaina, salangoro, green ribbon, Daniel Dupont, and Brisbane, the last mentioned being identical with chomija.

The following have proved unhealthy, viz.:—Daniel Dupont, grande savaane, Tourkoury, and Nain.

Other varieties now backward may prove more vigorous in their second year.

The cane introduced from Lord Howe Island, which proves to be "cheribon," has made rapid growth, far surpassing any of the same variety which had been observed in the district, the plants bearing from sixteen to twenty-five canes many of them having a girth of 7½ inches.

Among those introduced by the Department from New Guinea, plants of which were supplied by the Colonial Sugar Refining Company ten months ago, the foremost in healthy growth is Mahoovu, a handsome black or dark purple variety, now showing 6 feet of cane, about 6½ inches in girth, averaging twelve stalks per stool. This variety, both on the farm and the river flats, has shown no sign of disease, possessing the additional advantage of costing nothing for trashing, as it sheds its leaves as they mature.

Chenom, a pale green cane, stands next, carrying from fifteen to twenty-three stout stalks on the majority of the plants, which are in perfect health. Unfortunately, gumming has appeared in four of the weaker plants, two of these growing in deeply worked the others in shallow worked land.

Kikeria has made good growth, but has suffered from fungus on the rind as well as on the leaves.

Batoo, arabora, and ooraya, at one time gave promise of being equal to the best, but after the wet season they were so severely attacked by rust as to necessitate cutting the canes recently in order to save the plants.

The Queensland consignment has done well, bamboo blanche, black Fiji, striped meera, and Mauritius guighamp, proving strong varieties. Bourbon was destroyed by rust.

Among the best of those growing at the farm, and which were previously cultivated in the Colony are Louzier (which will probably prove one of the heaviest at cutting time, carrying now twenty stalks to each stool), Moore's purple chemija, white bamboo, striped Singapore, violet striped tanna, black tanna, and green tanna, Indian bamboo, and red bamboo, all of which have made highly satisfactory growth.

Imported by Department from Jamaica—	Chenoma	Bamboo blanche (imported by Department, I think)
Tourkoury	Kikeria	Green Dupont
Poaole	Arabora	Red Malabar
Warendnow	Batoo	Striped meera
Nain	Ooraya	Imperial
Martinique	Imported by Department from New Orleans, 1892—	Outamite
Nagapouri	Louzier	Daniel Dupont
Morris Seedling	Kokea	Honolulu
Hope		Mauritius guighamp
Salangore		Striped Fiji
Brisbane		Black Fiji
Grande savanne	Black tanna	Bourbon
Boronu	Green tanna	White bamboo
Kenkeni	Striped tanna	Red bamboo
Lahaina	Violet	Striped Isaacs
Queensland	Striped Singapore	Nunn's salangore
Betramic	Meera	Black Isaacs
Imported by Department from Lord Howe Island—	Chemija	Indian bamboo
Purple ribbon	Grey Fiji	Moore's purple
Imported by Department from New Guinea—	Bourbon rayée	Tahitian
Mahoaovu	Large rappoo	Green ribbon
Oiva	Branchée rayée (imported by Department, I think)	Striped ribbon
	Mauritius ribbon	Branchée blanche

#### Fruits.

Fruits of the following varieties have been planted, and although slow in showing new growth, owing to the late advent of spring, are now looking well, and most of them are making good progress. On the citrus trees, aphid and scale both black and red, have appeared at intervals, but in all cases have been successfully treated.

<p><i>Oranges.</i></p> <p>Jaffa. Washington, navel. Australian, navel. Blood. Poor man's. Star. Mediterranean, sweet. St. Michael. Valencia, late. Siletta. Tahiti. Joppa. Parramatta. Queen. Homossassa. Parsovy, brown. Egg-shaped. Seville. Maltese, oval. Jaffa, blood. Norfolk Island, seedlings. Seychelles Islands, seedlings. New Caledonia, seedlings.</p> <p><i>Lemons.</i></p> <p>Lisbon. Thornless. Variegated. Sweet. Belair. Sicilian. Villa Franca. Common. Fijian giant.</p> <p><i>Citrons.</i></p> <p>Lemon shaped. Amalfi. Shaddock. <i>Citrus fruits, Japanese varieties.</i> Citrus medica, var. chirocarpus. Kishin mikan. Satsuma mikan. Omi kinkan. Urishin mikan. Nagami kinkan.</p> <p><i>Limes.</i></p> <p>East India. West India. Tahiti. Seychelles. New Caledonia.</p>	<p><i>Mandarins.</i></p> <p>Thorny. Scarlet. Emperor. Myrtijolia. Beauty of Glen Achea.</p> <p><i>Miscellaneous fruits.</i></p> <p>Mango. Kaffir apple. Whampec. Papaw. Pomegranate. Brazilian cherry. Persimmon. Loquat. Chinese raisin. Brae apple. Cherimoyer. Granadilla. Phyllocalyx edulis. Tree tomato. Jack fruit. Tamarind. Monstera deliciosa. Diospyros kaki. Jujube. Rubus flavus (golden raspberry). Cape plum. Carambola plum. Rose apple. Alligator pear. Star apple. Dillenia indica. Indian fig. Eugenia Braziliensis.</p> <p><i>Figs.</i></p> <p>Black ischia. Brown ischia. Japanese.</p> <p><i>Pears.</i></p> <p>China. Kieffer's hybrid. Le Conte. Poire de Bernays. Windsor. Broom park.</p> <p><i>Peaches.</i></p> <p>Flat China. Shanghai. Muir.</p>	<p><i>Apples.</i></p> <p>Alexander. Irish peach. Red astrachan. Triomphe de Luxembourg.</p> <p><i>Guavas.</i></p> <p>Parker's hybrid. White. Yellow. Purple. Guinea.</p> <p><i>Pineapples.</i></p> <p>Smooth-leaf Cayenne. Queen. Ripley queen. Spineless. Common.</p> <p><i>Bananas.</i></p> <p>Cavendish. Tall China. Apple or Java. Pear. Manila. Dacca. Sugar. Sossido. Barrego. Giant sugar. Labuan. Plantain. Vundi waiwai. Vundi seavula. Rod lady's finger.</p> <p><i>Nuts.</i></p> <p>Walnut. Spanish chestnut. Japanese chestnut. Pecan. Mockernut. Shagbark hickory. Terminalia catappa. Canarium sp. Macadamia ternifolia. Hicksbeachia pinnatifolia.</p> <p><i>Strawberries.</i></p> <p>Omar Pasha. Superb. La Constant. Edith. Comte de Paris. Duc de Malakoff.</p>
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## Fodder Plants.

- Canada Rice (*Zizania aquatica*).—Seed from the United States was sown under various conditions, but in all cases failed to grow, no land on the farm being moist enough for it.
- Polygonum sachalinense*.—Two plants received from Gosford State Nursery were destroyed by insects within a few hours after planting.
- Oats.—Two plots were sown, heavy crops resulting. The straw, however, was very coarse, and quite unsuitable for hay, especially in the case of the later crop, which was badly affected by rust.
- Hungarian Millet.—While in camp, Mr. McKeown sowed seed in untilled land, after passing fire over it. An excellent crop resulted, maturing in ten weeks, making hay far superior to locally grown oat hay, which it should entirely supersede. A crop sown in November last yielded green fodder at the rate of 6 tons 19 cwt. 2 qr. 16 lb. per acre.
- Planter's Friend.—A quantity was sown early in last year for use as fodder, with fair results. Seed sown in December last produced fodder at the rate of 11 tons 16 cwt. per acre. This seed was sown in unploughed land. Experiments were also tried in tilled land with manures, but, owing most probably to this being carried below the roots of the plants by the heavy rains which fell from December to March, the results were scarcely appreciable. Like most other fodder crops at that season, it was badly attacked by rust.
- Kaffir Corn.—Yielded green fodder, 7 tons per acre. The seed, which forms a valuable food for poultry, suffered greatly from the ravages of beetles of various kinds.
- Tagosate, or Tree Lucerne.—Growth of plants very slow. Unsuitable to this district, many dying during rainy season.
- Teosinte (*Euchlana luxurians*).—Sown thickly in drills. Produced fodder at the rate of 37 tons per acre in ploughed land. In unploughed land the plants placed in hills, 4 feet x 4 feet, yielded 12 tons 3 cwt. per acre. The latter crop was simply hoed in and kept free from weeds.
- Teosinte (*Euchlana Mexicana*).—Seed received from Baron von Mueller, sown late, and plants transplanted into 3 x 3 hills in December, yielded 7½ tons green fodder per acre.
- Lathyrus sylvestris*.—Growth unsatisfactory; sown in September; is now only a foot in height.
- Pulla.—A leguminous plant recently introduced to the Colony. Produced green fodder, 12 tons 15 cwt. per acre. Tested only with horses, which do not appear to like it.
- Bersin Clover (*Trifolium Alexandrinum*).—A small quantity of seed from Italy germinated freely, but for some time growth was prevented by paddymelons (the land being then unfenced). After being protected, it grew rapidly. For seed purposes the crop was allowed to become partially dry before cutting, the yield per acre being 4 tons of fodder, greatly relished by horses. A recent sowing is making luxuriant growth.
- Timber-cane.—Yielded a light crop.
- Serradella.—Slow in growth. Produced green fodder, 9 tons 7 cwt., making excellent hay, at the rate of 2½ tons per acre.
- Sainfoin.—Growth unsatisfactory.
- Lucerne.—A plot sown in March last, in subsoiled land, has made rapid growth, but within the last week has become rusted.
- Trefoil.—Sown in March. Making slow growth.
- Skinless Barley.—More successful than any other variety sown at the same time, being more upright, the whole of the "flag" remaining green and free from rust. Yield, 7 tons 17 cwt. per acre.
- English Barley.—Yield of green fodder, per acre, 9 tons 6 cwt.
- Cape Barley.—Yield of fodder, per acre, 8 tons 19 cwt. Sown with vetches, 7 tons 17 cwt. per acre.
- Lathyrus hirsutus* (Hairy Vetching).—Seed from Queensland Department of Agriculture. Making excellent growth.
- Paspalum dilatatum*.—An excellent fodder or pasture grass. Plants rowed out 18 x 6 inches grew rapidly to a height of 5 feet, and latest cutting yielded 13 tons 7 cwt. per acre from shallow-ploughed land. Seed was sown in subsoil land, a test cutting showing, at 8 months from time of germination and 3½ months from previous cutting, a yield of green fodder equal to 19 tons 4 cwt. per acre, making hay at the rate of 5 tons per acre. This grass is greatly relished by stock of all kinds, and forms a good sod, resisting well the grazing and trampling of animals.
- Tricholœna rosea* (Natal Red-top).—Has produced large quantities of grass of light texture. Test cuttings have yielded, green, at the rate of 10 tons 18 cwt. and 10 tons per acre respectively. Will not stand grazing, and horses on the farm prefer most other varieties to this.
- Panicum macrostachyum*.—Yields a large quantity of fodder, makes excellent hay, but will not stand grazing.
- Eleusine stricta*.—In its young stages gives good fodder, much liked by stock, but becomes very "woody" with age. Yields seed at the rate of 51½ bushels per acre, of value as chickfeed. A plot of 60 square feet produced 4¼ lb. of seed, resembling that of Hungarian millet.

## Pasture Grasses, &amp;c.

- Alsike Clover (*Trifolium hybridum*).—Seems admirably adapted to this climate. A plot sown in winter, in chocolate soil, produced green fodder equal to 7 tons 3 cwt. per acre. A spring sowing also resulted in a heavy crop, which has been ploughed in for manurial purposes. Experimental plots have also been laid down recently, with and without the use of lime, respectively.
- Clover (red perennial, scarlet, and white).—All sown in March last. Making good growth.
- Japanese Clover.—Growth very slow.
- Panicum effusum*.—An indigenous grass, tested under cultivation; of short duration, very light in texture, and will not stand grazing to any extent.
- Bromus inermis* (Smooth Brome).—Sowings in October and March, respectively, have given very satisfactory results.
- Prairie Grass.—Sown in March last; growing rapidly.
- Kentucky Bluegrass (*Poa pratensis*, var. *Virginiana*).—In the red soil was destroyed by heat. Has succeeded well in chocolate soil, which retains moisture better.
- Poa trivialis*.—Doing well; a good grass for this locality.
- Poa nemoralis* (Wood Poa), *Poa sempervirens* (Evergreen Poa).—*Phleum pratense* (Timothy), *Alopecurus pratensis* (Meadow Foxtail), *Festuca rubra* (Red Fescue), *Festuca durivincula* (Hard Fescue), have been sown, but at present are not doing well.
- Festuca pratensis* (Meadow Fescue).—Sown at the same time as the last mentioned; will make good pasture.
- Perennial Rye (*Solium perenne*).—In general use for pastures in this district. Does not stand dry weather or grazing. A plot sown in April last year now shows a few scattered tufts.
- Cocksfoot (*Dactylis glomerata*).—Sown from April to June last year. Has produced good feed. Thrives in the district generally.
- Panicum spectabile* (from Fiji).—A few stools have been planted, and promise a heavy yield. So far has withstood frost.
- Paspalum pubescens* (Russell River Grass).—Has made good growth, withstanding frost well, and bids fair to prove one of our best grasses.
- Panicum maximum* (Guinea Grass).—Plants from Queensland were a long time in transit, and the few survivors have not had time to make much progress.

## Pulses.

- Cow Peas (*Vigna catiang*).—Several varieties were sown with the following results, viz. :—  
 Black; sown in December. Vine yield, 8 tons per acre.  
 Black; sown in December; manured. Vine yield, 10½ tons per acre.  
 Clay coloured; sown in September. Vine yield, 9 tons 1 cwt. per acre.  
 Large white; sown in September. Vine yield, 10 tons 3 cwt. per acre.  
 Small white; sown in September. Vine yield, 9 tons per acre.
- The two first mentioned were sown in drills 3 ft. apart; the others broadcast. A large quantity of seed having been destroyed by rain, the seed yield could not be determined.
- Mung Bean (*Phaseolus mungo*).—Yielded pulse equal to 9½ cwt. per acre.
- Green Gum (*Phaseolus Max*).—Suitable for green manure; forty plants in one drill covered 364 square feet. Very few have appeared, however.
- Phaseolus roxburghii*.—A strong variety, also suitable for green manuring. Pulse yield, 2,631 lb. per acre.
- Phaseolus viridissimus*.—Partial harvest yielded 6 cwt. pulse per acre. Vines were overrun by P. Max.
- Phaseolus aureus*.—A light cropper. Vines weak.

Soy Bean (*Soja hispida*).—Yielded dried pulse equal to 791 lb. per acre.  
 French Bean.—Produced excellent crops.  
 Lima Beans (Dwarf).—Cropped heavily, but suffered from caterpillars more than any other kind.  
 Lima Beans (Tall).—Have produced too much foliage. Cropped lightly.  
 Broad Beans.—Grew freely; bore but few pods.

#### Oil Yielding Plants.

Gingili or Till (*Sesamum indicum*).—Seed received from India; sown in early spring; germinated irregularly. The few plants resulting made good growth and bore seed heavily, but died during the rainy season. A later sowing did well up to the flowering period and then died. A sowing made in autumn failed to survive a few cold nights.  
 Sunflower.—Grew strongly and produced a good crop of seed; withstood wet weather badly.  
 Castor Oil.—An improved variety is being cultivated. The trees have attained a large size, but the production of seed has been greatly checked by the attacks of borers.  
 Pea Nuts.—Large variety yielded 2 tons 5 cwt. per acre; small variety, 1 ton 14 cwt. 3 qr. per acre.

#### Fibres.

Sunn Hemp (*Crotalaria juncea*).—A failure; made but slight growth.  
 Jute (*Corchorus olitorius*).—Growth insufficient for useful fibre. Will be tried again next season.  
 Sisal Hemp (*Agave sisalana*).—Recently planted. Looking well.  
 Ramie (*Boehmeria nivea*).—Has produced a heavy crop. A number of plants available for distribution in spring.  
 Cotton.—The following varieties have been grown with fair amount of success, viz., Sea Island, Louisiana, Garo Hill, Gordon Pasha, Tree, Nankin, and Egyptian.

#### Tan Plants.

Acacia catechu.—A large number of young plants in the nursery are making rapid growth, soil and climate apparently suiting them admirably.  
 Canaigre (*Rumex hymenosephalus*).—The plants surviving out of a number received from America have not made satisfactory growth.  
 Terminalia bellerica.—Has grown rapidly.

#### Dye Plants.

Indigo (*Indigofera tinctoria*).—Seed from India. Three plots were sown under different conditions, all producing good crops, that on the highest land making the strongest growth. A large quantity of seed is available for distribution and for further tests here.  
 Safflower.—Has done well. By successive sowings flowers may be produced almost continuously during the year.  
 Annatto.—Plants from Queensland died, having been badly used in transit. A number raised from seed are making slow growth.  
 Turmeric.—Shows signs of a light crop only.

#### Rice.

Three upland varieties have been tried, viz., Kyba, Madagascar, and Japan. The two kinds first mentioned have proved of value only as fodder plants, the yield being heavy, and the fodder, both green and dry, much liked by horses. The Japan variety produced well-filled grain at the rate of about 1 ton per acre, which, however, owing to late ripening caused by the crop having been checked by dry weather, was somewhat discoloured by rust.

#### Miscellaneous Economic Plants.

Tapioca (*Manihot utilitissima*).—One tuber received from Queensland failed.  
 Manihot Aipi.—Plants raised from cuttings have made good growth. One broken down by wind yielded 9 lb. of immature tubers.  
 Cocoa (*Theobroma cacao*).—Plants from Fiji died on first appearance of cold weather.  
 Tea (*Thea sinensis*).—Doing well in chocolate soil, but not so in red soil.  
 Cinnamon (*Cinnamomum zeylanicum*).—Making fair growth.  
 Arrowroot (*Canna edulis*).—Showing heavy crop; shall shortly manufacture.  
 (*Maranta arundinacea*).—Only recently planted.  
 Chicory.—Not successful; roots burst in rainy season.  
 Ginger.—Only recently planted.  
 Coffee.—*Coffea Arabica*, *C. Liberica*, and *C. Maragogipri* are all making excellent progress. A number of plants of *C. Arabica* have been distributed.  
 Pepper (*Piper nigrum*).—Recently planted; looking well.  
 Grasses for Paper-making.—*Pollinia eriopoda* (Bhabar grass) and *Andropogon augustiplusium* were sown, but seed failed.

#### Medicinal Plants.

The following are being tried, viz.:—Sarsaparilla, dandelion, aniseed, liquorice, poppy, tansy.  
 Perfumery Plants.—The following are all thriving.—Pagoda-tree (Frangipani), jasmine, citronella or lemon grass, Eucalyptus citriodora, Aloysia citriodora, heliotrope, tuber-rose, and violets. Lavender and vitivert have recently been planted.

#### Miscellaneous Food Plants.

Yams.—*Dioscorea Uvi*, *D. Fortuni*, and two varieties of which the names are unknown are growing. A fair crop of tubers showing; not quite matured.  
 Sweet Potatoes.—Five months after planting the following yield was obtained, viz.:—Maltse variety, 14 tons 10 cwt. 1 qr. 16 lb.; Pink, 10 tons 10 cwt. 3 qr. 21 lb. per acre. Two other varieties have been planted lately.  
 Taro.—One variety under cultivation.

#### Potatoes.

The following crops were obtained from medium-sized tubers, whole sets, planted in October, 3 feet x 1 foot, and hilled:—

	tons	cwt.	qr.	lb.	
Magnum Bonum...	2	2	0	0	per acre.
Duckmaloi Champion ...	3	8	1	26	„
Snowflake ...	4	17	3	4	„
Bliss' Triumph ...	3	7	0	0	„
Early Rose ...	3	7	2	2	„
Imperator ...	3	12	1	17	„
Schoolmaster ...	3	18	0	7	„
Early Puritan ...	5	5	1	9	„
Unnamed (German seed) ...	5	0	0	1	„

Circular Head. Failed.

An August planting of the Dean, flourball, Brownell's beauty, Cambridge kidney, and Bliss' triumph was destroyed by wet rot, with the exception of the last-named variety.

Beetles proved very troublesome, but were kept in check by the application of lime and Paris green.

Onions.

*Onions.*

The following varieties were sown lately, viz. :—Potato, tree, silver queen, wonder, Italian, new queen, giant Rocca, brown globe, extra early globe, brown Spanish, white Spanish, extra early flat red, James' keeping, Eschallots.—Russian.

*Cabbage.*

The following varieties have been cultivated, viz. :—Drumhead Savoy, dwarf drumhead, succession, St. John's Day, West Ham.

The only variety which produced heads above the average size was drumhead Savoy, and this variety resisted the attacks of insects far more successfully than any other.

The following are now growing :—Large drumhead, succession, West Ham, and St. John's day.

Cauliflowers.—Early London, Walcheren, and large Asiatic have been grown with a fair amount of success.

Carrots and parsnips have produced good roots, but, like other root crops, suffered much from excessive moisture.

Turnips.—Sutton's crimson king, Laing's garden Swede, orange jelly, early six weeks, white Nepal, white model, hardy green, round and mammoth purple top. Of the Swedes, Sutton's crimson king was far the most successful, yielding a heavy crop and resisting wet better than any other. All other varieties suffered heavily from this cause, the hardest being the green round and purple top. Sutton's purple top and Anderson's Imperial have recently been sown as a field crop.

Tomatoes.—Trophy, optimus, Lorillard, golden trophy, and several other varieties have produced excellent fruit. Trophy and golden trophy have proved the best of the large varieties.

Artichokes.—Globe and Chinese are under cultivation.

Marrows.—Three varieties, viz., long yellow, rice, and small red. All produced good crops, remaining long in bearing. One specimen of the yellow variety weighed 28 lb.

*Pumpkins.*

A small quantity of seed of each of the following varieties was sown, viz. :—Ironbark, crown, button, king of the mammoths, and gramma, the last named only yielding a fair crop. All early-sown vines suffered from the excessive moisture prevailing from December to end of February. The only seeds true to name were the button and gramma.

*Cucumbers.*

The following were sown, viz. :—Japanese, long green, short green, apple-shaped, crystal white, market king, and ivory monarch. All the varieties except Japanese gave poor results, cropping lightly and dying early. Three hills of the Japanese bore eleven and a half dozen cucumbers, weighing from 4 to 21 lb. each. A plot to which manure was applied was destroyed by hail late in December.

*Melons.*

Rock.—The following were sown, viz. :—Hackensack, Persian, cassara, and banquet. The latter only cropped well, proving itself a first-class variety, but, as was the case with almost all other varieties, the vines did not survive the heavy rains; consequently most of the fruit perished.

Water.—Ice cream, Gragg, Semish, red seed, Kolt's gem, and Cuban queen were planted. The variety which best withstood the wet was ice cream, three-fourths of the others having rotted on the vines.

Preserving.—Japanese and citron were planted, heavy crops resulting.

*Maize.*

The varieties sown were red Hogan, yellow Hogan, ninety-day, Roone Co. white, pride of Kansas, mammoth dent, Edmonds, Loudon dent. The most successful was yellow Hogan, sown early, which yielded 46 bushels per acre. The new varieties suffered much from blight following excessive rains, and the ninety-day, mammoth dent, and yellow Hogan, which were sown late, were destroyed by blight, which was very destructive to most late-sown crops throughout the district. The following varieties of pop corn were grown, viz. :—Early and late white, red and yellow porcupine. Manured crops were destroyed by a heavy gale.

*Tobacco.*

Experiments have been made for the purpose of ascertaining the most suitable period, in regard to weather, for maturing and curing the leaf. Havana seed, sown in February last year and transplanted at the end of March, grew irregularly owing to the patchy nature of the soil. Part of the crop matured in July, the rest in August; but the attempt to cure the leaf failed owing to the absence of weather-resisting conveniences for dealing with it. Strong westerly winds prevail from June to September, and, as our buildings are used for the common purposes of stable, cart-shed, tool-rooms, &c., it is impossible to protect the leaf as is necessary in such weather. The plant will also mature from January forward into the year; but at this period, without proper appliances, it is impossible to protect the leaf from the growth of fungus so prevalent during the excessive rains falling during the first quarter of the year. Leaf is now drying in the best available places—the stable and the tool-room.—and every day the effects of the weather upon it may be noted, as after a few hours of westerly wind it will readily break in pieces, recovering its normal condition when the wind ceases. The strongest plants have been produced from seed locally grown, several kinds of which the names are not known having done well. The site of the farm being elevated, much damage has been caused by high winds. Caterpillars have caused little trouble, but grasshoppers in the early, and "fleas" in the later stages of the growth of the crops were troublesome. Their attacks, however, were confined to limited periods.

The following varieties have been sown, viz. :—

Maryland, which only grew to a height of 6 inches.

Fly River.—Many of the plants proved weak, failing to mature the seed, which, this season, was the primary object in view in planting this variety. In some of the better patches of soil, however, a number of plants made good growth, and a fair quantity of seed has been secured.

Viretti de Abajo, Havana.—A few plants have been raised and seed saved for next season's experiments.

Havana.—Has proved one of the strongest varieties.

Turkish Cigarette varieties.—Glinbeck di Zanthi, Kir Basma, and Baseball Persoccian germinated freely and made good progress till the end of March, when the whole of the young plants in the field and the nursery were destroyed by the sudden advent of cold weather. These will be tried again in spring, seed having been reserved.

*Grapes.*

Cuttings of the varieties enumerated below were planted, but many were lost owing partly to the late arrival of spring (many of them not starting to grow till November), and partly to the ravages of grasshoppers, which ate out the eyes as they swelled. Paris green of sufficient strength to kill the insects was too strong for the young buds, and although lime for a time kept them in check, as they (the insects) grew older it failed in its effect. A strong infusion of quassia chips proved effectual, but rain falling frequently, it was soon washed off. Elsingburgh, Delaware, Wilder, Anna, Catawba, Rebecca, Isabella (Bell's seedling), Mill Hill hambro', Baxter's sherry, Joslyuge's, St. Albans, Mrs. Pince's black muscat, Lady Don's seedling, Royal Ascot, black hambro', black Damascus, Esperione, Madeline Royal, black prince, white sherry, early chasselas, golden hambro', golden chasselas.

*Sericulture.*

Fifty mulberry-trees (*Morus Alba*) have been planted on the headlands, where they have grown to a large size, and even thus late are full of growth and bearing leaves of excellent colour and texture. Their period of rest will probably not exceed six weeks. About 250 young plants, raised from cuttings, are in the nursery.

*Plants*

## Plants and Seeds Distributed.

Variety.	Number of Plants.	Number of Persons.
Tobacco .....	254	6
Citrus seedlings from imported fruit, four varieties.....	298	48
Macadamia ternifolia (Australian nut) .....	83	25
Carya olivæformis (pecan nut) .....	49	44
,, alba (hickory).....	6	5
,, tomentosa (hickory).....	4	4
Carica papaya (papaw).....	54	18
Coffea arabica (coffee) ..	105	45
Acacia catectin .....	53	12
Ceratonia siliqua (carob bean) .....	48	24
Acacia baileyana (silver wattle) .....	26	13
Secchium edule (Chocho) .....	9	4
Hicksbeachia pinnatifolia (tweed nut).....	1	1
Andropogon schœnanthus (lemon grass) .....	2	2
Morus alba (cuttings) (mulberry) .....	12	2
Manihot aipi (cuttings) (cassava) .....	12	2
Terminalia bellerica .....	6	3
Grasses .....	16	3
Sugar-cane .....	280	21
Thea sinensis (tea) .....	4	2
<i>Seeds.</i>		
Maize .....		9
Beans .....		6
Rice.....		7
Zizania aquatica (Canada rice) ..		5
Indigofera tinctoria (indigo) .....		5
Japanese cucumber 5, chili 10, cotton 10, castor oil 3, tomato 5.....		33
Total plants ..	1,322	.....
Packets seeds .....		65

## Plants in Nursery.

Ceratonia siliqua (carob bean) .....	478
Carya olivæformis (pecan nut) .....	15
,, alba (shagbark hickory) .....	24
,, tomentosa (mockernut) .....	3
Macadamia ternifolia (Australian nut) .....	191
Acacia catechu.....	2,500
Coffea arabica (coffee).....	122
Carica papaya (papaw) .....	28
Morus alba (mulberry) .....	215
,, multicaulis (mulberry) .....	24
Naugifera indica (mango) .....	6
Eugenia jambos (rose apple).....	5
Bixa orellana (annatto).....	9
Acacia baileyana (silver wattle) .....	238
Hicksbeachia pinnatifolia (tweed nut) .....	10

## Citrus Fruits—Seedlings.

Orange .....	Seychelles Islands.....	212	
	New Caledonia .....	15	
	Local .....	44	
			271
Shaddock ..	New Caledonia .....		11
	Citron.....	New Caledonia .....	103
		Local .....	68
			171
Lime .....	Queensland .....	13	
	Seychelles Islands .....	10	
			23
Lemons .....	Seychelles Islands .....		285
			4,629
Total ..			

## Meteorological Report.

	Temperature.			Rainfall
	Maximum.	Minimum.	Mean.	
1894.—				
January .....				22.10
February .....				11.20
March .....				17.10
April .....				4.91
May .....				5.05
June .....	69.5	43.5	57.5	1.87
July .....	74.4	40.2	56.2	0.06
August .....	77.4	42.8	59.8	1.91
September.....	88.0	46.6	62.0	5.91
October.....	84.6	50.5	69.0	4.97
November.....	96.2	54.0	73.2	4.76
December.....	91.8	49.0	72.5	13.95
				93.88
1895.—				
January .....	92.4	58.4	74.8	20.64
February .....	91.0	61.5	75.0	10.49
March.....	91.4	49.8	71.8	3.81
April.....	87.2	57.6	67.5	3.49
May.....	78.4	49.0	63.4	2.05
June.....	79.0	44.2	59.2	0.97
				41.45

Instruments are hung in a southern verandah, roofed with iron, enclosed at both ends.

## Vegetable Pathology.

I am greatly pleased to report that the experiments with wheats undertaken by the Pathologist, Dr. Cobb, have been continued with, so far, extremely satisfactory results, and are likely to become of great value for those who are engaged in the production of our most necessary and important food.

These experiments have necessitated extreme care and attention, and Dr. Cobb's zeal in his laborious work cannot be too highly commended. His report for the last eighteen months shows that:—

Dr. Cobb, in reporting briefly upon the work of 1894, says it will be convenient to write separately of that done at Wagga Wagga, at Bong Bong, at Brisbane, and at Sydney.

*Wagga Wagga.*

The object of the experiments at Wagga Wagga has been to improve wheats with reference to their disease-resisting qualities. There has been no radical alteration in the nature of the work begun at Wagga Wagga in 1893, though there has been a marked improvement in the methods employed and the results obtained. The varieties which had already been selected as rust-resistant have once more shown the quality, and have added therefore to the certainty of their value in this respect.

On visiting the Wagga Wagga farm, on October 28, I found no provision made for the storage of grain and other produce then growing and becoming rapidly ready for harvest, and felt called upon to recommend the building of a shed 20 ft. x 40 ft., to be used temporarily for the above purpose, and to be afterwards converted into a tool shed (for which it will be suitable) or used for some other purpose. This shed was put up with great celerity under the supervision of the Works Department. One month from the date of obtaining Ministerial sanction to build it, the shed was done in a thoroughly satisfactory manner, painted and finished throughout, so that it was decided to hold under its roof the first field day held on the farm.

The field day was designed to bring together at the experimental farm as many farmers from the surrounding districts as cared to avail themselves of the general invitation to attend, which was inserted in the press generally. Between seventy and eighty influential Riverina farmers assembled in the shed, many of them having taken long journeys (in some cases over 200 miles) in order to attend. The objects of the farm and the nature of the work being done having been explained, the whole party made an inspection of the farm. After lunch had been served, all took part in a profitable discussion on what had been seen. The field day passed off, in fact, a success, and I hope it is the forerunner of regular annual or semi-annual gatherings of a similar sort. It is only by farmers visiting the experimental farm and seeing what is being done, and learning by personal inspection the results of the experimental crops, offering their criticisms, making suggestions, letting the Department know their greatest needs; it is only in these ways that the experimental farm can be made of most service to the farmers.

A small laboratory has been added to the farm, this being the third building erected. It is now nearly in working order, and will be a valuable addition to the experimental work, much of which has been done in the past under very adverse conditions.

The sale of seed wheats is progressing satisfactorily, except that the farm is unable to supply the demand, and, in consequence, many applicants have been put off with much less than they have ordered. It would be obviously unfair for the farm to supply the bulk of its seed wheat to one or a few wheat-growers. The prices charged in no way recoup the great expense involved in collecting, trying, and improving the varieties. For full particulars concerning these wheats, see *Agricultural Gazette* for December, 1894, and succeeding numbers.

*Brisbane.*

The Intercolonial Rust Conference was held at Brisbane in April, and Dr. Cobb was one of the delegates. His principal duties were in connection with the Wheat Nomenclature Committee. The committee, after two years of careful work, have issued careful and accurate descriptions of over sixty wheats, either now grown on an extensive scale in Australia, or worthy of notice for some other reason. These names and descriptions are worthy of the respect of all interested in wheat, and if good use is made of the work of the committee, their publication marks the dawn of a new era in Australian wheat-growing. It is only by an accurate knowledge of the varieties of wheat as they grow in this country that we can ever expect to compete in the world's market in times when the margin of profit to the grower is so narrow. Another very important consideration, and one Dr. Cobb is convinced has been too often overlooked, is that all experiments on the value of wheats for different purposes depend for their usefulness on the purity and reliability of the sample used. He has seen elaborate and costly analyses published, which were nearly worthless, because the sample was impure, and inaccurately named. It is highly satisfactory to chronicle the completion of work so fundamental as that of the Wheat Nomenclature Committee.

*Bong Bong.*

The work at Bong Bong has been carried on as in the previous year, and a full report on the parasites found in sheep and other animals will be submitted in due time. The other Australian Colonies have given permission to examine all their public collections of parasites contained in museums, &c. This will greatly enhance the value of the report, and make it useful in wider circles. Numerous careful woodcuts have been made to illustrate the report.

*Sydney.*

The usual official work of answering correspondents, &c., has been done from Sydney. There is great need for a properly equipped pathological laboratory for the use of this branch in Sydney.

I beg to once more call careful attention to the fact that an assistant permanently attached to this branch would enable Dr. Cobb to accomplish much more valuable work. In previous annual reports I have indicated the qualifications such an assistant should possess.

*Publications.*

The publications of this branch have been fewer than usual during the past year; but this is due to the fact that even more time than usual has been given to investigation. The material on hand and ready for the printer was never previously so great.

*Wheat Experiments.*

From year to year, for several years, Dr. Cobb has been accustomed to sow a short row of all the different varieties of wheat obtainable, and year after year these have been compared with each other and examined in various ways. This examination has resulted in the discovery amongst them of a large number of duplicates, and these duplicates as fast as they are discovered are cancelled. For instance, during the harvest of 1894 over 100 duplicates were cancelled, and those varieties remaining, together with such new samples as were acquired during the year 1894-95, have been sown in the usual way on two different pieces of ground, one plot being an exact duplicate of the other in all respects except the soil and the date of sowing. The objects in keeping this plot up from year to year may be stated as follows:—

(1.) all visitors can see the different varieties of wheat that it has been possible to obtain from various parts of the world. This is a matter of interest and instruction to them in various ways:

- (a) They can see the material from which the stud plots and other plots of wheat on the farm have been derived. Visitors seeing this large number of wheats are impressed with the thoroughness with which the work is being carried out.
- (b) Small samples being always available to the public from this plot, wheat-growers can always obtain samples of any wheat which strikes them as having desirable qualities, quite regardless as to whether the officers who have had charge of these wheats have considered these qualities enough; in other words, it gives a chance to visitors to use their own judgment in case they think the best selection has not been made.

(2.) It is impossible to judge any given wheat from one year's behaviour, or even two years behaviour, so that growing all these varieties year after year brings out in the long run many properties that were overlooked, or could not be discovered the first time they were sown.

(3.) A complete examination of all these different varieties of wheat has enabled him to group them into distinct families, so that they have an educational value on that account, thus there is a distinct group of wheats known as "Five-wheats," another group known as "Defiance-wheats," and all the different samples, as they are examined, are referred to one or other of these various distinct groups of wheat, so that the plot, as it is now growing, is an important object lesson in the classification of wheats, inasmuch as the characteristics of each of the important groups of wheat can be readily seen while the plants are growing.

(4.) In case it is necessary to do so, this plot furnishes material for making any desired cross-bred.

(5.) The few pounds of wheat (not often more than 10 lb.) that are derived from each of these rows in the general plot are harvested each year and preserved, and by an examination of the grain, year by year, a good deal of information is being collected with regard to the milling properties of the grain, such properties as will be referred to later on in the report.

It is Dr. Cobb's advice that this plot be continued year by year, perhaps not indefinitely, but still for some years to come.

As in previous years, the rust-labile sort has been sown along with the various sorts put into the general or nomenclature plot. This year the rust-labile sorts used for this purpose are "Steinwedel" and "Barwick," every third row being rust-labile, the "Steinwedel" and "Barwick" alternating with each other, so that every six rows include one row each of "Barwick" and "Steinwedel." These remarks apply, however, only to the plots sown near the laboratory, that sown on the orchard site being sown without the "Steinwedel" and "Barwick."

The samples composing the nomenclature plot, about 500 in number, were all sown on the same day, so as to facilitate comparisons as to earliness and so forth. The sowing was, however, much hindered this season by the condition of the land, and, in order that this may not occur again, I would recommend that the land which is to be used both for the general plots and stud plots should be reserved and summer-fallowed, so that, no matter what the season may be, there will be no difficulty about ploughing and otherwise working the land early in the season.

The area occupied by the two general plots is  $1\frac{1}{2}$  acres.

The order in which these wheats have been sown was determined from 350 notes made while harvesting these wheats in 1894. These notes referred principally to the relationships of the various varieties.

About twenty fresh samples have been added to the plot this year.

#### Cross-bred Wheats.

The cross-bred wheats resulting from the cross made by Mr. Wm. Farrer, of Queanbeyan, have been sown in the usual manner from seed obtained by selection from the cross-beds sown last year. Mr. Farrer has also furnished about forty new crosses made by him last season. The total number of crosses sown is about 200. Of these some are one year old, some two years old, some three years old, and some four years old. The sowing and selecting of these cross-bred wheats requires considerable time each year, but Dr. Cobb is of opinion that the time is well spent. So far as I know, no such extensive or systematic crossing of the various wheats has ever been made, and it is possible that, by selection from among the large number of crosses that are available through Mr. Farrer's efforts, some valuable varieties of wheat may yet be produced. The area occupied by the cross-breds is about 1 acre.

The wheat sown this season has been graded by means of hand sieves made by Dr. Cobb for the purpose from what is known as "half-round brass wire." The meshes of the sieve are elongated, their width being graduated most carefully from  $3\frac{1}{4}$  millimetres down to 2 millimetres, the different grades being known as 325, 300, 275, 250, 225, and 200, meaning 3.25 millimetres, 3 millimetres, 2.75 millimetres, 2.50 millimetres, 2.25 millimetres, and 2 millimetres. These six sieves give seven grades of wheat.

Inasmuch, as it was necessary to grade the wheat before sowing, it occurred to him as worth while to weigh the amount of each grade furnished by the principal varieties of wheat. The results are contained in the following table, and show what proportion of large grains and small grains each variety yielded in the season 1894. If these observations, which entail very little trouble, be continued from year to year, he is satisfied that they will furnish information which, together with other knowledge obtained from other sources, will enable us to decide definitely in favour of certain varieties as against other similar varieties. This, of course, will lead to the discarding of the poorer varieties. At present we are growing, he is satisfied, more sorts of wheat than it would be necessary to grow if we knew more concerning them. As an instance of this, he has been unable to decide which is the best of about five different sorts of "Purple Straw" wheat, all of which differ from each other sufficiently to be called separate strains of the variety "Purple Straw."

As to which is really the best wheat—"Farmer's Friend," "Hudson's Early Purple Straw," "Steer's Early Purple Straw," "Red Straw," or "Rattling Tom"—he has not yet been able to satisfy himself.

#### 1st Quality Improved Wheat—Graded.

Variety.	Total oz.	Grades.						
		325.	300.	275.	250.	225.	200.	Rubbish.
Allora Spring .....	14.96	.....	.48	3.93	6.50	2.46	1.00	.50
Australian Talavera.....	18.51	.42	4.35	11.27	2.14	.03	?	?
Algerian .....	14.80	5.76	6.10	2.52	.40	.02	.....	.....
Berthoud .....	18.89	.42	1.45	10.41	5.76	.47	.23	.15
Berthoud (even growth).....	3.69	.15	.43	2.67	.40	.02	.01	.01
Blount's Lambrigg .....	17.95	.....	.54	1.40	7.82	4.90	2.29	1.00
Canning Downs .....	14.64	.17	1.60	3.48	5.47	2.17	1.25	.50
Early Para .....	17.26	.50	1.68	6.87	6.08	1.20	.54	.29
Early Baart .....	17.20	.22	3.52	7.45	4.77	.92	.29	.03
Farmer's Friend .....	16.18	.32	2.77	10.64	1.50	.08	.52	.35
Farmer's Friend (even growth).....	13.62	.25	2.00	6.47	3.75	.75	.35	.05
Golden Drop .....	14.08	.60	1.36	2.55	6.50	1.82	1.00	.25
Grosse's Prolific .....	17.23	5.76	1.4	7.5	5.75	1.75	.58	.25
Hudson's Early Purple Straw .....	18.52	.60	3.58	9.60	3.68	.68	.38	.10
King's Jubilee .....	9.02	.10	.99	2.56	3.72	1.08	.47	.10
Marshall's (white straw).....	39.13	.90	4.90	15.63	13.00	3.09	1.18	.43
Marshall's (purple straw) .....	26.93	1.05	4.08	9.65	9.00	1.90	1.00	.25
Quartzlee (bearded) .....	8.01	.....	.57	2.48	3.57	.98	.35	.06
Quartzlee (beardless) .....	11.26	.08	.60	2.74	5.00	1.50	.79	.55
Red Straw .....	20.60	.48	1.75	7.40	7.85	2.00	.92	.20
Talavera de Bellevue .....	12.23	.....	1.23	5.48	4.82	.50	.18	.02
Velvet Pearl .....	20.33	.....	.42	1.26	7.50	5.42	4.15	1.58
White Lammas.....	9.19	.61	1.76	5.32	1.40	.08	.02	0.00
White Lammas (from Young) .....	18.42	.26	3.31	9.13	4.95	.50	.15	.12
White Naples .....	20.70	.25	.86	12.95	6.14	.37	.10	.02
White Tuscan .....	15.10	.36	.72	4.61	7.00	1.85	.51	.05
White Velvet .....	15.92	.....	.47	3.00	7.61	2.75	1.58	.51

#### Threshing Notes.

In 1893 Dr. Cobb began making notes on the ease or difficulty with which the different varieties of wheats can be threshed. This is a matter of practical value both to the grower and the thresher.

The method adopted is extremely simple, yet perfectly effective. The results do not show the absolute difficulty or ease with which a sample of a variety can be threshed; in other words, do not show the exact cost of threshing out, say, 100 bushels; but they do show the relative difficulty, or ease, or cost with which the variety may be threshed.

The

The test applied is as follows :—Put a given quantity of heads into a bag. These heads are beaten a certain number of blows in a uniform manner. When the heads are emptied out it is easy to decide whether the wheat will thresh easily or with difficulty.

These notes on the threshing properties have been obtained with almost no additional labour; in any case the wheats had to be threshed. In the crop of 1893 only thirty-six wheats were tested in this way; but in the crop of 1894, 460 varieties were tested.

It is the intention to continue these threshing notes so as to arrive at definite conclusions based on several seasons' observations.

#### *Hardness of different varieties of Wheat.*

A table of wheats, arranged according to the hardness of their grain, has been made up from the results of about 2,000 tests made by means of a machine invented by Dr. Cobb for the purpose. One of the first things a miller does when a wheat is submitted to him for his judgment is to place one of the grains between his teeth and to bite it. The resistance which the grain offers to his teeth gives him an important indication with regard to its milling property. If it is hard to bite it will be hard to mill. If it is easily crushed between the teeth, it will be easily crushed between the rollers of the mill. It occurred to Dr. Cobb to apply this practical test in a more accurate way. In consequence, he took a pair of cutting pincers, filed off the edge until they were about as blunt as the front teeth of a middle-aged man, and with these pincers, so altered, proceeded to bite the grain of different varieties of wheat, the force which was required to bite the grains in two being measured on an ordinary spring balance.

As a result of these tests he has been able to arrange the wheats harvested on the Wagga Wagga Experimental Farm in the year 1893 in the order given in a table. It is his intention to continue these experiments on the crop of 1894 and that of 1895. The results so far obtained are very promising; they correspond at any rate exactly with the ordinary opinions concerning the milling qualities of these varieties which are most generally grown in New South Wales. They correspond also very fairly with the results obtained by Mr. Guthrie from chemical analysis.

He is of opinion that when these tests have been made on a sufficient variety of samples he will be able to give a good estimate of the milling quality of a sample of wheat by means of a test, the whole of which can be accomplished in an hour's time. This would be a very great advantage, inasmuch as it would be a very great saving of time, the chemical analysis requiring a much longer time as well as the expenditure of more money for apparatus, chemicals, and so forth.

#### *The naming of Samples of Grain.*

The Department receives each year a considerable number of letters from millers and farmers requesting information concerning the milling value of samples of wheat submitted. Until recently we have been unable to give satisfactory replies to these letters.

Other letters requesting the name of samples of wheat, grain of which are submitted, also have to go without satisfactory replies. To these latter we can only say the grain will be sown, and when grown the name furnished. This, however, involves so much delay and uncertainty that the results are not satisfactory.

Dr. Cobb has cast about for means to identify, at least approximately, samples of grain. Although he has not discovered such means, a series of notes by him, soon to be published in the *Agricultural Gazette*, based upon over 14,000 measurements of the grains of the principal varieties of wheat, lead him to the conclusion that the case is not hopeless. He submits these measurements, made in millimetres, as something preliminary to a definite attempt on his part to identify varieties from the grain alone. A number of average grains of each variety were carefully calipered, and the average length, breadth, and thickness of the grains thus obtained. These results were then arranged in various ways so as to show which varieties have the longest grains, which varieties have the shortest grains, which varieties have the thickest grains, which varieties have the thinnest grains, which varieties have the narrowest and the widest grains. Again, the three dimensions multiplied together have furnished figures probably showing the relative size or volume of the grains of various wheats. It seems to him probable that such results as these (it must be borne in mind that the results obtained from another harvest will, in some respects, modify those already obtained), taken together with the colour, hardness as determined by the biting test, and internal constitution as determined by microscopic examination, will enable us, sooner or later, to identify a variety from the grain alone. He believes this is a matter of a good deal of importance. There is no doubt that even the most expert buyers of wheat are continually misled as to the value of the samples which they handle, and when we consider the magnitude of the operations in wheat there is no doubt that any additional information, however trifling, which will lead to the ability to judge samples of wheat more accurately would be very welcome indeed.

#### *Applications for Seed Wheat for Experimental Purposes.*

Dr. Cobb invites attention to the fact that a large number of applications for seed wheat for purely experimental purposes have been received during the season 1894-95, and that, in response to these applications, over 2,000 packages of seed wheat have been distributed free to those who have a genuine desire to experiment with wheat. All these samples have been prepared and sent out from the farm laboratory. All have been screened, graded, and treated for smut before being sent out. All have been true to name, pure seed, containing no small, shrivelled, split, cracked, or otherwise defective grain. These have been sent to various applicants both inside and outside the Colony.

It is gratifying to note in this connection the application by various colonial and foreign Governments for samples of seed as grown at the Wagga Wagga Experimental Farm.

#### *Chemist.*

The Chemist, Mr. Guthrie, and his assistant, have, during the past eighteen months, performed a considerable amount of most valuable work.

At the commencement of this period (January, 1894), the offices of the Department were moved from the premises they previously occupied to the premises opposite the Sydney Hospital. It was, consequently, not until March, 1894, that the necessary alterations and fittings in the chemical laboratory were sufficiently advanced to permit of the resumption of work.

The

The routine analytical work includes the following:—163 soils, 60 fertilisers, 15 milks, 62 beet-roots, 10 waters, 15 honeys.

In addition to the above, a large number of miscellaneous analyses were made, including dairy produce (butter, cream, cheese), fodders, preservatives, insecticides, tobacco, &c.

#### *Soil Analyses.*

Of the soil analyses, 100 were complete analyses, involving about 16 separate determinations in each case; the remaining 63 being only partially analysed.

These analyses were conducted on the same system as in previous years, a report being furnished in each case explaining the analysis and pointing out the proper treatment and manuring for the different crops in each instance.

This part of the work is very largely availed of by the farmers—so much so, that it had become impossible, with our small staff, to keep down the constantly-increasing arrears. As a considerable number (over 300) of soils from different parts of the Colony have now been carefully examined, it is possible, in many cases, to furnish a report suggesting the proper treatment without having recourse to a complete analysis. This has been done in 63 cases, in which only such points as are absolutely essential have been examined, thereby lessening the labour considerably.

The results of all the analyses thus made are now being collected and arranged in such a form that the characteristics of the soils from different districts and from different geological formations may be readily studied.

I believe that this work, which should be ready in a few months' time, will be of value in enabling us to form a correct judgment concerning the nature and peculiarities of the soil in the different districts of the Colony.

From the data thus supplied, it would be possible to prepare a surface-map of New South Wales which would be a valuable companion-map to the geological map of the Colony.

#### *Manure Analyses.*

In connection with the analyses of manures, a pamphlet was prepared and issued in July showing the composition and relative value of the different fertilisers in the market, compiled from analyses made in the Department. The information there given affords the farmers the means of accurately judging the nature and value of any particular fertiliser they may wish to purchase.

This list has been revised and brought up to date again this year, and appeared in the July number of the *Gazette*.

In the absence of any law regulating the sale and purchase of manures, it is of great importance to the farmer that he should have some such reliable and authoritative opinion of the manures offered for sale.

In addition to the commercial fertilisers, analyses were made of products manufactured by private persons for their own use, wood-ashes, and waste products of all descriptions, with a view to determining their manurial value.

#### *Sugar-Beet.*

The cultivation of the sugar-beet is largely increasing in the Colony, and during the year a large number of samples were forwarded from different parts of the country which had been obtained from seed supplied by the Department.

When the necessity for a little more care in the cultivation is realised, there is every reason to anticipate that this will become one of the most remunerative crops.

It is a crop whose cultivation deserves to be encouraged by the Department, since success in sugar-beet raising involves more careful and scientific cultivation, and leads to a more advanced system of farming, than is at present practised. The result of Mr. Van de Velde's experiments in this direction at Tenterfield shows that it is eminently suited to some districts of New South Wales at all events, and that by careful and systematic cultivation the sugar-content can be almost doubled.

#### *Wheats.*

In addition to the above routine work, a lengthy investigation was undertaken, and completed, into the milling qualities of the seventy-five different varieties of wheat. These wheats were grown by Mr. Wm. Farrer, of Queanbeyan, and include both grain now grown in New South Wales and other grain which might, with advantage, be introduced into cultivation.

The object of this investigation was to arrive at a decision as to the manner in which the different grain behaved on milling, with a view to suggesting such varieties as are most suitable for cultivation in the Colony, or which might become so by judicious selection and cross-breeding. This work, which Mr. Guthrie believes breaks new ground, was surrounded by many difficulties. It involved the purchase (at a small cost) of a small hand-roller mill, and a considerable amount of preliminary labour in learning the science of roller milling, and deciding on a system of milling suitable to our small plant. These difficulties have been successfully overcome by Mr. Guthrie, and it has been possible, in the case of each wheat, to observe, accurately, its milling quality, and to examine the flour obtained for such essential points as colour, strength, gluten-content, and baking quality. The full details of this investigation were published in the *Agricultural Gazette* for March, 1895.

It is sufficient to say here that the general conclusions arrived at point to the fact that the varieties of wheat in general cultivation in New South Wales are soft grains, yielding a flour deficient in gluten (and consequently nourishment) and strength; the only advantage which such wheats possess lies in the ease with which a flour of a good colour can be produced.

The harder, or flintier, kinds of wheat, while not yielding a flour of such good colour, produce a stronger and more nutritious flour, and are, moreover, of the additional value to the farmer that they are, as a class, less liable to disease, and, consequently, a more reliable crop. It is thought that by judicious cross-breeding of the hard and soft wheats it will be possible to produce varieties specially suited to the different districts.

In the course of the above work, a number of interesting questions arose bearing upon the chemical nature of the different grain, which questions Mr. Guthrie is in hopes of being able shortly to settle.

*Darling*

*Darling Pea.*

In September last, at the invitation of Mr. G. H. Gordon, of Gragin, near Warialda, Mr. Guthrie visited his station with the object of investigating the effects of the Darling Pea upon stock. He was able, through Mr. Gordon's courtesy, to witness the effects of this plant upon horses and sheep, and in his report suggested that the services of a physiologist should be obtained in order to trace, if possible, the nature of the disease. Since then Dr. C. J. Martin, of Sydney University, paid a visit to Mr. Gordon, and succeeded in localising the effects of the disease, and determining its general character. Dr. Martin will supplement his preliminary examination by a more extended investigation in July or August, which is the best time of year for such observations. During Mr. Guthrie's visit extracts of the fresh plant were obtained in considerable quantities, which have since been examined, but Mr. Guthrie reports that he is bound to say that, dealing as we are with substances whose nature and effects are unknown, chemical examination is not likely to throw much light upon the matter until we have more definite knowledge concerning the nature of the disease; at least, his work has been fruitless in determining and isolating any specific poison.

*Honey.*

A number of samples of honey submitted for sale were examined, and compared with pure honeys obtained from well-known apiarists, with the result of showing that a large proportion of the honey at present in the market is adulterated with starch syrup. Although this adulteration is not necessarily injurious to health, it is a matter that affects bee-keepers, and one that could be advantageously legislated upon.

A second point brought out by these analyses is that Australian honey has practically the same composition as English and American honeys, and that the prejudices that are stated to exist against it in England are merely a question of taste. The so-called eucalyptus flavour is, as far as Mr. Guthrie's experience goes, absent in good Australian honey.

*Wines.*

Circulars were sent out in the beginning of the year inviting wine-growers to submit samples of their wine for examination. It is a matter of regret that this circular has met with hardly any response, as a proper knowledge of the constitution of our wines is necessary before any great improvement can be effected in their quality, and any reasonable hope entertained of competing with wines of other countries in the English market.

*Ash of Timbers.*

Samples of the more commonly occurring timbers of New South Wales were obtained from different localities, with the object of systematically examining the chemical nature of the ash of each variety of timber. Apart from the scientific interest attaching to such an investigation, it will be of great practical importance in determining the value of the ashes of different woods for manurial purposes, and also in affording an indication of the chemical nature of the soil on which they grow. This work is ready to be undertaken as soon as time permits.

In addition to the above a large amount of unrecorded work has been done, such as verbal reports and replies to questions, personal interviews, &c. The laboratory is also availed of by the other officers of the Department.

During the eighteen months over 360 letters were sent out from the Chemical Branch.

*Publications.*

The following is a list of the articles dealing with chemical matters published in the *Agricultural Gazette* :—

- "On the Choice and Use of Artificial Manures." (A series of articles appearing in the March, April, May, June, July, and August numbers, 1894.)
- "On the Detection of Adulteration in Artificial Manures." (May, 1894.)
- "Table of Analyses of Commercial Fertilizers." (July, 1894.)
- "Wood Ashes as a Fertilizer." (June, 1894.)
- "Australian Honey." (June, 1894.)
- "Analyses of Tumut Tobacco." (September, 1894.)
- "Notes on the Milling Qualities of Different Varieties of Wheat." (March, 1895.)
- (The above were reprinted in pamphlet form for distribution.)
- "Seaweed as a Manure." (October, 1894.)
- "Ammonium Sulphate and Nitrate of Potash in Potato-growing." (October, 1894.)
- "Manufacture of Superphosphate." (April, 1894.)
- "Notes on Preservatives for Food." (December, 1894.)
- "Analyses of Cheese." (December, 1894.)
- "Judging of Prize Wheats." (June, 1895.)
- "Chemical Notes." (A number of miscellaneous articles and notes on bonedust, honeys, foders, beets, &c., &c., appearing in March, April, May, August, October, December, 1894, and March, April, June, 1895.)

In conclusion Mr. Guthrie wishes to record his high appreciation of the value of the services rendered in the work of the laboratory by his assistant, Mr. E. H. Gurney.

*Entomologist.*

The Entomologist, Mr. A. S. Olliff, has reported that in January and February, 1894, he made, by my instructions, an extended tour in the vine-growing districts of the Murray River, with the object of ascertaining if the dreaded vine-pest, *Phylloxera vastatrix*, existed in those localities, this course being deemed advisable as similar inquiries were proceeding on the neighbouring banks of the Murray River, under instructions from the Hon. the Premier of Victoria.

In the course of his tour he visited a large number of vineyards in the vicinity of Howlong, Albury, and Corowa, and with the assistance and co-operation of the vine-growers and vignerons, who received him with the utmost cordiality, made as complete an inspection of the vineyards as the time at his disposal would permit. The result of these investigations was that not a sign of *Phylloxera* could be found, and that the vineyards (except for the presence of the fungus-disease *Oidium*) were found to be generally

generally free from disease. Opportunity was taken to make a general collection of insects affecting vines and other fruits, resulting in a considerable addition (about 1,500 specimens) to the Departmental collection of economic insects. In the work of collecting this material, and in the special object of the tour, Mr. Olliff received much assistance from vigneron and fruit-growers, especially Messrs. J. D. Lankester, S. O. Mitchell, Boadle, John Lang, J. P. Buggy, Moras, and the Rev. Father Dunn. The specimens have since been mounted and incorporated with the general collections of the Department, and will be available for reference when suitable accommodation can be provided for their display.

During the tour, and afterwards in Sydney, some further experiments with the fungus (*Botrytis tenella Isaria densa*), known in France as "Parasite du ver Blanc," were made, and the results go to show that the artificial dissemination of the spores of this fungus, as a means of destroying the larvæ, or "white grubs" of our cockchafers, which do so much injury to the roots of maize, wheat, clover, grass, sugar-cane, and other field and garden crops, is altogether unsatisfactory. It was found that the *Botrytis*-spores would germinate in the laboratory, and a few grubs were there infected and subsequently died, but it was not found that infected grubs conveyed the disease to others, even when the conditions appeared to be most favourable, and where they could be, to some extent, controlled; and experiments in the field with Melolonthid grubs (chiefly species of *Anoplognathus*, *Lepidiota*, &c.) showed that even when ground thickly infested with grubs was saturated with water containing vast numbers of fungus spores, and grubs that had been dipped in similar spore-laden water had been turned loose amongst their healthy comrades no appreciable results followed.

After fifteen and twenty days had elapsed, and again at intervals of four days, the ground was carefully examined, but the cockchafer grubs appeared to be as abundant as ever, and no dead specimens were found. Similar experiments with the larvæ of cockchafers (*Lepidoderma albo-hirtum*, Waterh., &c., a species which is very injurious to sugar cane), conducted by Mr. Freeman, of the Colonial Sugar Refining Company, on the Johnstone River, Queensland, also gave negative results; and equally unsatisfactory conclusions have been arrived at in regard to the *Botrytis* fungus, at Washington and elsewhere, in the United States, after carefully conducted experiments with American root-feeding Melolonthidæ. The use of these *Botrytis* cultures, which are now extensively sold, cannot, therefore, be recommended for destroying the Australian root-feeding Lamellicorn larvæ, commonly known as "white grubs."

The additions to our collections of injurious and beneficial insects have not been as numerous during 1894 as in past years, as no permanent collector of entomological specimens has been employed by the Department; but a considerable amount of material has been received from country correspondents, and besides the specimens from the Murray River vineyards, to which allusion has previously been made, some additional material has been received from West Australia (collected by Mr. J. A. Despeissis), and from various localities in New South Wales, chiefly through the efforts of Dr. Cobb and Mr. Benson (fruit expert), and through the kind co-operation of Dr. Dagnell Clark, Messrs. Scobie, W. Abram, M. Master, J. J. Fletcher, J. H. Rose, and the Rev. John Ayling. A few specimens outside the Colony have also been received from the Rev. E. H. Thompson, Mr. W. M. Maskell, Mr. A. H. Brigstocke, R.N., and Dr. John Andrews. R.N.

Advice regarding insect pests and the method of coping with them, has, as heretofore, been afforded to fruitgrowers and agriculturists, both verbally and by correspondence; and articles on Bees'-wax moths (*Galleria mellonella*, Linn., and *Achræa grisella*, Fabr.), on the red cedar moth (*Epicrocis terebrans*, Oll.), and on lignivorous moths belonging to the family *Hepialidæ*, have been prepared. The publication of articles on injurious insects, an important part of the work of the Entomologist, has been interrupted, I regret to say, during the latter half of the year, by Mr. Olliff's illness.

During the past six months (January-June, 1895) a number of useful additions have been made to the Departmental collections, chiefly owing to the kindness of correspondents. Amongst these may be mentioned an ample series of the larvæ of *Iodis pieroides*, found destroying the flowers of garden-roses at Port Stephens, by Mr. R. H. D. White; a series of lepidoptera from Mr. Maurice M'Keown, Wollongbar; and a collection of lepidoptera from Thursday Island, obtained by Mr. J. B. White. We have also to thank Messrs. H. Copeland, Dowling, Rudder, and G. Lyell, junior, for useful and interesting specimens of Diptera, Coccidæ, and lepidoptera. Some of these specimens will be the subject of special notice for the pages of the *Agricultural Gazette*.

The acquisition of a fine series of entomogenous fungi, belonging to the genus *Cordyceps*—a group of parasitic fungi which are known to live upon the larvæ and pupæ of various subterranean and root-feeding insects—has furnished an opportunity for bringing together all that is known concerning the habits of these singular plants. In a special article, several new forms are described, and some definite information as to the insects which they destroy is made known. Since the publication of this preliminary paper, careful inquiry has been made as to the possibility of utilising these fungi as a means of destroying the moth-larvæ (*Pielus trictenæ*, &c.), which do so much injury to wattles and other useful trees and shrubs. Some extremely interesting results have been obtained; but as the observations and experiments are at present by no means complete, owing to Mr. Olliff's services being required in connection with the inspection of the vineyards of the counties of Cumberland and Camden, all account of them must be postponed.

In regard to the illustrations for the entomological portions of the *Agricultural Gazette*, I would remark that in addition to the drawings prepared in the Department by Mr. F. Wills and Mr. C. Fuller, I have to acknowledge the gift of two original drawings, which have since been reproduced. One, in colour, representing a parasitic fungus (*Cordyceps Scottianus*), is from the brush of Mrs. Edward Forde; the other, representing a series of entomogenous fungi (*in situ*), is by Mr. Henry Selkirk. Another, representing a parasitic fungus from the Murrumbidgee River (*Cordyceps trictenæ*), from a drawing originally in the possession of the late Mr. George Robert Gray, of the British Museum, which Mr. Olliff contributed.

The following articles on Entomological subjects have appeared in the *Gazette* during the present year:—

1. A new useful Ladybird from West Australia.
2. Some Australian Weevils or Snout-beetles (1 plate).
3. Australian Entomophytes, or Entomogenous Fungi, and some account of their insect hosts (4 plates).
4. Economic Entomology; its aims and needs (read before the Fruitgrowers' Conference, February, 1895).

The following are in preparation:—

1. Additions to the Mesozoic or Tertiary Insects of Australia (in conjunction with R. Etheridge, junr., Curator of the Australian Museum, Sydney).
2. Further notes on insects affecting sugar-cane crops.
3. An attempt to propagate *Cordyceps Gunnii*, Berk., and additional notes on Entomogenous Fungi.

### Viticulturist.

The attention of the viticulture expert, Mr. Despeissis, was early last season directed towards the prevention and eradication of several insect and fungoid pests which attack our fruit-trees and vines.

Following up experiments successfully carried out in 1892 at Albury in keeping down the "woolly aphid" on apple-trees by means of injections into the ground and round the affected trees of carbon bisulphide, he treated early in the spring, and before the shoots were out, one row of nectarines and one row of peach-trees, of about forty trees each, by means of injections of carbon bisulphide, mixed with kerosene, and applied by means of Vermorel's forcing injector. Three injections of 10 grammes each were made, at a distance of 2 to 3 feet round each tree. Alternate rows of the same fruit-trees were left untreated as witnesses. The result was very satisfactory; a great many of the trees treated never showed any aphides, while on others a few appeared in the spring. The untreated trees were fairly covered with swarms of the black peach aphid (*Myzus cerasi*, Fabr.).

The habits of these destructive insects being in many particulars similar to those of the woolly aphid of the apple-tree, in so far that they are both closely related, and both hibernate in lumps on the main roots of the trees they attack, where they swarm and crawl up the trees and establish themselves at the base of the flower-buds and along the tender shoots. The attempt to attack them in their winter quarters by means of the fumes of carbon bisulphide have proved most successful, and would, I dare say, save, if systematically carried out, much time and money being spent in spraying the trees later in the season, when it is found the insects are endangering the prospects of the fruit crop coming to maturity.

During the month of February Mr. Despeissis was directed to visit Mr. Knox's vineyard, near Liverpool, where the phylloxera had recently been discovered. There, again, by means of the Vermorel injector, carbon bisulphide was, for the first time in Australia, applied in heavy doses for the purpose of destroying the phylloxera on the roots of the infected vines previous to their eradication. The work was performed by the officers of the Department, and the result as satisfactory as could be expected. Indeed it is a matter for surprise that this method of destroying this pest of the vine should not have been adopted long before in the attempts made to check the progress of the phylloxera in this Colony; and considering the palpable result which this action of the Department demonstrated at Mr. Knox's vineyard, it is more surprising still that those entrusted with the administration of the Vine Diseases Act should have carried on the work of eradicating the pest in the same way which had been hitherto in favour instead of dealing with the pest in a more thorough and less expensive way.

In connection with the eradication of the phylloxera in New South Wales, Mr. Despeissis was, last November, instructed to visit Mr. Reddan's vineyard at Kellyville, and report on the manner the work of rooting up the vines had been performed by the Cumberland Vine Diseases' Board.

The result of his visit of inspection was duly presented under the form of a report to the Minister, and pointed out the inefficient way the work had been carried out at that particular vineyard.

At the request of the vine-growers the Ministry instructed him to deliver, at several vine-growing centres, an address on the phylloxera, the symptoms by means of which its presence in a vineyard can readily be detected, and the best methods of checking its progress, and effecting its eradication from the country. In compliance with this request, lectures were delivered at Corowa, Albury, Liverpool, and Ryde—the lecture at this last place was postponed in consequence of the very poor attendance of vine-growers, and the lack of apparent interest shown by them in the matter.

A paper on the subject, fully illustrated, was also prepared and published in last January issue of the *Agricultural Gazette*, which, it is hoped, will afford to those desirous of information on the subject all they require.

Giving effect to a recommendation Mr. Despeissis submitted last year, the Department took steps for introducing through the good services of Professor G. Faex, Director of the Ecole Nationale de Viticulture, of Montpellier, a few pounds of seed of some of the best phylloxera resisting vines used as stock for grafting the choicer varieties of the *vitis vinifera*. These seeds have been entrusted to the care of the fruit expert for propagation at the "Experimental Orchard" at Wagga.

It is gratifying to have to record the uniformly favourable reports that have reached the Department from all parts of the Colony regarding the directions issued for keeping down the black spot or anthracnose of the vine as published on page 4 in the handbook on "the vineyard and the cellar," and also in part 7, vol. II, of the *Agricultural Gazette*.

That disease which the year before last proved most destructive to the grape crop, and which for the past three or four years had been on the increase, was, wherever treated as recommended, practically checked, and vines which the year before had produced a crop of grapes made almost unmarketable owing to the disfigurement caused by this disease, produced this last season a crop of clear healthy grapes. The cost of the treatment is only nominal.

The oidium of the vine causes also at times considerable loss to the vine-grower. This loss may safely be stated to absorb in a great many instances the bulk of the profit of the grower, and may be put down as varying from 10 to 30 per cent. of the whole crop.

Sulphur is the recognised remedy against the pest, its application in the powdered state is, however, at times costly and wasteful. It has often been suggested that, if it be true that the sulphur fumes are active agents of destruction of the oidium, some solution containing sulphur in the liquid form might prove efficacious to the same extent. With this object in view Mr. Despeissis arranged a series of experiments and sprayed a couple of acres of white Muscat vines with a solution made of:—

Sulphate of copper	...	...	...	...	...	...	2 lb.
Lime	...	...	...	...	...	...	$\frac{1}{2}$ "
Sodium sulphite	...	...	...	...	...	...	$2\frac{1}{2}$ "
Water	...	...	...	...	...	...	20 gal.

The result which was satisfactory and of a very encouraging nature, is given in a report published in last October issue of the *Agricultural Gazette*.

One important experiment Mr. Despeissis was driven by the force of circumstances to make early in 1894 at vintage time. It refers to a method of fermentation never before attempted in Australia, where he conducted it in quite a fortuitous manner. Having run short of vats and the grapes splitting and rotting on the vines, in consequence of the incessant period of wet weather we were having, he had to use an empty 500-gal. galvanised iron water tank as a fermenting vat. This tank he had previously, however, painted inside with a coating of lignosote—a black enamel much used in breweries for smearing casks inside. In this tank thus prepared, in order to prevent the corrosive action of the acids in the grape-must on the tin, he put about 400 gallons of black shiraz-must, and on the same day filled a 500-gallon oak vat with the same quantity of must. From the very start he carefully took twice a day, morning and afternoon, the temperature of the must in fermentation in each vat. The iron vat was all the time quite hot to the touch of the hand, while the wooden one was, comparatively speaking, much cooler, so much so, that he was at first afraid that the temperature in the iron vat would go too high, and, as a consequence, the wine would go bad. Such was not the case however, and all through the temperature charts which he preserved, indicate a degree of temperature in the iron tank of 10 to 12 degrees F. in favour of the iron over the wooden vat, the thermometer having never reached 86 in the first case, and having gone up to 96 and 98 degrees F. in the second. The explanation of this would seem to be in the fact that iron being a far better conductor of heat than wood, allowed night and day the continuous escape and flow through the sides of the vessel of the heat generated during the course of fermentation, thus getting rid of it more rapidly than in the case of the wooden staves.

It is interesting to notice that the November and December issues of French viticultural papers mention somewhat similar and independent experiments carried on in enamelled iron vats, and with the greatest success, in Algeria. This system of fermentation may probably revolutionise the method of fermenting in thick vats or in brick and cement vats and offer great possibilities in the conversion of grape-must into good wine.

The Viticultural Committee appointed by the Minister has met as often as circumstances would permit, and among other suggestions tendered with a view of promoting the interest of the vine-growing industry in this Colony, has recommended the creation of a school of viticulture, with a model cellar attached, at which students would receive the necessary training that would qualify them for the pursuit of vine-growers and wine-makers. The necessity of a Food Adulteration Act was likewise advocated in order to check the importation and manufacture in this Colony of deleterious liquor and food stuffs.

A revision of the Distillations Act seemed also desirable, in order to promote the establishment of brandy distilleries, and thereby relieve the wine market of heavy stocks of tainted and vitiated wine and turning the same into a more wholesome article.

The advisability of making more stringent the conditions under which a permit for a still is granted to vine-growers is desirable in so far that the minimum of 4 acres of vines in full bearing is considered low and not likely to be of any great advantage to owners of small vineyards. A minimum area of 20 acres would, it is expected, be preferable, provided the smaller wine-makers be allowed to purchase whatever spirit they require for fortifying purposes from the larger makers or from a brandy distillery, under the same conditions that are enforced in South Australia.

The usual consulting work of this branch of the Department has been carried on during the year, and has extended to correspondents in this as well as the other colonies. Applications were submitted to the Minister from the leading vine-growers at Rutherglen, Vic., for permission for Mr. Despeissis to go and deliver a lecture on new methods of wine fermentation in that district, before last vintage.

Several papers, bearing on the manufacture of wine and the growing of the vines, have appeared at intervals in the pages of the *Agricultural Gazette* and a handbook under the title of *The Vineyard and the Cellar*, setting forth the work to be carried out in a vineyard and in the cellar every month of the year, and accompanied by plans and illustrations, as well as more exhaustive papers on questions interesting the wine-makers especially has been issued, distributed free of cost, and favourably commented upon.

Experiments were conducted in fermenting wine by means of imported pure levures, or yeast, from the most celebrated growths of France, both by Mr. J. D. Lankester and by Mr. Despeissis.

In no case were the levures used injurious to the wine. In several cases no appreciable difference can be detected between wines treated with levures and wine fermented in the ordinary way followed in the Colony, while very noticeable improvement was shown in several cases which can be ascribed to no other cause but the use of the selected levures. As a rule, wines fermented through the agency of the levures are drier; that is to say, have undergone a complete fermentation, and have no sugar left in them. As regards the distinctive bouquet each particular levure is claimed to impart to the wine, Mr. Despeissis failed to detect any very appreciable and particularly striking characteristic bouquet worth recording. However, he would be inclined to believe that equally satisfactory results could be achieved by liberally using a ferment carefully prepared from some of the best wine grapes grown in the Colony. Much good may be said to have been done by the use of these imported levures in wine fermentation, in so far that more care and attention has been paid to the process of wine-making than had hitherto been the case, and the result—in the value of wine turned out—is certainly distinctly noticeable.

Towards the beginning of the year, and at the request of the Bureau of Agriculture of Western Australia, Mr. Despeissis' services were lent to the Government of that Colony for a period of three months, which was afterwards, on application, further extended to another period of three months.

The work he did in the sister Colony met with such recognition, that soon after his return to New South Wales a definite offer was made to him of the position of Viticultural and Horticultural Expert in that Colony which, although reluctant to sever his connection with this Department, he felt that in justice to himself he should accept.

From Western Australia he brought back several insects of economic value not hitherto described, which his colleague, Mr. Olliff, kindly named and classified.

### Fruit Expert.

During the whole of 1894 the fruit expert, Mr. Benson, has been fully occupied, and a very large amount of overtime as well has been devoted to one or other of the various branches of his work, either practically on the land or officially at head-quarters.

The year has seen the establishment of an experimental orchard and vineyard at Wagga, also the establishment of an experimental orchard for citrus and semi-tropical plants at Wollongbar. The establishment of these orchards has entailed a very large amount of extra work, but I cannot speak in too high terms of the willing assistance given by Mr. George Valder, the orchard manager at Wagga, and from Mr. G. M. M'Keown, the manager at the experimental farm at Wollongbar. Both orchards have been started most successfully, and that the growth of trees and vines has so far been highly satisfactory.

During the winter Mr. Benson spent four months at Wagga, getting the ground into order, laying out the land, planting the trees and vines, and establishing a nursery to grow all our own trees. This work was done almost entirely by Messrs. Benson and Valder, and the expenses were kept down to the lowest extent possible.

In addition to supervising the orchard work of these experimental farms, a large amount of other work was performed, of which that done by the Pomological Committee was by no means the least. Some hundreds of samples of different varieties of fruits were submitted during the season, and a careful record of all typical samples has been kept for reference purposes. During the year Mr. Benson visited various parts of the Colony, giving information on fruit matters in general and fruit pests in particular, and he reports that he is glad to be able to say that the efforts of the Department in this direction are generally much appreciated, and have resulted in much good to the industry.

During the month of August he visited Mildura (Victoria), as the official delegate to the First Intercolonial Fruit-growers' Conference, and whilst there obtained a great deal of information which he has found very useful to this Colony.

These conventions are, in his opinion, of very great value, as they encourage an interchange of ideas and enable us to see what our neighbours are doing. He delivered a number of lectures on fruit-growing during the year, and wrote a number of articles for the *Agricultural Gazette*, including the following subjects:—

Cider Making.	Notes on the Experimental Orchard at Wagga.
Apple Culture.	Notes on Fruit Preserving.
Notes on Mildura.	Monthly Orchard Notes.

During the year there was a very large number of inquiries from fruit-growers in all parts of the Colony on practically every branch of fruit-culture, the number of official papers being much greater than in 1893.

In addition, a vast amount of personal information has been given at head-quarters.

During January of the present year Mr. Benson attended the meeting of the Australian Association for the Advancement of Science, held at Brisbane, and read a paper on "How to grow fruit." On his way to Brisbane he paid a visit to the Wollongbar Experimental Farm, where everything was progressing favourably under the management of Mr. G. M. M'Keown, though, owing to the spring of the year being a very dry one, the fruit-trees had not made as good a growth as they otherwise would. Notwithstanding this drawback, everything was doing well and in vigorous health. Whilst at Brisbane he visited a number of the principal orchards, pinneries, and banana plantations near Brisbane, and obtained a large number of various trees and economic plants that are likely to be of value at Wollongbar, where they have been sent, and where they are now doing well. In addition to obtaining plants, &c., he also gathered a large amount of information on various agronomical matters that will be of value to us for the Northern rivers district of this Colony. During February a conference of fruit and vine growers was held in Sydney under the auspices of the Department of Agriculture, and a large amount of useful information was obtained and disseminated. During the conference Mr. Benson read papers on the following subjects:—"The present state of the fruit industry and how to improve it"; "A standard measure for fruit"; "Fruits, to grow," as well as taking part in the discussion generally. A full report of the papers read and of the discussion has been prepared and distributed.

Mr. Benson next attended the shows at Uralla and Camden, where he acted as judge of fruit, and at Uralla of produce as well. From Camden he went to the experimental farm at Wagga, and from there to Newbridge, when he visited orchards and lectured on fruit growing. Shortly after his visit to Newbridge he visited Inverell and Glen Innes, judging fruit and produce at the shows held at these two places and visiting orchards in the vicinity of each. I regret to say Mr. Benson found that that fearful pest to the fruit grower, the fruit fly (*Tephrites* sp.) was spreading fast in the Inverell district, and doing a large amount of damage to late apples, quinces, and late peaches. The spread of this pest, if not checked, is likely to lead to very serious loss amongst fruit growers throughout the Colony, and it is very much to be regretted that we have not power to deal with it and other similar pests in a satisfactory manner, instead of allowing them to increase and spread, as they are doing at present. He next visited Orange, and acted as judge of fruit and vegetables at the show there. His next work was to visit the orchards attached to the Asylum at Rookwood, and the Carpenterian Reformatory at Eastwood, and reported on their condition and best means of improving them.

On Easter Tuesday he left Sydney in company with Mr. Campbell for Melbourne, en route to Hobart, to attend an Intercolonial Conference of Fruit Growers, held at Hobart April 22nd to 26th. This conference was attended by delegates from all the colonies, and a number of excellent papers were read, and the discussion on the papers was highly instructive. He read a paper on "The preparation of the land for the orchard, including drainage; and on the cultivation of the orchard, including manuring."

During the time that the conference was being held, in fact, in conjunction with it, the Hobart Horticultural Society held an intercolonial fruit show, at which probably the largest and best collection of pomaceous fruits ever seen in the Australian Colonies was brought together. Although New South Wales was only very poorly represented with fruit, still the apples we showed, and that were grown in the New England district, were fully equal to the fruits of the same varieties grown in any of the other colonies.

As one of the judges, Mr. Benson had an excellent opportunity of examining and comparing the fruits exhibited, and in his opinion the collection of apples was one that it would have been exceedingly hard to beat in any part of the world. After the termination of the conference he visited a number of the orchards of Tasmania, both on the Derwent and Huon, the Tasmanian Department of Agriculture having applied for and obtained permission from this Department for him to visit their chief fruit-growing districts and give exhibitions of pruning and grafting.

Shortly

Shortly after his return to Sydney he visited the labour settlement at Wilberforce, and reported on same. His next visit was to the experimental orchard at Wagga, and from there he went to Tumberumba, where a lecture was delivered on fruit-growing, and he reported on the class of fruit best suited for the district. On his way from Wagga to Sydney he visited Garangula Orchard, where he reports that he was very pleased to note the extremely satisfactory results Mr. J. D. Robertson, the manager, had obtained by spraying the orchard for codlin moth and for fungus diseases. He again visited Wagga, this time with two officers of the Colonial Architect's Department, to determine the site of the permanent buildings to be erected there, and to consult with these officers and Dr. Cobb as to the best style of buildings to erect.

His next visit was with Mr. Campbell to the Pera Bore, near Bourke, to report with Mr. Campbell on the suitability of the land for fruit culture. This report has just been approved of by the Minister, and steps are now being taken to plant a number of fruit trees and vines, and to prepare the land for the growth of a number of experimental plots of fodder plants, pulses, &c., so as to show what can be done with the land by the judicious use of water for irrigation. These experiments will be of the greatest value to the Colony, and if they prove as successful as Mr. Benson anticipates, they will probably revolutionize the hot and more or less arid interior of this Colony. On his return from Bourke he remained at Orange, proceeding thence to Molong, where he visited the orchards of Mr. James Lee and Mr. John Young, at Burrawong. The orchard of the latter is one of the largest in the Colony, and the young trees are generally making good growth. Mr. Young has erected a very good cannery in connection with the orchard, and during the past season he has canned a small quantity of various fruits. He tried samples of the Bartlett pears and cling peaches, and they were equal to any Californian brand, the Bartlett pears especially being equal, if not superior, to the extra grades of San Jose fruit, which are generally admitted to be the best canned fruits made. This is very satisfactory, as it shows that with proper care and attention there is no reason why we should not produce all the canned fruits we require for our own consumption, and when we have met our local consumption, then export successfully to Europe and elsewhere. On returning from Molong he stayed at Tarana, where he gave instruction in fruit-growing, and delivered a lecture on fruit culture, &c. From Tarana he returned to head-quarters, where he remained till June 20.

In addition to the great amount of work done by Mr. Benson, he prepared a pamphlet on "Fruits to Export," and another on "Fruit Pests."

Mr. Benson reports that he is glad to be able to say that the Experimental Orchard and Vineyard at Wagga has made exceedingly good progress. The trees and vines planted have made very good growth, despite the season being an unusually dry one, and the various crops raised by Mr. Valder have conclusively proved that with proper care, thorough cultivation, and the use of one's brains as well as one's hands, that it is possible to grow a large number of crops successfully in our drier and warmer districts that were commonly supposed to be unable to be grown. During the present winter it is the intention to considerably extend the orchard, and owing to the fact that we have had a really good soaking ground rain, he has no doubt that he will have a successful planting season, and that the trees that we set out will do well. The orchard and vineyard will thus have a good start, and it is his intention to make it a thorough success and a credit to our Colony. Mr. Valder is a very enthusiastic and competent manager, and the men employed on the place are careful and painstaking, and are taking a keen and active interest in their work, so that the work is being carried out with a minimum of labour and with the best results.

### Sericulture.

During the eighteen months ending June 30th, 1895, steady progress has been made under the able management of Mr. Charles Brady, bringing matters onward to meet the fresh interest and desire, now so generally apparent in many quarters, to enter upon a commercial production of silk as one of our colonial staples for export, and possibly in the not distant future, to establish new industries in manufacture as well as growth of this valuable material.

Attention has been given to improving the mulberry plantation at Booral leased by the Government from the A. A. Company. Those trees which have suffered permanently from neglect were so improved as to yield a most useful supply of leaf, which has allowed some early silkworm rearing, with a view to secure a sufficient stock of silkworm eggs. This is being satisfactorily accomplished, and it is hoped will in due time—when private parties shall be prepared with necessary food leaf on their own properties to commence rearing worms on their own account—allow of a free supply of worms or eggs to work with.

Every legitimate effort is being made at Booral and also at other Government establishments to stimulate and aid bona fide undertakings by private individuals to form plantations, by a liberal distribution of young mulberry plants, ready rooted, of the best kinds. The demand is already great, but it is hoped sufficient plants will be available in the coming season to cover a good amount of acreage. The sorts of mulberry are those specially suitable for silkworm rearing, and are being sent out with discrimination, but gratuitously, on the principle of supplying owners of land, fenced and cultivated by themselves, with reliable plants suitable for their several localities, thus assisting to tide them through initial difficulties, partly through the period of non-productiveness, yet still more to take advantage of that time to enable them to learn the proper management of their trees—especially as to pruning—they during the while acquiring on their own properties, as well as from Booral, some knowledge and trial experience in the art of rearing silkworms in numbers sufficient to produce some results in cocoons; season after season increasing as their trees grow and flourish. This assistance and information, which is most willingly given and accepted, necessarily entails a large amount of correspondence, but it appears to afford much encouragement and to be highly appreciated. The young trees are usually distributed in lots of 100 or 200, in widely different localities, and in several instances as many as from 400 to 750, so that in due course of time as plantations grow, commercial results may reasonably be expected to supplant the toying and trifling ("experimenting" without knowledge and without adequate means) hitherto so characteristic of public intelligence in the matter of silk production. In Mr. Brady's estimation the most encouraging feature now observable is the greatly increasing desire to grow the mulberry to provide food beforehand for the sustenance of silkworms in payable numbers, instead of beginning, as too often has been the case, by having unmanageable numbers of highly organized creatures to struggle cruelly through a miserable existence on precarious supplies—begged, borrowed, or stolen. The

The stock of silkworm eggs now in possession of the Government is largely increasing. Improvement, as well as acclimatisation on the whole is progressing most favourably—though much care and close oversight reveal the necessity of continual attention to the health of the stock, instances of weakness and even disease in some few particular cases have been noticed, and at once eliminated. The later show marked improvement on the earlier rearings.

Much local, and indeed general interest of a better kind, has been taken in regard to an enterprise by a local landowner—a farmer at Booral, who is making improvements on his property by the erection of a wormery devoted exclusively to the management of mulberry silkworms. The building—a substantial structure, 40 ft. x 20 ft., with an 8-foot verandah all round, giving a floor space under cover of about 2,000 feet—though not quite complete, is so far available for use that considerable numbers of worms of all ages and descriptions are being continually reared in it. This building, which is found admirably adapted for its purpose, will be rented from the owner for a limited period on the very advantageous terms of a simple interest on the value of the land and outlay. The owner has the satisfaction of securing a continuance for a certain time of operations in his own neighbourhood, and instruction “how to rear silkworms,” while the Government obtains excellent means for demonstration by object lessons, &c., together with some very necessary facilities by which students may acquire practical experience.

The ground about this wormery has been trenched and planted with young mulberry trees to serve in case of need on the spot for a limited supply of leaf in emergencies, when, by reason of stress of weather or other cause, the usual supply from plantations may be cut off. To this is added, newly erected, a propagating bush shed, 77 ft. x 33 ft., now being filled with 2,500 cuttings of choice trees. Work is going on—ploughing and setting out young rooted plants in the 21-acre paddock, propagating largely cuttings for future applicants, pruning trees, clearing, &c.

On several occasions certain peculiar advantages favourable to Australian silk-growers—which have often been alluded to, though their value is still far from adequately comprehended—have been made manifest. Living worms just hatched and eggs to hatch in a few days were without previous notice requisitioned from Booral, and forwarded agreeably to demand to several distant places. Some travelled even by post without casualty, and lived to be reared their natural lives through and reproduce in localities distant 300 miles from the place of birth, and yet greater distances within and beyond the Colony. The significance of this still remains to be fairly understood, but will doubtless in time be better esteemed.

One principal difficulty to be overcome is that of time—it is to get a total average of mulberry trees established in various parts of the Colony, which would become centres similar to Booral, to carry the industry through infantile troubles to a well-rooted art and trade recognized in our own statistics.

Besides by correspondence, a great deal of advice and practical explanation has been and is given when possible in person. The latter it is hoped will be more widely extended in the immediate future. Printed notes for the use of applicants will shortly be provided for distribution.

### Sugar Beet.

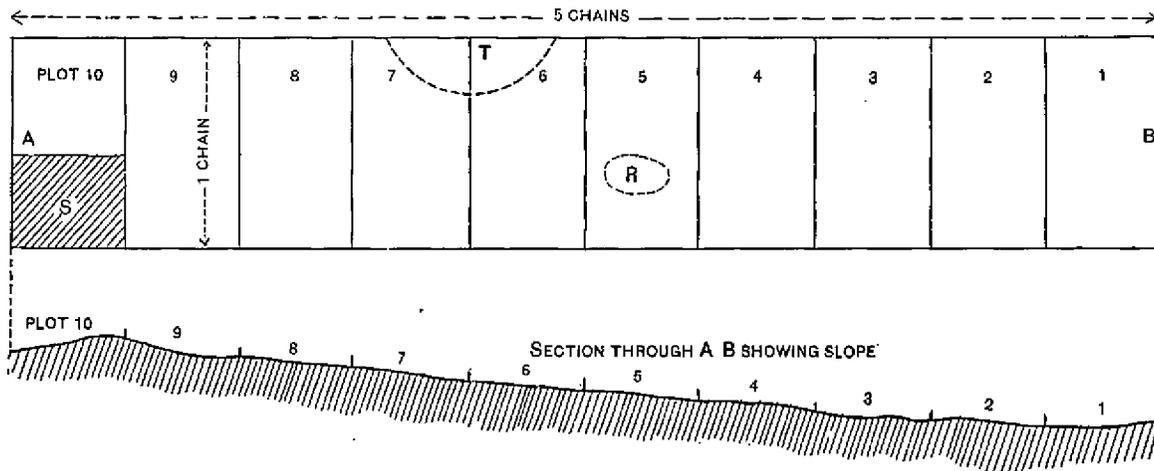
Mr. Van de Velde has made the following report on the experiments which have recently been made at Tenterfield in the cultivation of sugar beet:—

On the 13th of March, 1894, in a letter addressed to the Hon. T. M. Slattery, Mr. Van de Velde drew attention to the fact that, in his opinion, sugar beet would thrive in many parts of this Colony, and suggested that experiments be made in view of the introduction of this great agricultural industry. The matter was warmly taken up by Mr. Charles A. Lee, representing in Parliament the Tenterfield District. On his representations the Minister kindly decided that a variety of suitable sugar beet seeds should be imported from France, and that they should be gratuitously distributed to any farmer who might apply for same.

To stimulate the farmers of his electorate, Mr. Charles A. Lee offered a series of cash prizes to the amount of £25 for the production of the best quarter of acre of sugar beet. About sixty farmers entered their names, but only about forty took the trouble to plant the seed.

Having requested Mr. Charles A. Lee to find a farmer who would agree to grow an experimental half acre under Mr. Van de Velde's supervision, he induced Mr. W. H. Walker, of Tenterfield Station, to accept the offer, and this gentleman kindly placed at his disposal the land, the farm implements, and all the required hand labour to properly carry out the experiment. Mineral manures of different descriptions were supplied by the Department of Agriculture.

Owing to the great distance of Tenterfield from the metropolis, Mr. Van de Velde had not the opportunity of selecting the land for the experimental plot, and regrets that, as an experimental field for testing the value of manures, the chosen plot was not very suitable, it being placed on a slope as per plan below.



The

The half acre was divided into 10 plots, which received different fertilisers. To obtain absolutely reliable results as to the relative merits of those fertilisers, all the plots would require to be placed in similar conditions of drainage, and this was not the case. The experiment, as will be seen, is conclusive nevertheless.

Plot No. 10, which received no manure, was partly swampy, which was only discovered after the first rain, when it was too late to obviate it. On nearly half of it, on spot marked S, very few roots have been gathered in consequence. In plot No. 5 was a rock sticking out on spot marked R, and on plots 6 and 7, on spot marked T, the subsoil had been brought to the surface, which is prejudicial to the proper growth of sugar beet.

Mr. Van de Velde arrived in Tenterfield on the 9th of October, 1894, and found the land very dirty with stubbles of the previous corn crop. It had been ploughed before the winter, and we cleaned it as well as we could. The half acre was harrowed and rolled, and the artificial manures were spread broadcast over the 10 plots, and ploughed in about 5 in. deep. Then the surface was harrowed and rolled again a couple of times to make the seed-bed as fine as possible. Beetroot land cannot be made in a couple of days; it takes two or three seasons of proper cultivation before it can be called by that name. However, the land was in as good a state as possible under the circumstances, and the degree of dampness in the soil being excellent, everything was favourable to the proper germination of the seed. Eighteen varieties of seed were supplied by the Department of Agriculture, and each of them was planted on lines across the ten plots, so that every variety might be tested on the different fertilisers. The planting was done between the 11th and 13th of October last, and the harvesting on the 14th May, but this could have been done five or six weeks earlier. The crop took less than six months to mature.



The system of planting the seed adopted in this case is shown in the above illustration, where two rows are being planted, and it also shows the fineness of the seed-bed, if compared with the land at the side of it, which shows the state in which Mr. Van de Velde found the land on arrival. Strings were tied across the field 18 inches apart, which indicates the distance between the rows. This was done in order to get the rows perfectly straight. In each row there is a man in front driving the holes 7 inches apart, wherein the following man drops three or four seeds, and the last man covers the seed with some fine soil and presses it down with the back of his hand. The holes were driven in the soil by small cubes of wood of 1 square inch surface by  $\frac{3}{4}$  inch high, fixed to a board having two handles. All the man had to do was to place this machine along the string and press it down with his foot, five holes being made at the time. This rustic method, clearly shown in the illustration, answered the purpose very well. It need hardly be pointed out that in practice, when sugar-beet is cultivated on a large scale, special seeding-machines are used, allowing the planting of an acre being done in about one hour's time. The seeds were soaked in cold water for about eighteen hours before being planted, and on the fourth and fifth days the green lines of the young plants, with the exception of one or two varieties, were all perfectly visible.

The germination of the seed on the whole was most satisfactory, and any misses that occurred must be attributed more to the want of sufficient fineness of the seed-bed than to the quality of the seed. The germination of the same seeds on the plots grown by a number of farmers in the same district was very imperfect, and the number of misses in the rows was considerable. The only reason was that the seeds had been planted too deep in badly prepared land. As an example, Mr. Van de Velde mentions the case of a farmer who ploughed up his land because the seed had not germinated. A large proportion of

of that seed did germinate after the ploughing was done, and roots grew among the corn crop which followed, the simple reason being that with the ploughing up the seed had been brought closer to the surface. As soon as the plants were up hoeing was started, the thinning was done in proper time, and the experimental half-acre was most carefully looked after by Mr. W. H. Walker's farm overseer.

During the first three months of their growth till the end of January the season was favourable, 16 inches of rain having fallen in about forty days. This rainfall is below the average, but quite satisfactory. A hailstorm which fell in December, however, did much injury, having partly destroyed the leaves, the principal organs for the elaboration of the sugar in the roots. These hailstorms are to be expected, it is presumed, in every season in the New England district. From the 1st of February an unprecedented drought set in, which is clearly shown in the following table showing the total rainfall in Tenterfield during the months of February, March, April, and May, and the number of rainy days during the last ten years. This information has been kindly supplied by Mr. H. C. Russell, Government Astronomer:—

Years .....	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.
Total rainfall .....	14.33	12.11	5.65	11.21	25.95	9.20	21.01	20.92	11.92	3.75
Rainy days .....	20	34	21	40	61	41	40	56	49	28

Only 3.75 inches of rain fell this year during those four months, and, as the results of the experiment are eminently satisfactory, it indicates that no drought is to be feared in Tenterfield for the successful cultivation of sugar beet. It must be observed that a dry-ripening season is favourable to the elaboration of sugar in the roots. Mr. Van de Velde considers, however, that last season the dry weather set in too early, and it has been so severe that since the middle of February the growth of the roots has been completely stopped, and the leaves have been regularly burned down. Many roots withered up in the ground.

The season has, therefore, been anything but favourable to the production of large crops, and it is believed that in an ordinary year, though the roots may not be richer in sugar, the yield of sugar per acre will be greater, provided that more roots are planted per acre than was the case during this first year's experiment.

As far as Mr. Van de Velde's present experience goes of the soils and climate of Tenterfield, and taking into consideration the rainfall during the last ten years, he is of opinion that the best crops will be obtained by planting at 18 inches between the rows and 5 inches between the roots in the rows. This would give 69,696 roots to the acre, and supposing them to weigh 12 oz. on an average, the acre would yield over 23 tons of roots. This is considerably above what is obtained in other sugar-beet countries, but in none of those countries have they a climate like this. He would even venture to say that in Europe they grow good crops, in spite of their unfavourable climate, by science and skill.

The ten plots were manured as follows:—

<p>Plots</p> <p>No. 10 No manure.</p> <p>„ 9 { 14 lb. sulph. of ammonia = 280 lb. per acre.</p> <p>„ 9 { 23 lb. Thomas' phosphate = 460 lb. „</p> <p>„ 9 { 9 lb. potash chloride = 180 lb. „</p> <p>„ 8 { 14 lb. sulph. of ammonia = 280 lb. „</p> <p>„ 8 { 10 lb. superphosphate = 200 lb. „</p> <p>„ 8 { 9 lb. potash chloride = 180 lb. „</p> <p>„ 7 { 45 lb. dried blood = 900 lb. „</p> <p>„ 7 { 10 lb. superphosphate = 200 lb. „</p> <p>„ 7 { 9 lb. potash chloride = 180 lb. „</p> <p>„ 6 { 7 lb. sulph. of ammonia = 140 lb. „</p> <p>„ 6 { 22 lb. H. &amp; E. Albert's P. K. N. = 440 lb. „</p>	<p>Plots.</p> <p>No. 5 { 15 lb. superphosphate = 300 lb. per acre.</p> <p>„ 5 { 9 lb. potash chloride = 180 lb. „</p> <p>„ 4 { 25 lb. H. &amp; E. Albert's P. K. N. = 500 lb. „</p> <p>„ 3 { 14 lb. sulph. of ammonia = 280 lb. „</p> <p>„ 3 { 9 lb. potash chloride = 180 lb. „</p> <p>„ 2 { 22 lb. nitrate of soda = 440 lb. „</p> <p>„ 2 { 15 lb. superphosphate = 300 lb. „</p> <p>„ 1 { 22 lb. nitrate of soda = 440 lb. „</p> <p>„ 1 { 9 lb. chloride of potash = 180 lb. „</p>
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The following tables give the results of the experiment:—

Varieties of Sugar-beet.	Number of Plot.	Number of Rows of 11 Yards.	Net Weight of Trimmed Roots.	Rate of Roots per acre.	Density of Juice at 15° centigrade.	Cane Sugar per 100 <sup>cs</sup> of Juice.	Remarks.
Vilmorin improved ...	1	2	78	15 6 1 20	6.5	14.1	This variety has grown well under the ground; roots small; few misses in the rows.
	2	2	84	16 10 0 0	7.2	16.2	
	3	2	69	13 11 0 0	7.6	17.2	
	4	2	76	14 17 3 12	7.2	16.2	
	5	2	85	16 13 3 20	8.0	18.1	
	6	2	80	15 14 1 4	8.0	18.1	
	7	2	88	17 5 2 24	7.7	17.4	
	8	2	80	15 14 1 4	7.5	16.9	
	9	2	78	15 6 1 20	7.8	17.7	
	10	2	31	6 2 2 20	8.4	19.1	
White red top .....	1	2	76	14 17 3 12	8.4	19.1	I am afraid some mistake has been made in marking the seed. No red tops were noticed, and the roots had all the appearance of improved Vilmorin.
	2	2	78	15 6 1 20	8.4	19.1	
	3	2	73	14 6 3 4	7.3	16.5	
	4	2	83	16 6 0 8	8.0	18.1	
	5	2	85	16 13 3 20	8.9	20.5	
	6	2	84	16 10 0 0	9.0	20.7	
	7	2	84	16 10 0 0	8.4	19.1	
	8	2	79	15 10 1 12	8.3	18.9	
	9	2	88	17 5 2 24	8.7	19.9	
	10	2	39	7 13 0 24	8.4	19.1	

Varieties of Sugar-beet.	Number of Plot.	Number of Rows of 11 Yards.	Net Weight of Trimmed Roots.	Rate of Roots per acre.	Density of Juice at 15° centigrade.	Cane Sugar per 100° of Juice.	Remarks.
			lb.	Tons cwt. qr. lb			
Yellow	1	3	131	17 5 2 24	7.0	15.7	This seed was a mixture of red tops and yellow.
	2	3	135	17 13 2 8	7.2	16.2	
	3	3	123	16 13 3 20	7.4	16.7	
	4	3	152	19 12 3 12	7.2	16.2	
	5	3	114	14 17 3 12	6.7	14.9	
	6	3	120	15 14 1 4	7.2	16.2	
	7	3	152	19 12 3 12	7.7	17.4	
	8	3	146	19 0 2 0	7.7	17.4	
	9	3	140	20 4 2 16	8.4	19.1	
	10	3	63	8 5 0 0	7.3	16.5	
White Imperial improved.	1	2	99	19 11 0 0	8.5	19.4	Grown well underground; no misses; beautiful hard heavy roots. Rock in the way of plot 5.
	2	2	92	18 1 1 20	8.3	18.9	
	3	2	73	14 6 3 4	8.7	19.9	
	4	2	88	17 5 2 24	8.7	18.9	
	5	2	85	16 13 3 20	8.9	20.5	
	6	2	98	19 0 2 0	8.0	18.1	
	7	2	110	21 12 0 0	8.7	19.1	
	8	2	100	19 0 1 16	9.5	22.5	
	9	2	70	13 15 0 0	8.3	18.9	
	10	2	52	10 4 1 4	8.3	18.9	
Blanche No. 3	1	2	99	19 11 0 0	7.8	17.7	Grown well underground, but a certain number of misses in rows. Rock in the way of plot 5.
	2	2	96	18 17 0 16	8.7	19.9	
	3	2	73	14 6 3 4	9.5	22.0	
	4	2	75	14 14 0 0	8.5	19.4	
	5	2	60	11 15 2 24	8.2	18.6	
	6	2	90	17 13 2 8	8.3	18.0	
	7	2	84	16 10 0 0	8.5	19.4	
	8	2	84	16 10 0 0	8.5	19.4	
	9	2	63	12 7 2 0	8.5	19.4	
	10	2	33	6 2 9 16	8.2	18.6	
Bis collets verts	8	1½	70	13 15 0 0	9.7	25.5	Not sufficient seed to complete the two rows. Beautifully shaped roots.
	9	2	88	17 5 2 24	9.7	22.5	
	10	2	73	14 6 3 4	8.8	20.2	
Rose No. 5...	1	4	131	.....	.....	.....	It was not found necessary to test any of this variety owing to their rank growth. Appearance of mangels.
	2	4	244	.....	.....	.....	
	3	4	200	.....	.....	.....	
	4	4	153	.....	.....	.....	
	5	4	167	.....	.....	.....	
	6	4	233	.....	.....	.....	
	7	4	179	.....	.....	.....	
	8	2½	156	.....	.....	.....	
	9	2	164	.....	.....	.....	
	10	2	58	.....	.....	.....	
Bis Rose No. 4	1	2	128	25 0 1 4	8.9	20.5	Here were a large number of misses—large roots. It also seemed to be a mixture of seeds of two varieties.
	2	2	123	24 0 1 8	8.6	19.7	
	3	2	94	18 9 1 4	9.2	21.5	
	4	2	114	22 7 1 8	9.3	21.7	
	5	2	93	18 6 3 24	8.7	19.9	
	6	2	141	27 13 3 20	8.4	19.1	
	7	2	133	26 0 1 0	8.8	20.2	
	8	2	127	24 18 3 20	8.1	18.4	
	9	2	114	22 7 1 8	8.0	18.1	
	10	2	130	25 1 2 24	8.3	18.9	
Blanches No. 4	1	2	98	19 0 2 0	8.5	19.4	Roots well in ground, but frequent misses.
	2	2	99	19 11 0 0	8.7	19.9	
	3	2	69	13 11 0 0	9.3	21.5	
	4	2	93	18 5 1 12	8.9	20.5	
	5	2	77	15 0 1 0	8.8	20.2	
	6	2	95	18 13 0 24	8.9	20.5	
	7	2	100	19 14 2 12	9.3	21.5	
	8	2	98	10 0 2 0	8.5	19.4	
	9	2	103	20 4 2 16	8.3	18.9	
	10	2	91	17 17 2 0	7.7	17.4	
Bis Roses, No. 3	1	2	146	28 13 2 8	7.2	16.2	Roots grown well under ground, and even in size; few misses in the rows.
	2	2	139	27 6 0 8	8.2	18.6	
	3	2	82	16 0 0 20	8.5	19.4	
	4	2	108	21 8 0 24	8.8	20.2	
	5	2	99	19 11 0 0	8.7	19.9	
	6	2	125	24 11 0 0	9.0	20.7	
	7	2	124	24 7 0 16	8.5	19.4	
	8	2	125	24 11 0 0	9.0	20.7	
	9	2	159	31 4 3 8	7.9	17.9	
	10	2	110	21 11 1 0	8.3	18.9	

Varieties of Sugar-beet.	Number of Plot.	Number of Rows of 11 Yards.	Net Weight of Trimmed Roots.	Rate of Roots per acre.	Density of Juice at 15° centigrade.	Cane Sugar per 100 <sup>c</sup> of Juice.	Remarks.
			lb.	Tons cwt. qr. lb.			
Bis Rose.....	1	2	99	19 11 0 0	7.3	16.5	Well grown roots; some misses in the rows.
	2	2	93	17 15 2 4	7.3	16.5	
	3	2	81	15 18 0 24	7.4	16.7	
	4	2	86	16 17 3 12	8.2	18.6	
	5	2	81	15 18 0 24	8.8	22.0	
	6	2	95	19 0 2 0	9.0	20.7	
	7	2	78	15 6 1 20	8.7	19.9	
	8	2	93	18 6 3 24	8.6	19.7	
	9	2	96	18 17 0 16	8.1	18.4	
	10	2	90	17 12 1 8	8.8	20.2	
Bis Blanches .....	1	2	131	25 14 2 16	7.5	16.9	These roots are very large and pronged; it is surprising the density of the juice is so good. The roots were very red, which does little agree with the name on the packet.
	2	2	135	26 10 1 12	7.0	15.7	
	3	2	132	25 18 2 8	7.5	16.9	
	4	2	134	26 6 1 20	7.7	17.4	
	5	2	147	28 7 2 20	7.5	16.9	
	6	2	164	32 4 1 4	8.4	19.1	
	7	2	136	26 14 1 4	8.3	18.9	
	8	2	164	32 4 1 4	8.0	18.1	
	9	2	156	30 12 3 12	8.3	18.9	
	10	2	164	32 4 1 4	7.6	17.2	
Allemande acclimatée	1	2	100	19 12 3 12	7.4	16.7	This variety was well-grown in the ground, and there being no misses the roots were of splendid even size and weight.
	2	2	124	24 7 0 16	7.7	17.4	
	3	2	97	19 1 0 1	8.0	18.1	
	4	2	97	19 1 0 1	8.1	18.4	
	5	2	89	17 9 2 16	8.4	19.1	
	6	2	100	19 12 3 12	8.1	18.4	
	7	2	104	20 8 2 8	8.2	18.6	
	8	2	107	21 0 1 12	8.4	19.1	
	9	2	100	19 12 3 12	7.7	17.4	
	10	2	90	17 12 1 8	8.0	18.1	
German small-rooted, white.	1	2	91	17 17 2 0	7.3	16.5	Well in the ground and few misses. Some roots died in the ground in consequence of the intense drought.
	2	2	107	21 0 1 12	7.4	16.7	
	3	2	108	21 2 2 0	7.8	17.7	
	4	2	103	20 4 2 16	7.9	17.9	
	5	2	92	18 1 1 20	7.9	17.9	
	6	2	102	20 0 2 24	7.8	17.7	
	7	2	123	24 0 1 8	8.0	18.1	
	8	2	120	23 11 1 20	7.9	17.9	
	9	2	130	25 1 2 24	8.1	18.4	
	10	2	89	17 9 2 16	8.8	20.2	
Blanche, No. 1. ....	1	2	72	14 2 3 12	8.1	18.4	Roots well grown, small, but even in size. Some died and withered in the ground.
	2	2	79	15 10 1 12	8.0	18.1	
	3	2	56	11 0 0 0	8.4	19.4	
	4	2	71	13 18 0 8	8.0	18.1	
	5	2	58	11 7 3 12	8.7	19.9	
	6	2	83	16 6 0 8	8.6	19.4	
	7	2	79	15 1 1 12	8.4	19.1	
	8	2	89	17 9 2 16	8.6	19.7	
	9	2	78	15 6 1 20	8.8	20.2	
	10	2	59	11 11 3 4	8.5	19.4	
Klein Vanzeleben.....	1	3	126	16 12 0 23	8.7	19.9	Roots well grown and not very many misses. Subsoil was ploughed up in plots 6 and 7, where misses were frequent in consequence.
	2	3	144	18 17 0 12	8.4	19.1	
	3	3	130	17 0 0 26	9.0	20.7	
	4	3	125	16 10 0 0	8.7	19.9	
	5	3	102	16 17 1 8	8.7	19.9	
	6	3	139	18 6 3 24	8.4	19.1	
	7	3	141	18 9 1 4	9.0	20.7	
	8	3	152	20 0 2 24	8.9	20.5	
	9	3	157	20 8 2 8	9.2	21.2	
	10	3	101	13 7 0 16	8.1	18.4	
Blanche Elite .....	1	2	97	19 1 0 1	9.6	22.2	Roots well grown and few misses.
	2	2	95	18 13 0 24	7.9	17.9	
	3	2	88	17 5 2 24	9.4	21.7	
	4	2	76	14 17 3 12	9.0	20.7	
	5	2	64	12 11 1 20	8.0	18.1	
	6	2	86	16 17 3 12	9.0	20.7	
	7	2	93	18 5 3 24	8.8	20.2	
	8	2	87	17 1 3 4	9.1	21.0	
	9	2	94	18 9 1 4	9.1	21.0	
	10	2	70	13 15 0 0	8.9	20.5	
Vilmorin Improved ...	1	3	112	14 14 0 0	9.7	22.5	The roots were well in the ground, and there were very few misses, except in row 6 where the subsoil was ploughed up.
	2	3	143	18 13 0 24	9.0	20.7	
	3	3	144	18 17 0 12	8.7	19.9	
	4	3	124	16 6 0 8	8.9	20.5	
	5	3	93	12 0 1 12	8.3	18.9	
	6	3	164	21 11 1 0	8.1	18.4	
	7	3	129	16 17 3 12	8.6	19.7	
	8	3	137	17 17 2 0	8.7	19.9	
	9	3	135	17 13 2 8	8.4	19.1	
	10	3	86	11 7 3 12	8.4	19.1	

The variety blanches No. 2, of which one row was planted, is not shown in the preceding tables, as it was a complete failure. This failure proves nothing against the variety, but everything against this particular supply of seed.

There were altogether 40 rows of 5 chains long, and 18 inches apart, which is  $\frac{1}{16}$  less than half an acre.

The following table shows the results of each plot, adding all the varieties together:—

Plots .....	1	2	3	4	5	6	7	8	9	10
Net weight in lb. . . . .	1,564	2,010	1,697	1,789	1,591	2,002	1,937	2,014	2,013	1,429
Rate per acre . . . . .	t. c. qr. lb. 18 6 0 8	t. c. qr. lb. 19 14 2 16	t. c. qr. lb. 16 14 0 12	t. c. qr. lb. 17 11 1 20	t. c. qr. lb. 15 12 2 0	t. c. qr. lb. 19 13 0 24	t. c. qr. lb. 19 0 0 19	t. c. qr. lb. 19 15 2 4	t. c. qr. lb. 19 15 1 12	t. c. qr. lb. 14 0 2 24

The roots were tested by the density of the juice. This is only an approximate method, which represents averages. It has been found after a large number of tests that beet juice at 5° density, contains at least in 100° 2 grains of sugar per 1° of density. But the quantity of sugar in the root increases with the density of the juice. The method is based on that presumption. All the tests were made on the juice extracted from five or six roots of each variety, and they are therefore entirely reliable.

Mr. Edward W. Knox having expressed a desire to receive some roots, to get them analysed in the laboratory of the Colonial Sugar Company, 35 roots were forwarded from Tenterfield. Unfortunately all the varieties from the different plots had been mixed together by that time, and therefore all that those analyses show is the extraordinary richness in sugar of those roots.

In the 35 roots which were analysed by the Colonial Sugar Company, 11 came from the above plots. The following is the result of those analyses:—

Soluble—					
Cane sugar .....	17.89	19.51	16.08	22.22	15.66
Fruit sugar .....	.20	.46	0.26	.45	.25
Other organic matter.....	2.13	2.99	2.62	3.71	3.48
Ash .....					
Insoluble—					
Fibre .....	4.37	4.37	4.82	5.42	3.58
Ash .....					
Water .....	73.23	72.67	76.22	68.20	77.03
	100.00	100.00	100.00	100.00	100.00
Quotient .....	87.7	85.00	84.8	84.2	80.8
Weight of root .....	1.38	1.00	0.99	0.70	0.90

Soluble—						
Cane sugar .....	19.90	20.13	20.56	24.75	22.11	20.33
Fruit sugar .....	.92	.29	.31	.28	.24	.30
Other organic matter.....	3.63	2.81	2.40	2.17	2.75	3.80
Ash .....						
Insoluble—						
Fibre.....	4.55	4.99	4.54	5.38	4.74	6.36
Ash .....						
Water .....	71.60	71.78	72.19	67.42	70.16	69.21
	100.00	100.00	100.00	100.00	100.00	100.00
Quotient .....	83.4	86.7	88.4	91.0	88.1	83.2
Weight of root .....	0.59	.73	.67	.63	0.51	.42

The other 24 analyses were made on roots grown by two farmers, and their average sugar percentage is above 16 per cent.

Not much can be said about the plots grown by the farmers generally. Owing to their inexperience in the cultivation of this crop, the seed was badly planted, as already pointed out, and the germination was very imperfect. Had it not been for the very dry season, the roots, owing to the large space between them, would have acquired enormous proportions, and the sugar contents would probably have been low. However, their experience of last season will be useful to them for the trials on a much larger scale, which they contemplate making during the coming season.

In conclusion, Mr. Van de Velde says that in his opinion the prospects of the introduction of the beet-sugar industry in the table-lands of this Colony are extremely brilliant. He can safely state that no country where this great agricultural industry is carried out has soil and climate equal to those of New South Wales. It is true that labour is dearer in this part of the world than in Europe, but ample compensation will be found in the cheapness of the land, the better and larger crops, the larger extent of the season for sowing and harvesting, the better market for the manufactured products, &c.

The difficulty in the introduction of the industry in these colonies is the backward state of farming and agriculture, brought about by the too-flourishing conditions of the past. The sugar-beet industry means intense cultivation and high farming, with production of manure with the bye-products of the farm to keep up the fertility of the land. The permanency of the industry can only be assured on those conditions. It will raise the present methods of agriculture and farming from their present level to the highest state of modern perfection, and it shows its importance from a national point of view.

The

The subjoined note has been submitted in connection with the above report by Mr. F. B. Guthrie, the Departmental Chemist:—

Although none of the beets submitted by farmers as grown from seed supplied by the Department have approached in sugar content those grown by Mr. Van de Velde, still the results obtained are sufficiently encouraging in showing that when the necessity for more careful and scientific cultivation is properly realised, there should be a great future for this crop in the Colony.

I am of opinion that the Department should encourage the cultivation of this crop in every way, not necessarily with the object of producing sugar, but as a farm-crop, more particularly as a fodder-crop, for which it is unsurpassed.

I have pointed out in my annual report how the proper cultivation of sugar-beet necessitates more systematic and scientific methods of farming, which is in itself a recommendation to the Department of Agriculture. The following results refer always to beets grown from seed distributed by the Department, identical with those supplied to Mr. Van de Velde.

Mr. G. Valder, at the Wagga Wagga Experimental Farm, sent a number of beets and 19 different varieties grown by himself at the Wagga Wagga Farm.

Mr. Valder has furnished a separate report, and I need only say here that the average sugar contents for the whole number was 16·2 per cent., the average weight of the individual roots being 8½ ounces. This is by no means a bad result, and is by far the best that has come under my notice before seeing Mr. Van de Velde's report.

Mr. J. L. Thompson, of the Hawkesbury Agricultural College, has also obtained very fair results under unfavourable conditions as to soil. Of the beets sent in by the farmers the results have been somewhat erratic, the tendency in most cases being to grow the beets for size, want of proper cultivation and manuring being responsible in many cases for the formation of side roots and general bad shape. Well-shaped beets of about 1 lb. weight are the exception, but where these have been produced the high sugar content obtained shows that the fault in other cases lies in the cultivation and not in the seed supplied, nor in any climatic disadvantage.

Mr. Van de Velde's report is a very instructive and valuable object lesson to the farmers in showing what can be done by systematic and scientific methods.

When it is remembered that before the sugar-beet was cultivated according to present methods (not many years ago) the highest sugar content was about 8 per cent. it will be realised what immense strides agricultural science has made in this direction alone.

2,498 packets of sugar-beet seed have been distributed by the Department to farmers during the past year.

### Dairying and General Agriculture.

Since last report the intervening period has been one of continued and ceaseless activity in dairying and other agricultural work.

The increasing number of personal applications for information at the offices of the Department, and the enlarged work of the Department generally have necessitated the officer dealing with the work, Mr. Dunnichiff, being detained in Sydney at times when his services were in much request in the country, and for several districts it has been found impossible to comply with the repeated demands for such assistance.

*Reports* have been made, or *Papers* written on the following subjects in response to enquiries from the public, or the requirements of the office:—Estimated costs of dairy factories and creamery buildings, with their equipments, &c., have been prepared for several districts; refrigeration and cool chambers for ditto; selection of dairy machinery (2); spading harrows, scarifiers, and cultivators; mangold planters and other seed-sowing machines; double and triple furrow ploughs; farm implements and machinery; potato culture and manures; potato diseases; tomato culture and diseases; onion cultivation as a field crop; rape cultivation (for seed); linseed (for oil and for stock feeding); sorghum and imphee (for stock); lathyrus sylvestris, or flat pea; horseradish culture; red clover, fertilisation and adaptability to various districts; vetches, clovers, and other forage plants; lavender cultivation and its products (2); castor oil as a commercial crop; castor oil, extraction of; imphee halapense, or "Johnson Grass"; chicory cultivation for export; "Smart" weed; "smut" in cereals; reports on imported seeds (2); wheat samples; maize (in cob), new varieties; sunflower (for feed, oil, or manure); sunflower (extraction of oil); importation of bees from Europe; permanent pastures; grasses for mixed pastures; pastures of South Monaro; climates and lands of New South Wales; eradication of weeds; sowing of cereal crops; advice on cropping with wheat, barley, rye, vetches, imphee, rape, swedes, field carrots, cabbages, and peas for stock feeding; rations for dairy cattle; manufacture of maizena, arrowroot, and starch; essential oils of tansy, thyme, and spearmint; food preservatives (various); preserving eggs; a milk purifier; milk testing; purchasing milk or cream; manipulation of milk and cream, and churning; report on analyses of cheese; costs and profits of dairy farming and manufactures; packing butter for export as ordinary cargo; report on butter exportation, and the local trade, 1894 (2); differential duties affecting Australian dairy products in France; advices on making, packing, transit, and export of cheese (2); Continental buyers and markets for Cheddar cheese; assistance to buyers from France, Holland, Belgium, and Germany, for various raw products; exportation of hares and rabbits (2); transit and other charges on rabbits for export; differential duties affecting Australian meats in Europe; shipping maize and wheat to England; the dairying industry, its prospects and the best means for its development.

In the autumn of last year an effort was made to extend the sale of New South Wales products in Canada, believing that the alternate seasons would furnish fitting opportunities. Liberal samples were obtained of wines, tinned meats, butter, honey, &c., and despatched per S.S. "Warrimo" to Vancouver, British Columbia; to the Chamber of Commerce at Sudbury, for Ontario; and to the Board of Trade, Montreal. The reports from each place were very favourable, and it was anticipated trade would follow.

About this time also an effort was made to place fresh, unsalted butter, made from sweet cream, upon the Paris market, the Department having been informed that if such could be successfully done, a very profitable trade might be opened for it. The butter was made under the supervision of Mr. Dunnichiff, and by him duly forwarded. The report of this also was very satisfactory, but the excessive import duty in France on unsalted butter was found to be prohibitory. The aid of the Imperial authorities was sought to obtain some concession, in the hope that such a large market might be opened to our producers, but without avail. Otherwise, the experiment was a success, and without any loss to the Department.

In connection with the matter of the shipments of Cheddar cheese from the H. A. College to London, it may be worthy of note that the package which has been used was specially designed for that purpose by Mr. Dunnicliff, and is neat, light, very strong, easily handled, and inexpensive. It has repeatedly been commended by experts in London, and is worthy of general adoption.

A portion of the work in the country has been covered by visits to various centres, with the object of affording instruction and aid to those desirous of establishing the dairying industry in their midst. A large number of meetings have been held, and addresses given on dairying and allied subjects, which appear to have been appreciated, and the information given has been largely acted upon.

In the extension of co-operative dairying and the formation of companies on that basis, considerable assistance has been rendered in almost *every particular of principle and detail relating to the work*. As a consequence, large numbers of farmers are now feeling the benefits of this industry who were previously existing on the proceeds of arable crops.

A considerable portion of the last three months has been occupied by Mr. Dunnicliff with the matter of affording assistance, by way of loans of seeds, to enable farmers who had lost their crops and substance by floods to re-seed their lands. These extended along the Hawkesbury, Hunter, Williams, Patterson, Wollamba, and Manning Rivers. About 800 cases were investigated, and aid granted according to their several needs. The relief consisted of seed wheat, barley, rye, vetches, peas, lucerne, and potatoes; and should a favourable season follow, it is confidently anticipated that the larger part of these loans will be early repaid.

### Subsidies to Agricultural Societies.

As was foreseen in 1893, the inauguration of the system of direct checking of the accounts in connection with the subsidies to Agricultural Societies—butt receipts, bank books and balance sheets of the Agricultural Societies making application for subsidy—has proved, after a trial of over fifteen months, very successful. The whole of the societies have cheerfully acquiesced in the arrangement, with the result that the accounts of every society are now systematically investigated, initialled, and the claims dealt with without difficulty or misunderstanding.

Besides the submission of their receipts and bank books for examination, the societies were invited to adopt a general form of receipt books specially arranged for convenience in checking subscriptions and donations, and it is gratifying to note that almost without exception, as their ordinary books are exhausted, the societies are adopting the new ones.

In October, 1894, Mr. Fitzgerald resigned, and the work was entrusted to Mr. W. H. Clarke, who has had charge of it since.

For the year 1894, 247 separate accounts of claims were rendered, and the claims of 89 societies satisfactorily settled. This is an increase on the number of societies receiving subsidy for 1893, and goes to show that the adoption of the membership minimum has rather stimulated the societies than otherwise. This will be the more readily understood when it is taken into consideration that in a great number of cases the subscription fees of societies were greatly reduced, rendering an increased number of subscribers necessary to qualify for subsidy. Indeed this reform with respect to membership fees is one of the most important effected during the year. Up to this year it was customary for societies to allow to persons paying a subscription in excess of the actual membership fee certain privileges with respect to admission and free entry of exhibits. Seeing the length of time this practice had obtained unchallenged, it was only to be expected that a proposal to amend it should meet with some opposition. But the difficulty has been satisfactorily settled, and there is now scarcely a society interested which has not amended its rules in order to provide for a single membership fee for gentlemen, and a small fee for ladies and youths.

Another important reform is the alteration of the financial years of the societies so as to conform with the Government financial year, and already a large number of societies have adopted this arrangement.

During 1894 about 350 letters, and up to June, 1895, about 170 letters and inquiries have been received from societies with respect to subsidy claims, show matters, &c. A large number of letters have also been sent to societies giving advice as to accounts, rules, and minor details.

Mr. Clarke keeps a statement of applications for subsidy, and records the action taken with respect to each, as also a cash account against the vote, in order that the amount expended may at any time be ascertained.

A record is also kept of the societies' rules and regulations, and any alterations noted, and a list of the shows, compiled each month, is published in the *Agricultural Gazette*.

### Conferences.

With the view of affording the fruit-growers an opportunity of discussing the various questions affecting their industry invitations were issued to representative orchardists in all the chief districts of the colony, and gentlemen interested in the export trade. These delegates, to the number of , assembled in Sydney on the 6th February, 1895, and the proceedings lasted till the 9th February.

Papers dealing with new methods of cultivation, pruning, application of manures, and treatment of insect and fungus pest and weeds, were read by delegates and officers of the Department, and discussed. The question of the opening up of new markets, and the development of the export trade generally, was exhaustively dealt with, and papers were read on all the latest and successful systems of picking, packing, and shipping fruit, as well as the most suitable varieties of each particular fruit to grow for this purpose.

The proceedings have been printed for distribution to all fruit-growers interested, and there can be no doubt that the information embodied in the report, coming as it does as a result of the aggregate experience of a large body of successful orchardists in each important fruit-growing district of the colony, is of the greatest practical value, and cannot fail to do much to assist the advancement of the industry.

Before separating, the Conference arranged for the appointment of a Board of Advice to assist the Minister in all matters connected with the advancement of the wine industry.

The Conference just referred to having been confined strictly to matters connected with fruit growing, it was necessary, in order to enable farmers and pastoralists to discuss questions of equal importance to their industries, to convene a second conference of farmers' and pastoralists' delegates. Invitations were sent out through the Agricultural Societies, and on the 13th February, 1895, 105 representatives assembled in Sydney, and sat till the 16th February, 1895.

Papers

Papers on improved methods of cultivation, fertilisers, new fodder crops, dairying, treatment of pests—animal, insect, and fungoid, and noxious weeds,—opening up of new markets, with many other matters of vital importance to our farmers, were read and discussed.

A report of the proceedings of this Conference has been issued by the Department in the form of a hand-book of 181 pages, and will be distributed to all farmers who wish to avail themselves of the large amount of practical information it contains with respect to their calling.

### The Artist.

The artist, Mr. Burton, and his assistant, Mr. Wills, have been busily engaged on the following work during the year 1894:—

#### *Pathological Branch.*

Preparing coloured plate, showing diseases on fig, loquat, lemon, apple, bean, rose-leaf, and apricot; making thirty-seven pen and ink drawings, illustrating article on budding; making several pen and ink drawings, illustrating article on planting; making eight pen and ink drawings, illustrating blight on apples, four (*Podosphaera Kunzei* Lev.), and four (*Mytilaspis citricola*); making pen and ink drawing, showing diseases on oranges; lithographing coloured plate, thirteen subjects, showing life-history of phylloxera.

#### *Botanical Branch.*

Making drawings for nineteen botanical plates of grasses, weeds, plants, &c., which entailed a great deal of time, it often being necessary to go into the country to obtain photographs and specimens to enable the artist to faithfully delineate the special characteristics of the different species.

#### *Stock and Poultry.*

Making twelve pen and ink drawings, illustrating article on spaying cows; taking eight photographs of military horses, and preparing same for blocks illustrating article on breeding horses for exportation; making large pen and ink drawing of horse showing thirty-three different diseases, for the Richmond Agricultural College; photographing and making pen and ink drawings of poultry, viz., buff cochins, langshans, minorcas, wyandottes, and houdans, for insertion in *Gazette*.

#### *Entomological Branch.*

Drawing and lithographing plate of nine subjects, showing life-history of red cedar moth.

#### *Inspectors Branch.*

Making four diagrams of machinery in connection with beet culture; making drawing of Agricultural College silo pit; making drawing of wine vat.

#### *Photography.*

Some considerable time has been spent in photographing horses, poultry, developing, printing, and finishing photographs of artesian bores, &c.; also in fixing up dark room.

#### *Miscellaneous Drawings.*

The artist has made several miscellaneous drawings, including the designing and drawing of Agricultural College certificate, and about fifteen drawings illustrating tobacco pamphlet.

NOTE.—The assistant has been engaged for some months assisting the Pathologist at Bong Bong in his investigation of sheep disease, and at the experimental farm at Wagga for the purpose of harvesting the experimental wheats for Dr. Cobb.

And during the year 1895, to the 30th June, for the

#### *Pathological Branch.*

Making coloured drawing of disease on orange; photographing diseased pear and apricots (five negatives); two coloured drawings of apricot, showing disease; drawing and photographing pear, showing disease; lithographing coloured plate, showing vine disease (phylloxera); making several drawings of sections of apples for Mr. Benson; making sketches and photos of Mr. Adams' fruit-dryer for *Gazette*; birds, showing useful and destructive species in connection with the growing of fruit; five full-page drawings in black and white; five coloured plates for lithographing (this occupied considerable time, as it represents twenty-one different specimens).

#### *Entomological Branch.*

Lithographing in colours one plate of *Cordyceps scottianus*; three plates in black and white, viz.: (1) *Cordyceps pili*, (2) *Cordyceps cranstoni*, (3) *Cordyceps trietena*, (3) species of *Cordyceps* and host insects (in situ); lithographing two plates in colours, illustrating article on potato blight for Mr. Helms; making enlarged photo. of fly (*Hippoboscena equina*) for Mr. Copeland; drawing diagram of milling for Mr. Guthrie; drawing of millet for Mr. Valder, to be reproduced in the *Gazette*; making several drawings for Mr. Olliff, illustrating his article on host insect; several drawings for Mr. Gale in reference to bees.

#### *Botanical Branch.*

Making nine botanical drawings of spinefix, marram grass, and red mahogany, &c.; photographing and collecting fresh specimens of same occupied considerable time.

#### *For Chemist.*

Matching over forty specimens of flour in colours for reference, and drawing diagram for same.

#### *Miscellaneous.*

*Miscellaneous.*

One enlarged drawing, showing stringing of hops, for Murrumbidgee Experimental Farm; touching up seven drawings of machinery; finishing drawings on stone of four plates of bulls for Mr. Thompson. Some considerable time has been spent in connection with the following:—In attending to correspondence *re Gazette* and loan of blocks, and the necessary supervision of blocks, also in photography and work relating to same; in moving to Lands Office and reorganisation. The assistant was engaged at the Wagga Experimental Farm during January, and assisted generally in the above work.

**Disease Investigations.**

During January and part of February, 1894, Mr. Helms was engaged at the investigations of bee diseases, that for sometime previously had greatly damaged the apiary of Mr. Kitching, near Campbelltown.

These investigations produced fairly successful results, inasmuch as the diseases were completely eradicated, after various more or less protracted experiments led to a method of checking their ravages.

The report made upon these diseases and their investigations appeared in the April number of the *Agricultural Gazette*. It is very satisfactory to record that since the diseases were eradicated from Mr. Kitching's apiary they have not reappeared there again, according to several communications since then received. Moreover, Mr. Kitching states, in a recent letter to the Department, that through the adoption of Mr. Helms' method a neighbour of his succeeded in curing several colonies attacked by the same diseases.

During March and April Mr. Helms was engaged on some entomological work, and was also occupied in assisting Dr. Cobb by making microscopical preparations in connection with his investigations in vegetable and animal pathology.

From the time he joined Dr. Cobb, when the latter resumed researches in the laboratory at Bong Bong, his stay at Bong Bong lasted till the middle of September, being there occupied with assisting Dr. Cobb. Besides that he made entomological and other zoological collections, partly for the researches of Dr. Cobb and partly with the object of depositing them in the museum of the Department.

Towards the end of September, Mr. Helms went to the Clarence River for the purpose of investigating certain potato diseases, which are found to be prevalent in that district, and at times doing great damage to the crops. These investigations occupied his attention from time to time during the months of October, November, and December.

The full report of the work in connection with various diseases of the potatoes and the insect pests attacking the same has appeared in the May (1895) number of the *Agricultural Gazette*, and is accompanied by two coloured plates.

The time not occupied by investigations into these diseases was devoted to collecting internal and external parasites from domesticated and indigenous birds and animals for Dr. Cobb's researches. For this purpose Mr. Helms dissected during his stay at Grafton upwards of 300 birds and animals of other classes. The results were very satisfactory, not only regarding an extensive collection of parasites, but also through the discovery of a great number of hitherto unknown species.

A brief tabulated report, with notes of observations concerning the hosts and habits of these parasites, has been prepared for Dr. Cobb's information. The further critical examination of the parasites will be reported upon in due course by Dr. Cobb. Mr. Helms also made entomological and botanical collections during his stay at the Clarence River, and paid two visits to the Sugar Company's Mills, at Harwood, for the purpose of obtaining some gum from diseased sugar-cane for chemical analysis. The process of collecting this gum was a very tedious one. After the cane has been cut into pieces at every node, the surface of the cut must be trimmed smooth to allow the gum to ooze out on an even plane. The globules formed by the gum have then to be carefully scraped off, and the collected gum has to be quickly dried on glass slides to prevent any decomposition setting in.

The early part of this year, 1895, Mr. Helms was engaged in the preparation of some of his collections and the completion of reports. Later on he received instructions to write some articles for the elucidation of certain abstruse phases of bee-life. Of these papers, Nos. 1 and 2 have appeared in the March and April numbers of the *Agricultural Gazette* respectively, and No. 3 the July number, and 4 and 5 are in preparation for those of August and September.

Besides making a few short trips in the country for various purposes, on the occurrence of phylloxera, near Liverpool, he was sent there to collect some winged specimens of this destructive insect. A large number of these were brought to the Department, and the method adopted for their suppression reported upon.

Being sent to Booral for the purpose of acquiring a knowledge of a certain method of silk-culture, he stayed at that place during May and June.

**Forestry.**

I have much pleasure in remarking that the efforts made by the Department during the last two years have brought into prominence, more than ever before, the excellence of our indigenous timbers and their value for many purposes.

The absolute necessity for decisive steps being taken for the permanent reservation of valuable timbered areas and for the protection of timber trees has been forced upon the attention of the Department. I have no doubt that much of the land that has been set apart from time to time, and reserved for timber, is of but little if any value for the purpose, and I am quite sure that large areas which contain most valuable timber have not been reserved. I cannot avoid expressing a feeling of regret that many valuable reserves or portions of reserves have at various times been revoked and thrown open for selection, and I have reason to think that considerable portions of such areas have been selected solely with the object of removing the timber. However, steps are, I am pleased to say, being taken to remedy this, and I believe that the efforts of this Department will be assisted by the Department of Lands.

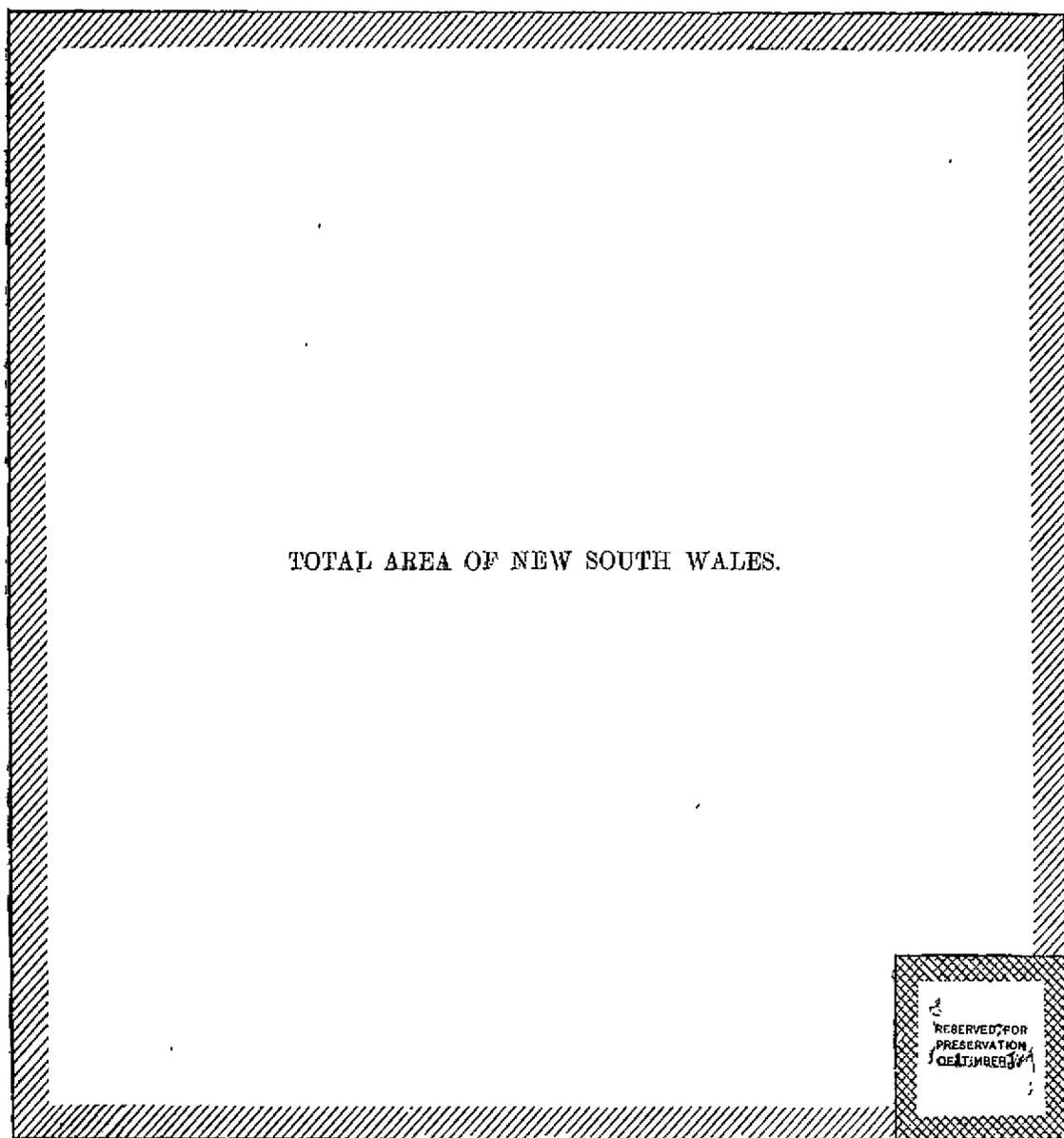
I may mention that considerable attention is being directed to forest conservancy by all civilised nations at the present moment, and that for a considerable time past European countries have made great efforts towards the proper preservation of their forests, and special care is taken in their management.

In this colony the waste of valuable timber has doubtless been enormous in the past, and I fear this still continues to a considerable extent, especially on lands alienated from the Crown. I trust, however, that in course of time the efforts made by this department will check this waste to a considerable extent.

The

The accompanying diagram shows the small proportion of land reserved for forests to the area of the colony. And when the exceptional value of hardwoods is considered, and the prospects that exist of a large export trade being opened up in the near future, it will, I think, be admitted that the Department is not unreasonable in urging that this comparatively small area, which will furnish employment for such a large number of men, should be permanently reserved and properly cared for.

SHOWING the relative size of the area "Reserved for the Preservation of Timber" in comparison with the Area of the Colony, = 3 per cent.



During the past eighteen months forestry operations have been considerably curtailed by the general depression, which affected in a very marked manner the local demands for timber. The work of the Department has, however, on the whole been very satisfactory, as new markets for our products have been sought, and a large number of samples, with information as to the uses and suitability of New South Wales timbers for various purposes, have been forwarded to Great Britain and other parts of the world. Particular attention has been given to the advertisement of our hardwoods, which for the construction of wharves, jetties, wood pavements, railway works, buildings, and other structures of a permanent and lasting character, are considered by reliable experts to be unsurpassable. In consequence of these efforts a deal of interest in the subject has been created in many of the principal centres of Europe, causing many enquiries through the channels of this Department, and it is gratifying to learn that already considerable orders have been placed in this colony for paving timbers for Great Britain, which, from the proved excellence of the timbers for that purpose, it is anticipated with confidence will lead to their further and more general use, and be the means of creating an extensive export trade.

*Office Work and Records.*—The administrative work of the Department has been carried out efficiently under the able supervision of Mr. W. S. Campbell, with the help of Mr. R. D. Hay, notwithstanding the reduction of the staff, and at the present time there are no arrears, the whole work of the office being up to date. During the first half of the present year current work was considerably increased in consequence of the forest thinning operations on Murray River red-gum reserves, which extra service was carried out without addition to the office staff, and for the same period the correspondence from abroad embodying enquiries on the subject of our timbers formed a considerable item. The policy with regard to the reservation of useful timbered areas and the cancellation of reserves not longer required in the interests of forest conservancy has been strictly adhered to, and has been extended in the direction of an endeavour to obtain the permanent dedication and control of the best and most useful areas, which subject has

has been promised the favourable consideration of the Department of Lands, and will, it is hoped, ultimately lead to the consolidation of areas, reduction in cost of supervision, and their comprehensive afforesting and improvement. An amalgamation of the record and correspondence staff of this office with that of the Mines Department has recently been effected with beneficial results. Appended is the statement of office records for the period under report.

Number of papers registered, 1894	...	...	...	...	...	8,040
" " to 30th June, 1895	...	...	...	...	...	5,169
Total	...	...	...	...	...	13,209
Number of letters issued, 1894	...	...	...	...	...	1,938
" " to 30th June, 1895	...	...	...	...	...	1,340
Total	...	...	...	...	...	3,278

*Distribution of Samples.*—The distribution of samples in advertisement of our timbers has, in addition to ordinary samples, comprised some very interesting specimens of durability, such as sections of ironbark sleepers from the permanent-way after twenty-five years' use, sections of piles from Circular Quay forty years driven, and wood blocks taken from city streets after bearing from nine to thirteen years' traffic. The following table indicates the distribution and variety of samples for the period:—

Samples.	Great Britain.	India.	France.	America.	Germany.	Africa.	Imperial Institute.	Local Distribution.	Totals.
Railway sleepers	1,011	6	.....	.....	.....	6	14	.....	1,037
General samples	457	26	40	66	110	96	.....	247	1,042
Paving blocks	140	.....	.....	.....	.....	.....	.....	92	232
Sawn timbers	.....	.....	.....	30,000 sq. ft.	.....	.....	.....	.....	30,000 sq. ft.
Pipe bowls and sticks	.....	.....	.....	.....	.....	.....	24	.....	24
Piles	.....	.....	.....	1	.....	.....	.....	.....	1
Timbers that have been in use, with particulars as to age.	124	5	2	27	6	6	4	38	262

#### Forest Improvement.

*Thinning and Planting.*—Thinning operations for the improvement of forests during 1894 comprised about 3,000 acres of pine at Wahgunyah and about 250 acres of red-gum forest near Moama. During the half-year to 30th June, 1895, the Department was enabled to considerably extend these operations, having been granted a special vote of £25,000 for this purpose; and up to date of this report further areas of about 45,000 acres of red-gum on the Murray, about 2,000 acres of coast-forest in the vicinity of Bateman's Bay, and about 7,500 acres of pine-forest at Narrandera, have been thinned out and improved. The average cost per acre for this improvement was at the following rates, viz.:—About 5s. 8d. per acre for red-gum, 4s. 6d. per acre for pine, and about 7s. per acre for the coastal areas. In connection with this work employment was given to about 420 men, earning wages averaging from 7s. to 9s. per diem, according to results; and it is confidently anticipated that in the course of a few years a very large return in revenue will result from this expenditure. In addition to the foregoing, a few isolated forest areas have been thinned out and improved, at the cost of pastoral lessees, but under the supervision of this Department.

*Planting.*—Planting operations for the period have not been on an extensive scale outside the work of the plantations, details of which are furnished under the heading *Nursery and Plantations*, operations on outside reserves comprising merely the experimental planting of a few young cedars in some of the brush areas, and the clearing and thinning out of areas formerly planted.

#### State Forest Nursery and Plantations.

At the State Forest Nursery, Gosford, the propagation of plants suitable for street avenue and forest area planting has been carried on as usual, a marked improvement being observable in every branch of the work. The improvements effected during the period under report comprised the proper drainage of inferior areas, the erection of a new bush house, small glass stove house, and cottage residence for the overseer, also the clearing and stumping of an additional area of 12 acres. Fairly successful results have been attained in rearing non-indigenous plants such as American hickories. The Pecan and Queensland nuts and a small quantity of the fodder plant *Polygonum Sachalinense* has been raised and distributed. Red cedar has been successfully grown, the estimated stock being 32,090 plants; white mulberry has been stocked largely, in view of demand in connection with sericultural pursuits, and an estimated stock of 28,000 plants is available, a considerable demand resulting in the distribution of 6,000 plants having already been experienced. Sixteen varieties of American tobacco were also raised, and 1,496 plants distributed. The following is the estimate of the present stock at Nursery, in which inferior growths have not been listed:—

Open rooted plants and shrubs	...	...	...	...	210,000
Trees and shrubs in pots	...	...	...	...	25,000
Trees and shrubs in boxes	...	...	...	...	20,000
Total...	...	...	...	...	255,000

The output of fruit, and ornamental trees and shrubs for the period was as follows:—

To reserves, plantations, artesian bores, and wells	...	25,249
To municipal bodies, public trusts, and commons	...	37,073
Total...	...	62,322

From

From the following table it will be seen that working expenses have been kept down to a satisfactory limit.

	£	s.	d.
Wages, January, 1892 ... ..	168	3	0
" " 1893 ... ..	188	4	4
" " 1894 ... ..	72	9	8
" " 1895 ... ..	70	19	3

*Plantations.*—The following is a record of planting operations on branch plantations for the period *Oxford*.—The planting of 4,167 red cedar, 3,000 ironbark, also yellow pine, black apple, brush box, white oak, and a few American ash, and plane trees, in all ... .. 17,037 trees.

*Moonbi.*—A portion of this area is devoted to tobacco and the balance to forest culture, the planting of which although considerably curtailed through the dryness of the season, comprised silky oak and varieties of the pine species, in all ... .. 6,386 "

*Glen Innes Reserves.*—A variety comprising red cedar, pines, plane trees, and catalpa were planted and are doing well, in all ... .. 553 "

*Hillgrove Water Reserve.*—A quantity of pine trees in variety were planted with good results, in all ... .. 500 "

*Artesian Bores and Wells.*—Surrounding these areas the total of trees planted was ... .. 773 "

Total planting on plantations, reserves, &c. ... .. 25,249 trees.

REVENUE for the one and a half-year ending 30 June, 1895.

Year ending 31 December, 1894.	Amount.	
Royalty, Class "C," at per 100 sup. feet—	£	s. d.
5,158,759 sup. feet .....	2,181	2 10
574 trees, at per tree (Tree Permit) .....	77	13 8
Miscellaneous .....	22	17 0
	2,281 13 6	
Licenses—		
Forest Reserves—		
Class "C" (with royalty) .....	283	0 0
Classes "A" and "B" (without royalty) .....	858	15 0
Wattle bark (without royalty) .....	83	0 0
Saw-mill sites .....	13	5 0
	1,238 0 0	
Crown lands (no royalty)—		
Cedar 245 .....	122	0 0
Quarry 216 .....	137	10 0
Woodcutters 6,164 .....	1,619	10 0
Fuel 2,404 .....	377	15 0
9,029	2,256 15 0	
Miscellaneous Revenue—		
Rent of prickly-pear leases .....	286	7 5
Sale of confiscated timber .....	130	19 8
*Penalties illegal timber cutting, &c. ....	139	5 6
	556 12 7	
Total Revenue for year 1894.....£	6,333 1 1	

\* 137 prosecutions, 111 convictions; fines, £139 5s. 6d., as above.

Half-year ending 30 June, 1895.	Amount.		Total for one and a half-year.
Royalty, Class "C," at 100 sup. feet—	£	s. d.	£ s. d.
2,886,621 sup. feet, also 1,186 trees .....	1,344	5 6	3,525 8 4
595 trees (Tree Permit) .....	80	4 0	157 17 8
Miscellaneous .....	2	3 8	25 0 8
	1,426 13 2		
Licenses—			
Forest Reserves—			
Class "C" (with royalty) .....	64	10 0	347 10 0
Classes "A" and "B" (no royalty) .....	491	0 0	1,349 15 0
Wattle bark (no royalty) .....	93	10 0	116 10 0
Saw-mill site .....	14	5 0	27 10 0
	603 5 0		
Crown lands (no royalty)—			
Cedar 228 .....	117	0 0	239 0 0
Quarry 101 .....	63	17 6	201 7 6
Woodcutters 4,066 .....	1,036	10 0	2,656 0 0
Fuel 1,702 .....	272	10 0	650 5 0
6,097	1,489 17 6		
Miscellaneous Revenue—			
Rent of prickly-pear leases .....	161	0 0	447 7 5
Sale of confiscated timber .....	78	9 9	209 9 5
Penalties illegal cutting, &c. (estimated) .....	70	0 0	209 5 6
Sale of wattle bark (Bargo Plantation) .....	49	19 4	49 19 4
	359 9 1		
Total Revenue for half-year 1895 .....	3,879 4 9		
Total Revenue for one and a half-year ending 30 June, 1895...£			10,212 5 10



should be a matter of surprise that, with our extensive western pine areas, so large a quantity of pine timber is imported from other parts of the world for local operations, more especially as the local pine cannot be rated as inferior, and has, at least, one additional advantage in being impervious to the attacks of white ants, a condition which does not apply to the imported, and it is only a question of reduction in railway freights that is necessary, in order to allow this valuable supply to compete successfully with the imported, and thus establish industries that would largely provide employment.

In connection with the demand for export, it may be mentioned that, in compliance with the request of shippers, an expert officer of this Department has been appointed to examine, classify, and brand timbers, and to issue certificates as to its quality; this measure, without being compulsory upon shippers, being sought as a standing guarantee by buyers in other countries, and on that account availed of by the principal exporters. An experiment has been inaugurated in the Milton district, under which timber required by millers shall be cut under the system to tree permits only, *i.e.*, a price per tree instead of by license and royalty, which, if proved successful, may be extended to other districts and ultimately generally adopted. Under this system, which prevails in many of the older countries of the world, the trees are marked by the forester, and paid for at their value, and not selected haphazard by the license holder, this having the effect of confining operations to a defined area, which, when depleted, may be again planted out, and besides working the forest in a systematic manner, should prevent waste of timber, simplify conditions of working, and ensure a more adequate return in revenue.

Should the proposed permanent dedication of forest areas referred to in another portion of this report be effected, a basis would be established upon which might be founded a comprehensive bill dealing with forestry, and providing extended powers for the maintenance and perpetuation of this important interest.

#### TOTAL number and class of Forest Reserves to the 30th June, 1895.

	No. of Reserves.	Acres.
Reserves in Class A, Regulation 6 (15 per cent. of which are partly in Class C) .....	701	3,165,322
Reserves in Class B, Regulation 6 .....	39	82,168
Reserves in Class C, Regulation 6 .....	360	2,391,523
Reserves for Plantations, &c. ....	12	2,265
<b>Total number of reserves .....</b>	<b>1,112</b>	<b>5,641,278</b>
<b>Total estimated area reserved .....</b>	<b>.....</b>	<b>.....</b>
Number of new reserves notified during the last eighteen months ...	75	304,491
Number of reserves cancelled during the last eighteen months .....	54	136,997
Number of reserves partly cancelled during the last eighteen months .....	78	120,480
<b>Total number of cancellations during the last eighteen months .....</b>	<b>132</b>	<b>.....</b>
<b>Total area of cancellations during the last eighteen months .....</b>	<b>.....</b>	<b>256,577</b>

#### Total number and class of Forest Reserves to 31st December, 1894.

	No. of Reserves.	Acres.
Reserves in Class A, Regulation 6 (15 per cent. of which are partly in Class C) .....	671	3,001,192
Reserves in Class B, Regulation 6 .....	39	82,168
Reserves in Class C, Regulation 6 .....	362	2,403,183
Reserves for plantations, &c. ....	12	2,265
<b>Total number of reserves .....</b>	<b>1,084</b>	<b>5,488,808</b>
<b>Total estimated area reserved .....</b>	<b>.....</b>	<b>.....</b>
Number of new reserves notified during the year .....	45	140,361
Number of reserves cancelled during the year .....	43	107,998
Number of reserves partly cancelled during the year.....	57	89,518
<b>Total number of cancellations .....</b>	<b>100</b>	<b>.....</b>
<b>Total area of cancellations .....</b>	<b>.....</b>	<b>197,516</b>

The work of the consulting botanist, Mr. J. H. Maiden, has been, as usual, of a miscellaneous character and some of the questions of public interest which have arisen have been dealt with in the form of articles or notes in the *Agricultural Gazette* during the year. The information supplied has been mainly of an economic character, and inquiries in regard to our vegetable products, whether indigenous or cultivated, have been replied to with as much detail as possible. Information of this kind, supplied to farmers, merchants, &c., does not usually produce results immediately, but numbers of letters received during the year have shown that the information supplied by the Department has stimulated enterprise. Mr. Maiden has been actively engaged in the dissemination of information in regard to the colony's products for nearly fourteen years, and he is in a position to say that the demand for information in regard to our products was never so great as it is at present. The age of empiricism, in regard to our products, has passed away, and producers, merchants, and consumers alike demand definite and scientific information which would not be looked for a few years ago. Even yet, ours is a new country, and many of our products are imperfectly known. Advantage has been taken of this (usually from ignorance), to give inferior articles the same prominence as those known to be of superior quality. The only remedy for this is to actively diffuse accurate information in regard to the various articles the colony produces, and this the Department is endeavouring to do.

Following are some of the subjects reported upon at length during the year:—Plants poisonous to stock, or reputed to be so; fodder-plants of various kinds, whether indigenous or introduced; weed-pests, with the view of repressive measures being taken, for the subject is of national importance; plants useful to the bee-keeper; the question of water-plants, and the evaporation of water from the surface of tanks, &c; the value of the leaves of *duboisia myoporoides* as a drug, the Department having placed

placed a large trial order; grass-trec gum; native sandarach; eucalyptus oil, a subject requiring much technical and laborious research, but which is well warranted owing to the commercial importance of the product; the question of ring-barking, of great importance to the pastoralist and the forester; the flowering period of the various species of eucalyptus, a matter of practical importance to the bee-keeper; wattle and other tan barks—here is a national industry—and the industries pertaining to tan substances and leather are capable of enormous expansion in this Colony; timbers for railway-sleepers, pavements, parquetry, gun-stocks, and many other special purposes. The question of the development of a trade in turpentine (*syncarpia*) piles, which are so resistant to the attacks of marine borers, has engaged the active attention of the Department, and Mr. Maiden is, at the present moment, engaged in special inquiries on the subject. There is some doubt as to the merits of spotted gum timber, and the circumstances under which it should be used. He is a member of a Committee appointed by the Minister to investigate this matter, and has already collected much valuable information. On behalf of the Department, he has, in conjunction with his colleague, Mr. W. S. Campbell, supervised the issue of a work, to be in parts, with coloured plates, giving illustrations of the principal economic plants and other plants of interest to the Colony. The first part of this has been issued, and subsequent parts will appear at quarterly intervals. It has been very appreciatively received, and distinctly supplies a want. It will indirectly stimulate a demand for the plants and vegetable products of this Colony, which is, botanically, so well endowed.

I have the honor to be,

Sir,

Your most obedient servant,  
HARRIE WOOD.

Department of Mines and Agriculture,  
Sydney, 4th November, 1895.



1895.

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

THE SUGAR INDUSTRY.

(RETURN RESPECTING)

*Ordered by the Legislative Assembly to be printed, 12 September, 1895.*

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 3rd September, 1895, that there be laid upon the Table of this House,—

“ A report recently obtained by the Minister for Mines on or in connection  
“ with the sugar industry of New South Wales and the central mill system  
“ of Queensland.”

(Mr. Kelly.)

NO.	SCHEDULE.	PAGE.
1.	Petition from the sugar-cane growers, &c., of Lismore, &c., district to the Honorable the Premier and Colonial Treasurer, with minutes. 22 October, 1894 .....	1
2.	Summers Brown, Esq., to the same. 22 October, 1894 .....	2
3.	Ludwik Bernstein, Esq., to the same, with minutes and enclosure. 26 November, 1894 .....	2
4.	Office Memorandum, with minutes. 27 December, 1894 .....	3
5.	The Chief Clerk, Department of Agriculture and Forestry, to the Under Secretary for Mines and Agriculture, reporting on the sugar industry, with minutes. 25 March, 1895 .....	3
6.	The Queensland Sugar Works Guarantee Act of 1893, with regulations .....	6
7.	Racecourse Central Sugar Company (Limited), Queensland, Annual Report for 1894 .....	9
8.	North Eton Central Sugar Company (Limited), Queensland, Directors' Report to the Shareholders, for 1894 .....	12

No. 1.  
Petition.

To the Honorable George Houston Reid, Premier and Colonial Treasurer, Sydney.

The Memorial of the undersigned sugar-cane growers and other residents of Lismore and surrounding districts,

HUMBLY SHOWETH:—

That for the past fifteen years the growing of sugar-cane has been the chief agricultural industry of the Richmond and Tweed districts, and that the experience thus acquired has shown that the soil and climate are specially adapted for cane-growing, and that the industry is both profitable and reliable.

That while there is already in the Colony about 30,000 acres of land under sugar-cane, producing 25,000 tons of sugar per annum, there are still at least 200,000 acres in the Richmond and Tweed districts equally suitable for the industry and yet to be brought under cultivation.

That while a part of this land belongs to the Crown the bulk of it has been alienated, and climate and conditions are such that your Petitioners believe that sugar-cane is a crop that can be grown with the most profit to themselves and the greatest advantage to the country.

That your Petitioners, stimulated by the facilities for carriage afforded by the railway, and also by the prospect at a later date of a system of cheap tram lines, have gone into the cane-growing business only to find that the crushing accommodation is insufficient, and that they are unable to get a market for their crops.

150—A

That

[620 copies—Approximate Cost of Printing (labour and material), £16 7s. 10d.]

That your Petitioners have unsuccessfully urged the Colonial Sugar Refining Company to increase their mill-power so as to provide for the cane, and not having sufficient capital themselves to establish a factory they have no alternative but to appeal to the Government in the difficulty.

Your Petitioners, therefore, now apply to the Government for sympathy and support, in the hope that the encouragement now being given to the industry in Queensland by the Government of that Colony may be extended by your Government to the agricultural industries in this Colony.

Your Petitioners are of opinion that the true basis of success for all agricultural pursuits is to work them under a system of co-operation, and that in cases such as this, where co-operation is impossible, owing to the large amount of capital involved, it is consistent with the general interests of the State that the Government should, under equitable conditions, give practical encouragement to such efforts of enterprise and self-reliance.

Your Petitioners approach your Government in this matter with all the more confidence, believing that if the sugar industry can be developed in proportion to the natural capabilities of the Richmond and Tweed districts it will be the means of settling upon the soil many thousands of deserving men now anxious to secure homes and only too willing to engage in profitable labour.

Your Petitioners, in praying that you will take the foregoing premises into thoughtful consideration, desire to give emphasis to the fact that while in the sister colony the business is carried on with the labour of alien races, in this Colony it affords lucrative work not only to the growers themselves but to thousands of their fellow countrymen.

And your Petitioners, as in duty bound, will ever pray.  
22nd October, 1894.

On behalf of the Petitioners,  
LUDWIK BERNSTEIN,  
Mayor.

Deputation introduced by Mr. Ewing, M.P., on 20/10/94. Further information asked.—G.H.R.,  
22/10/94.

### No. 2.

S. Brown, Esq., to The Colonial Treasurer.

Dear Sir,

158, Pitt-street, Sydney, 22 October, 1894.

Referring to a deputation which waited on you on Saturday, the 20th instant, with regard to the growth of sugar-cane and the erection of mills for the purpose of manufacturing the crops, I beg respectfully to bring under your notice the necessity of having reliable data to guide you in considering the matter, either for acceptance or rejection.

With all respect to the gentlemen forming that deputation, not one of them has the practical experience to guide him in advising the Government on the subject, and the remark of one of the deputation, that "there was no risk," was a wild one.

My purpose in addressing you is to make application to be appointed by the Government to thoroughly investigate the proposals and circumstances submitted through the deputation from agricultural, manufacturing, and financial standpoints.

My mill is situated within 12 miles of the district referred to, and is the only mill of any size in the Colony which deals with the cane grown on scrub land exclusively, the establishments of the Colonial Sugar Refining Company being situated at the water-side. My experience of eight years in the business in growing, cutting, conveying by land carriage with bullocks, horses, and light railways, manufacturing and selling the product, which means from the time of falling the scrub until the cash is received from sales, places me in possession of the full knowledge of the process. I have pleasure in referring you to the Union Bank of Australia (Limited), who will, I am sure, vouch for my practical and financial knowledge and straightforwardness. I do not desire that the appointment should incur expense for the Government at this time, feeling that should the Government consider my services of value they should be disposed to again avail themselves of my efforts, if occasion arose, and which might be of a more profitable nature to me.

Yours, &c.,

SUMMERS BROWN.

### No. 3.

L. Bernstein, Esq., to The Colonial Treasurer.

Sir,

Lismore, 26 November, 1894.

I have the honor to submit, according to promise, a statement with regard to crushing plant on the railway line, Lismore to the Tweed, and some further remarks respecting the question of the sugar industry in New South Wales.

The area of land under cane in this Colony is about 30,000 acres. The further area available for the industry by the construction of the railway, Lismore to the Tweed, is about 200,000 acres.

A large mill will crush from 6,000 to 10,000 acres of cane. There would be no difficulty in having an area of 10,000 acres immediately placed under cane, were a crushing plant available.

The effect of one large mill on the railway for cane haulage alone (say 4,000 tons of cane per week, or 90,000 for the season) would be £400 per week extra freight, or £9,000 for the season. The freight incidental to a population able to grow such an area would be not less than £4,000 per annum extra. It is not overstating the case to say that if there were four powerful mills on the railway which will utilise but a small portion of the sugar-growing area, the railway receipts incidental upon the industry would not be less than £50,000 per annum.

The Queensland Railways, in districts such as the Richmond (save that the Richmond could produce as much sugar as Maryborough, Iris, Bundaberg, and Mackay districts together), seem to stand out in relief against the rest of the Queensland system, paying £6 5s. 4d. per centum and £5 10s. 6d. per centum. This satisfactory state of things is attributable to the sugar industry alone.

The population of Bundaberg is about 4,000, that of Lismore between 3,000 and 4,000. Bundaberg exported last year £405,000 worth of produce, of which £370,000 was sugar.

The Bundaberg area of cane-growing land could be submerged in the Richmond River area many times over.

The

The balance-sheets and reports of the Central Co-operative Mills and the Queensland Act left with you will show the success attending upon such operations and the Act under which they work. If you are prepared to consider the principle, I shall be glad to furnish you with details, farmers' names, value of guarantees, &c.

The large area available in this Colony makes it clear that if our enormous resources be utilised, the sugar industry will assume vast proportions, and sugar will be easily obtained, and as good as in any part of the world.

If there be any doubt in your mind as to the merits of the case, we should be glad if you procured a report from the Director of Agriculture.

LUDWIK BERNSTEIN,  
Mayor, Lismore.

[Enclosure.]

A GOVERNMENT SUGAR MILL.

SOME time ago a deputation waited on the Premier to ask for Government assistance in establishing a cane-crushing mill on the Lismore-Tweed railway line. Mr. Reid, in reply, asked to be supplied with further particulars in writing. The following letter has accordingly now been forwarded to him:—

"To the Hon. G. H. Reid, Colonial Treasurer.

"Sir,—I have the honor to submit, according to promise, a statement with regard to crushing-plant on the railway line, Lismore to the Tweed, and some further remarks respecting the question of the sugar industry in New South Wales. The area of land under cane in this Colony is about 30,000 acres. The further area available for the industry, by the construction of the railway Lismore to the Tweed, is about 200,000 acres. A large mill will crush from 6,000 to 10,000 acres of cane. There would be no difficulty in having an area of 10,000 acres immediately placed under cane were a crushing-plant available. The effect of one large mill on the railway for cane-haulage alone (say, 4,000 tons of cane per week, or 90,000 for the season) would be £400 per week extra freight of £9,000 for the season. The freight incidental to a population able to grow such an area would be not less than £4,000 per annum extra. It is not overstating the case to say that if there were four powerful mills on the railway, which will utilise but a small portion of the sugar-growing area, the railway receipts incidental upon the industry would not be less than £50,000 per annum. The Queensland Railways, in districts such as the Richmond (save that the Richmond could produce as much sugar as Maryborough, Iris, Bundaberg, and Mackay districts together), seem to stand out in relief against the rest of the Queensland system, paying £6 5s. 4d. per centum and £5 10s. 6d. per centum. This satisfactory state of things is attributable to the sugar industry alone. The population of Bundaberg is about 4,000, that of Lismore between 3,000 and 4,000. Bundaberg exported last year £405,000 worth of produce, of which £370,000 was sugar. The Bundaberg area of cane-growing land would be submerged in the Richmond River area many times over. The balance-sheets and reports of the Central Co-operative Mills and the Queensland Act, left with you, will show the success attending upon such operations and the Act under which they work. If you are prepared to consider the principle, I shall be glad to furnish you with details, farmers' names, value of guarantees, &c.

"The large area available in this Colony makes it clear that if our enormous resources be utilised the sugar industry will assume large proportions, and sugar will be as easily obtained and as good as in any part of the world. If there be any doubt in your mind as to the merits of the case, we should be glad if you procure a report from the Director of Agriculture.

"LUDWIK BERNSTEIN.

"Mayor of Lismore."

Mr. Ross.—Acknowledge please.—F.K., 26/11/94. Acknowledged.—M.A., 27/11/94. Seen.—G.H.R., 30/11/94. Mr. Ross.—Wire Mr. Campbell, Lismore, for report and send papers.—F.K., 6/12/94. The Under Secretary for Mines and Agriculture. For favour of a wire to the Chief Clerk of Agriculture (Mr. Campbell) at Lismore, and the forwarding to him of these papers. The matter is of some urgency.—F.K., B.C., The Treasury, 6/12/94. Mr. Campbell may be asked to report.—H.W., 6/12/94. Submitted. Approved.—S. SMITH, 11/12/94.

No. 4.

Office Memorandum.

27 December, 1894.

I HAVE made an examination of the country between Lismore and the Tweed River, and made an investigation into the possible benefits a "Guarantee Act" might confer on the planters in this district; but before making a report I beg to suggest that I may be permitted to visit Queensland, in order to become acquainted with the working of the Queensland Act. From the information I have been able to gather, that Act seems to have been productive of remarkable good to cane-growers where central mills have been erected; indeed, the profits made under good management seem to be almost fatuous.

I found, strange as it may appear, that almost all if not the whole of the sugar consumed in our sugar-producing district is obtained from Queensland, and a great deal of it from the very mills erected under the Guarantee Act.

I would like to make inquiries as to the actual cost of black labour in Queensland, for I am under the impression that such labour is but little if any cheaper than white labour.

W.S.C.

Mr. Campbell should perhaps be allowed to visit Queensland for the purpose indicated. Submitted.—H.W., 28/12/94. Approved.—S. SMITH, 21/1/95.

No. 5.

The Chief Clerk, Department of Agriculture and Forestry, to The Under Secretary for Mines and Agriculture.

No. 95-5,115 A.

Sir,

Department of Agriculture, Sydney, 25 March, 1895.

I have the honor to report that, under your instructions in connection with the petition from the residents of Lismore and the surrounding districts, presented by the Mayor, Dr. Bernstein, I visited the districts lying between Lismore and the Tweed, and made careful inquiries into the statements made by the Mayor of Lismore.

There is no doubt about there being thousands of acres eminently adapted for the growth of sugar-cane now lying idle, which, owing to the dense growth of vegetation, is no use for even grazing purposes, and there can be no doubt that if the owners of the selections had the advantages of sugar-mills, a vast

area

area of this beautiful fertile land could be cultivated profitably by a large European population even at the present low price of sugar. I ascertained that holders of land in the vicinity of the railway line from Lismore to Murwillumbah had been in great hopes whilst the line was being made, that the Colonial Sugar Company would erect a large sugar-mill in some central position, but they have been disappointed owing to the company not wishing to extend their operations beyond doubling the crushing power, &c., of their sugar-mill on the Tweed. The company has, however, entered into contracts with farmers to take the produce of 6,000 acres of land in the vicinity of the railway line. This, of itself, is a large undertaking and is doubtless of great advantage to the district.

In order to ascertain the results and see the working of the Co-operative Central Sugar Mills in Queensland erected under the Guarantee Act referred to by Dr. Bernstein, I proceeded with your permission to Brisbane and thence to Port Mackay which is one of the chief sugar-producing districts in that colony, where two important co-operative sugar-mills assisted by the Government have been at work for several years.

I was surprised to find that these mills did not come under the operation of the Sugar-mills Guarantee Act. This Act only came into force in 1893, and up to the present time its advantages or otherwise have not been determined as the companies formed to work under the Act have not yet completed their mills.

About the year 1885, the Queensland Government being anxious to test the problem whether sugar-cane could be profitably grown by European labour only (in consequence of objections made to, and the difficulties in procuring, coloured labour) the sum of £50,000 was appropriated for the purpose of loans in aid of sugar-mills, &c. In 1888 applications were received from associations of selectors residing at the Racecourse and North Eaton for assistance to erect sugar-mills. The Racecourse £18,000, and North Eaton £20,000, and agreements, articles of association, and bills of encumbrance, were signed by persons who formed companies. The following extracts from the agreements and bills of encumbrance will explain some of the arrangements entered upon:—"And whereas the said Company (North Eaton) are desirous of purchasing certain machinery for the purpose of carrying out the objects of the said Company, but have not sufficient available capital for that purpose. And whereas the said Company have applied to the Queensland Government to advance them out of the sum of £50,000 set apart and appropriated by Parliament for the purpose of loans in aid of the establishment of central sugar-mills a sum of £20,000 to enable them to procure and purchase machinery, and otherwise to carry out the objects of the said Company. &c., &c. Now know ye, that, in pursuance of the said agreement, and in consideration of the sum of £20,000, to be lent and paid to the said Company by the Colonial Treasurer, at such times and in such instalments as the Colonial Treasurer may appoint, the said Company has deposited, and do hereby deposit and agree to deposit with the said trustees, all bills of encumbrance, bills of mortgage, and other securities, instruments, and documents mentioned in the schedule hereto, and the deeds of grant and certificate of title therein referred to, and all other securities, deeds, and documents of title now held by the said Company, do hereby charge all and every the property of whatever description and whether real or personal to which the said Company is entitled, &c., &c. The said Company do hereby covenant and agree with the said trustees, their executors, administrators, and assigns, that they, the said Company, shall and will repay the said loan of £20,000, together with interest thereon at the rate aforesaid (5 per centum) to the Colonial Treasurer of Queensland by forty equal half-yearly instalments, including principal and interest of £802 10s."

I beg particularly to invite attention to the 9th clause of the bill of encumbrance, "That I will employ labourers of European extraction and no other in and about the cultivation, cutting, and carting of the cane."

In the year 1890 an inquiry was made into the working of these mills by Mr. P. McLean, Under-Secretary for Agriculture, and Mr. J. Leisner, M.L.A., and this report showed that one of the main objects for which aid had been afforded had been completely ignored by the directors. "We consider," said the inquirers, "that, having in view the great economic problem and for which purpose the money was voted by Parliament to erect these mills, the directors have most glaringly violated the fundamental principle thereof, it being a well-known fact that fully one-half of the cane in the above-mentioned estimate was grown and cut by coloured labour."

I think I am right in saying that by far the greater portion of the cane crushed by the mills is produced by coloured labour, chiefly, I believe, from the fact that coloured labour is far more reliable than that of persons of European extraction.

For the first two or three years the directors had considerable uphill work, and could not obtain sufficient cane to keep the mills going, but since then matters have been much more satisfactory and profits have been exceedingly large. The mills are worked most economically, and the machinery improved yearly so as to keep abreast of the times.

The success of these mills is dependent, not only on good management and a sufficient supply of cane, but on the price of sugar. The companies make raw sugar only and sell to the Colonial Sugar Company, which will purchase the crop at a fixed price offered before the season begins. Owing to the extraordinary fall of sugar from about £12 5s. per ton, last season, to £8 10s. per ton for the next crop, the profits, if any, will be but small, unless means be taken to obtain a larger percentage of sugar from the cane to reduce expenses and reduce the price of cane to the growers, which might be done to some extent, and even then, the shareholders who supply cane will make a fair profit.

It may be interesting to mention that the sugar industry about Mackay was formerly altogether in the hands of proprietors of large estates who grew their cane and manufactured it into sugar. But of late years the owners of the large estates have been sub-dividing them into small areas and leasing or selling to farmers who will grow their cane to supply the mills, so that the "planters" are gradually becoming sugar manufacturers only. Most, if not all, the sugar produced about Mackay is, I think, purchased by the Colonial Sugar Company. This method of disposing of sugar is found to be particularly convenient to the central mills.

Several applications have been made for assistance under the Sugar Works Guarantee Act of 1893, and at the present time three mills are being erected. One danger which seems to me as being likely to occur is the possibility of these mills interfering with each other in obtaining supplies of cane, because they will probably each be able to crush more cane than it is necessary for the shareholders to plant under the Guarantee Act.

The Act provides:—

*Clause 3.* Subject to the provisions of this Act, it shall be lawful for any company to apply to the Treasurer for permission to issue debentures for the purpose of defraying the cost of sugar works and of the erection of the same, and the Treasurer may grant such permission.

*Clause 5.* The application shall further particularly set forth the land upon which it is intended to grow cane in sufficient quantity to keep the sugar works employed to the full extent of their average capacity, during the ordinary season, for manufacturing sugar and the names of the persons who propose to grow cane for the mill and the areas they propose.

*Clause 6.* The Treasurer shall not grant permission to any company to issue debentures unless and until he is satisfied upon the report of the valuer appointed under section eleven of this Act, that sufficient land to keep such sugar works so employed and of a quality to produce adequate crops of cane, has been so planted with cane or until a suitable guarantee is given to his satisfaction that such planting shall be duly carried on and maintained.

*Clause 7.* Upon such permission being granted it shall be lawful for the company to issue, and they are hereby empowered to issue, debentures under their common seal, payable to bearer, and to an amount equal to the total cost of the sugar works and of the erection thereof, as set forth in the application, and the moneys to be derived from the issue and sale of such debentures shall be applied to such purposes and not otherwise.

*Clause 8.* Such debentures shall each of them be for the same sum of money, and shall be in such form for such sum in such series of numbers and shall be payable at such place or places as the Treasurer may direct. They shall bear interest at the rate of five per centum per annum; the principal sum shall be payable at the expiration of fifteen years from the date expressed thereon. And the holder of any coupon originally annexed to a debenture, and whether separated therefrom or not, shall be entitled to receive payment in like manner of the interest mentioned in such coupon upon presentation of the same at the place where and on and after the date when interest is payable.

*Clause 9.* It shall be lawful for the Governor in Council to guarantee to the holders of such debentures the due payment of principal and interest, and thereupon such payment shall be a charge upon and shall be made good out of the consolidated revenue which is hereby permanently appropriated for that purpose. Provided that such guarantee shall not operate and take effect unless and until the company has from time to time or at some time made default in the payment of some part of the principal or interest actually due to the holders of the debentures or to any one of them.

*Clause 10.* Subject to the provisions in this Act contained, the Governor may, by warrant under his hand addressed to the Treasurer, direct him to advance out of the consolidated revenue such sums as the Governor-in-Council may think fit for the redemption of any debentures and the payment of any interest as prescribed by this Act. The Treasurer shall from time to time be allowed credit for any sum or sums of money paid by him in pursuance of any such warrant, and the receipt of the persons to whom such payments are made shall be sufficient discharge to the Treasurer.

*Clause 11.* For the purpose of securing the consolidated revenue against loss in respect of such guarantee, the company shall execute, or cause to be executed, in the name of and to the satisfaction of the Treasurer, a first mortgage and charge over the sugar works, and over such additional land to be used for the purpose of growing cane for keeping such sugar works fully employed, and over such other land and chattels, the value of which security will, in the opinion of the Treasurer, founded upon a report made by a valuer appointed by the Treasurer for that purpose as an able and practical valuer, and so employed and instructed independently of the company, amount in the aggregate to at least double the total sum for which the consolidated revenue has or may become liable under the guarantee.

*Clause 13.* If any land intended to be mortgaged to the Treasurer under the provisions of this Act is subject to an already existing mortgage or encumbrance, and if the mortgagee or encumbrancee shall by a writing endorsed upon the instrument evidencing the same, consent to the intended mortgage to the Treasurer taking priority over such already existing mortgage or encumbrance, such mortgage to the Treasurer shall, when executed and without any release or re-execution of the already existing mortgage or encumbrance, take priority over the same, and the Registrar of Titles shall register the mortgage to the Treasurer accordingly.

*Clause 19.* The Treasurer shall empower some person deputed by him to inspect the progress of the construction of the sugar works, and may control the purchase and erection of all machinery and other matters and things connected with such sugar works, and may permit or prohibit any action in connection therewith.

The Government at present hold the debentures and provide the moneys required, charging 5 per centum per annum.

I now beg respectfully to submit that there is a very large area of land in the north-eastermost portion of New South Wales of great fertility and well adapted for the growth of sugar-cane at present lying idle, and not likely to be made use of unless sugar-mills are erected, because up to the present time cane-growing is found to be about the most profitable industry, and the most suitable for the district.

There seems to be no prospect of private capital being forthcoming for the erection of central mills.

If central mills should be erected either by private enterprise or by assistance from the State, their success must depend on their management, and also, I believe, on the retention of the sugar duties.

If properly managed, and the price of sugar does not fall lower than at present, central co-operative sugar-mills would, I have no doubt, prove an immense boon to the district and give employment to a large population.

I believe there would be no difficulty about a sufficient area of cane being planted to meet all the requirements of one or two large sugar-mills on the line of railway. I beg to submit also that it would be necessary for any company erecting a mill to make provision for the laying of about 15 to 20 miles of tramways or perhaps more.

Should the duty on sugar be abolished, I would not be surprised if the whole of the sugar industry of the Colony collapsed, for, although the Colonial Sugar Company (which purchases, I believe, the largest proportion of sugar in the Colony) has entered into contracts extending over several years with cane-growers to take all their cane at a certain price, which is remunerative to them, the contracts provide for the possibility of the abolition of the duty. I feel almost sure in that case that the reduction in the price of cane will be so great that the growing of it will not pay the farmers, and this will doubtless cause great distress to those who are dependent on this industry for a livelihood.

Before concluding this report, I beg to submit that it is difficult and almost impossible to determine whether sugar-growing in this Colony is likely to be profitable in the future. There are many factors at work all over the world which may affect the industry considerably. Then there are many difficulties and possibilities to be kept in view.

There is a possibility of an increase and spread of the disastrous gumming disease in cane, which has caused considerable loss. But this, I think, will, through Dr. Cobb's valuable researches, be eventually overcome. Then there is the probability of our producing far more sugar than we require, which will mean the necessity for export and competition with sugars produced by cheap coloured labour. I may state, as being a curious anomaly, that a considerable proportion of the sugar consumed in our sugar-producing districts is grown and manufactured in Queensland.

Then, again, there is the possibility of a still greater fall in the price of sugar, but as I think it is generally expected that the sugar bounties are not likely to be increased in France or Germany, but are likely to be removed, it does not seem probable that sugar will ever be lower.

On the other hand our sugar requirements must increase as population increases, and when we are in a position to enter largely into the manufacture of preserves, jams, &c., for export and our own use, large supplies of sugar will be needed.

And I think it is quite within the bounds of possibility that sugar-cane may be so much improved by selection of seedlings that its yield of sugar will be considerably increased, as has been the case with sugar-beet, whereby within the last decade its percentage of sugar has been almost doubled.

I have, &c.,

WALTER S. CAMPBELL.

Submitted.—H.W., 26/3/95. For the information of my hon. colleague, the Premier.—S. SMITH,  
26/3/95. Seen.—G.H.R., 30/3/95.

## No. 6.

### Queensland Sugar Works Guarantee Act of 1893.

57VIC. No. 18. An Act to authorise the making of Advances, by way of guaranteed Loans, for the establishment of THE SUGAR WORKS GUARANTEE ACT OF 1893. Sugar Works, and to provide for the Repayment thereof, and for other purposes connected therewith.—Assented to, 18th October, 1893.

WHEREAS it is expedient to encourage the growth of sugar in Queensland by providing facilities for its manufacture: Be it enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Legislative Council and Legislative Assembly of Queensland in Parliament assembled, and by the authority of the same, as follows:—

Short Title. 1. This Act may be cited as "*The Sugar Works Guarantee Act of 1893.*"

Interpretation. 2. In this Act the following terms shall have the meanings set against them respectively, unless the context otherwise requires:—

"Company"—Any Company incorporated under "*The Companies Acts, 1863 to 1892,*" carrying on or intending to carry on the business of the extraction and manufacture of sugar;

"Sugar Works"—Any mill for the extraction and manufacture of sugar, and the by-products thereof, together with all machinery, chattels, and appurtenances used therein, and the allotment or portion of land upon which such mill is erected or which is used in connection therewith, and any railways and tramways leading thereto;

"The Treasurer"—The Colonial Treasurer.

Company may apply for permission to issue debentures. 3. Subject to the provisions of this Act, it shall be lawful for any company to apply to the Treasurer for permission to issue debentures for the purpose of defraying the cost of sugar works and of the erection of the same, and the Treasurer may grant such permission.

Particulars of sugar works to be given. 4. Such application shall state precisely the situation and cost of the land upon which it is proposed to erect such sugar works, and the nature and cost of the buildings and of the machinery to be placed therein, together with all other particulars which the Treasurer may demand.

Particulars of land under cultivation to be given. 5. The application shall further particularly set forth the land upon which it is intended to grow cane in sufficient quantity to keep the sugar works employed, to the full extent of their average capacity, during the ordinary season for manufacturing sugar, and the names of the persons who propose to grow cane for the mill, and the areas they propose to cultivate.

Conditions upon which permission to be granted. 6. The Treasurer shall not grant permission to any company to issue debentures unless and until he is satisfied, upon the report of the valuer appointed under section eleven of this Act, that sufficient land to keep such sugar works so employed, and of the quality to produce adequate crops of cane, has been so planted with cane, or until a guarantee is given to his satisfaction that such planting shall be duly carried on and maintained.

Debentures may be issued. 7. Upon such permission being granted, it shall be lawful for the company to issue, and they are hereby empowered to issue, debentures under their common seal, payable to bearer, and to an amount equal to the total cost of the sugar works, and of the erection thereof, as set forth in the application, and the moneys to be derived from the issue and sale of such debentures shall be applied to such purposes and not otherwise.

Form of debentures. 8. Such debentures shall each of them be for the same sum of money, and shall be in such form, for such sum, in such series of numbers, and shall be payable at such place or places as the Treasurer may direct; they shall bear interest at the rate of five per centum per annum; the principal sum shall be payable at the expiration of fifteen years from the date expressed thereon. And the holder of any coupon originally annexed to a debenture, and whether separated therefrom or not, shall be entitled to receive payment in like manner of the interest mentioned in such coupon upon presentation of the same at the place where, and on or after the date when, interest is payable.

Governor-in-Council may guarantee debentures. 9. It shall be lawful for the Governor-in-Council to guarantee to the holder of such debentures the due payment of principal and interest; and thereupon such payment shall be a charge upon, and shall be made good out of, the consolidated revenue, which is hereby permanently appropriated for that purpose:

Provided that such guarantee shall not operate and take effect unless and until the company has, from time to time, or at some time, made default in the payment of some part of the principal or interest actually due to the holders of the debentures, or to any one of them.

Governor may issue warrant for payment. 10. Subject to the provisions in this Act contained, the Governor may, by warrant under his hand addressed to the Treasurer, direct him to advance out of the consolidated revenue such sums as the Governor-in-Council may think fit for the redemption of any debentures and the payment of any interest as prescribed by this Act.

The Treasurer shall from time to time be allowed credit for any sum or sums of money paid by him in pursuance of any such warrant, and the receipt of the persons to whom such payments are made shall be sufficient discharge to the Treasurer.

Company to execute mortgage. 11. For the purpose of securing the consolidated revenue against loss in respect of such guarantee, the company shall execute, or cause to be executed, in the name of and to the satisfaction of the Treasurer, a first mortgage and charge over the sugar works and over such additional freehold land to be used for the purpose of growing cane for keeping such sugar works fully employed; and over such other land

land and chattels, the value of which security will, in the opinion of the Treasurer, founded upon a report made by a valuer appointed by the Treasurer for that purpose as an able and practical valuer, and so employed and instructed independently of the company, amount in the aggregate to at least double the total sum for which the consolidated revenue has or may become liable under the guarantee.

12. The mortgage to the Treasurer over the sugar works shall be for the full amount of the liability of the consolidated revenue under the guarantee, but the mortgage over any portion of additional freehold land shall be for a proportional amount only of such liability, according to the value of such portion as compared with the value of the whole of such additional freehold land.

Amount of liability of consolidated revenue under guarantee, in mortgage to Treasurer.

13. If any land intended to be mortgaged to the Treasurer under the provisions of this Act is subject to any already existing mortgage or encumbrance, and if the mortgagee or encumbrancee shall, by writing endorsed upon the instrument evidencing the same, consent to the intended mortgage to the Treasurer taking priority over such already existing mortgage or encumbrance, such mortgage to the Treasurer shall, when executed, and without any release or re-execution of the already existing mortgage or encumbrance, take priority over the same, and the Registrar of Titles shall register the mortgage to the Treasurer accordingly.

Mortgage to Treasurer to have priority over existing mortgages.

14. The repayment of the amount of the principal sum of the debentures and of the interest thereon shall be made by the company as follows.—

Repayment of principal and interest.

(a) As to the principal sum, by the payment to the Treasurer in respect of each one hundred pounds, and of any part thereof in like proportion, of the yearly sum set forth in the Schedule, such payment to commence at the expiration of two years from the date expressed upon the debentures, and to continue for thirteen payments thereafter:

[Schedule.]

(b) As to the interest, by payment thereof to the holders of the debentures, or of the coupons if detached therefrom, at the times and places at which the same is expressed to be payable.

15. The articles of association of every company shall provide that the payments set forth in the last preceding section shall be a first charge on the profits of the sugar works.

Repayments to be a first charge on profits.

16. If any default be made by the company in payment of any portion of the principal or interest, the price of all the cane to be purchased by the company shall be fixed by the Treasurer, and thereafter until all arrears of payments for principal and interest are duly discharged by the company no cane shall be purchased by the company at any higher rate than that so fixed, and if any cane be purchased at any higher rate such purchase shall constitute a default as between the company and the Treasurer.

If default made, Minister may fix price of cane.

17. If any default whatsoever be made by the company it shall be lawful for the Treasurer to enter into possession of the sugar works, and of all land mortgaged to him, and to manage and conduct the same, and to appoint all necessary managers and servants, until the whole liability resting upon the consolidated revenue has been fully discharged, or to sell the same by public auction if he thinks fit.

If default be made, Treasurer may take possession.

18. The amount which may be guaranteed under the authority of this Act shall not exceed the sum stated in the application, and the Treasurer shall require the company, at its own cost, to execute and complete every mortgage, lien, security, or assurance which the Treasurer may demand for the better securing the amount of the guarantee or proposed guarantee.

Mortgage fee to be at cost of company.

19. The Treasurer shall empower some person deputed by him to inspect the progress of the construction of the sugar works, and may control the purchase and erection of all machinery, and other matters and things connected with such sugar works, and may permit or prohibit any action in connection therewith.

Treasurer may inspect works.

20. Every company, so long as any debt remains due under the provisions of this Act, shall, when required thereto by the Treasurer, permit the Treasurer, or any person authorised by him in writing under his hand, to inspect and take copies of all or any books, documents, or records relating to the business or affairs of the sugar works.

Treasurer may inspect books, &c.

21. The Treasurer may from time to time, so long as any guarantee remains subsisting under the provisions of this Act, demand such information as he thinks fit from any company respecting the business and affairs of the company, and may require such information to be verified upon the oath of the manager or other principal officer of such company, and it shall be supplied to the Treasurer within seven days after the same shall have been demanded.

Information to be furnished.

22. The Treasurer may, by a notice under his hand, require and direct the company to insure and keep insured the sugar works against fire, in such insurance office and in such amount as the Treasurer may prescribe, and, in default of compliance with such notice, may effect such insurance, and from time to time recover the premium thereon from the company.

Company to keep sugar works insured.

23. In the months of February and August respectively in every year, the Treasurer shall cause to be published in the *Gazette* a detailed statement of all unpaid moneys arising out of guarantees at that time entered into on behalf of companies under the provisions of this Act.

Statements to be published.

24. If after the publication of any statement as aforesaid any payment of moneys required by this Act to be made by any company to the Treasurer is overdue and in arrear, he shall forthwith publish in the *Gazette*, and in some newspaper or newspapers circulating in the neighbourhood referred to thereby, notice of his intention to enforce payment of the same. And the last day on which such notice is published shall be deemed to be the day of publication thereof.

Notice of arrears to be published.

25. If after the expiration of fourteen days from the date of such publication such moneys remain unpaid, the Treasurer may forthwith exercise all or any of the powers conferred upon him by this Act for the recovery of overdue moneys payable by such company to the Treasurer or into the consolidated revenue.

Powers of recovery.

26. The liability at any time existing of the company to the Treasurer shall be a Crown debt due to Her Majesty the Queen, and payment thereof may be enforced against the whole of the assets of such company wheresoever they may be found, in priority to all other creditors.

Amounts due to be a Crown debt.

The company shall repay to the Treasurer all expenses incurred by him for inspections, valuations, and all other matters and things connected with the administration of this Act, and such expenses shall be added to and form part of such debt, and shall be repaid at such times and in such instalments as the Treasurer may direct.

A certificate in writing, signed by the Treasurer, of the amount appearing to be due for such advances, shall be *prima facie* evidence that the amount stated in such certificate is actually due, and that all acts and conditions precedent to the right of recovery of the amount thereof from such company and all other persons liable to pay the same have been duly performed and fulfilled.

27.

Evidence thereof.

27. Any obstruction, default, or non-compliance by the company with any of the provisions of this Act shall constitute a default between the Treasurer and the company, and the Treasurer may thereupon, in addition to any other remedies, proceed to enforce all or any of the remedies provided by this Act in that behalf.

Obstruction, default, or non-compliance.

28. A statement showing the amount of debentures guaranteed under the provisions of this Act shall annually be laid before Parliament. At the next session of Parliament after the passing of this Act, and annually thereafter, the Treasurer shall prepare an estimate showing the amount of probable guarantees required for the financial year then commencing, and obtain the approval of Parliament thereto.

Regulations.

29. The Governor-in-Council may from time to time make such Regulations, not being contrary to the provisions of this Act, as are necessary to give effect thereto.

Such Regulations shall be published in the *Gazette*, and after publication therein shall have the force of law, and shall be judicially noticed in any court of justice.

See section 14.

THE SCHEDULE.

TABLE for the ACCUMULATION of the sum of ONE HUNDRED POUNDS at the expiration of FIFTEEN YEARS by the following EQUAL PAYMENTS, bearing INTEREST progressively at the Rate of THREE AND A-HALF per centum per annum.

Payments to be made at the end of		Annual Payment.
Second	Year	£5 13s. 2d.
Third	"	£5 13s. 2d.
Fourth	"	£5 13s. 2d.
Fifth	"	£5 13s. 2d.
Sixth	"	£5 13s. 2d.
Seventh	"	£5 13s. 2d.
Eighth	"	£5 13s. 2d.
Ninth	"	£5 13s. 2d.
Tenth	"	£5 13s. 2d.
Eleventh	"	£5 13s. 2d.
Twelfth	"	£5 13s. 2d.
Thirteenth	"	£5 13s. 2d.
Fourteenth	"	£5 13s. 2d.
Fifteenth	"	£5 13s. 2d.

REGULATIONS UNDER "THE SUGAR WORKS GUARANTEE ACT OF 1893."

The Treasurer, Brisbane, 13 December, 1893.

HIS Excellency the Governor, with the advice of the Executive Council, has been pleased to make the following regulations under the provisions of "The Sugar Works Guarantee Act of 1893."

HUGH M. NELSON.

REGULATIONS.

1. In these regulations and in the forms in the Schedule hereto, unless the context otherwise requires, the words "Company" and "Sugar Works" shall have the meanings set against them, respectively, in the second section of "The Sugar Works Guarantee Act of 1893";

"The Act" shall mean "The Sugar Works Guarantee Act of 1893";

"The Treasurer" shall mean the Colonial Treasurer or other Minister who for the time being performs his duties;

"Prescribed" shall mean prescribed by regulation.

2. The forms in the Schedule hereto are hereby prescribed as the forms which shall be used for the purposes to which they are respectively applicable.

3. The Treasurer may, from time to time, publish for general information in the *Government Gazette* the forms which shall be used under the Act, for the following purposes, that is to say:—

(1) Debentures;

(2) Coupons;

(3) All other instruments and notices which may be lawfully made and issued under the Act, and the forms of which are not otherwise hereby prescribed;

Provided, however, that the Treasurer may in any case direct that, for the purpose above mentioned or any of them, such form or forms shall be used as may be approved of by him.

4. The Treasurer shall not give permission to any Company to issue debentures, nor shall he guarantee such debentures, unless the Articles of Association of the Company applying for such permission or guarantee contain, at the time of making the application for such permission or guarantee, the following clauses, or provisions to the like effect:—

(a) If any debentures of the Company are guaranteed under the Act, the object and operations of the Company shall, so long as any guarantee or other liability to the Government of Queensland subsists, be subject to the conditions and agreements contained in the Act and in any regulations thereunder, and the Company shall not, without the previous consent in writing of the Treasurer, amalgamate or enter into partnership with any person or Company;

(b) The directors may make and execute, under the common seal of the Company, any bond which the Colonial Treasurer may require for the purpose of securing the Consolidated Revenue of Queensland against loss in respect of any such guarantee. All payments to be made by the Company under the fourteenth section of the Act shall be a first charge on the profits of the Company.

5. Every debenture issued by permission under section seven and guaranteed under section nine of the Act shall be endorsed by the Treasurer, or by some officer appointed by him in that behalf; and the Treasurer shall not incur any liability in respect of any debenture not so endorsed.

6. No guarantee shall be given in respect of the debentures of any Company unless such Company has a capital of at least one-half the amount of the guarantee applied for, of which capital at least one-tenth part shall be actually and *bonâ fide* paid up.

7. The Treasurer may retain possession of any debentures guaranteed under the Act for the purpose of delivering the same to the purchasers, and may, upon the authority of the Company, deliver the same to such purchasers: Provided that, if the Treasurer so requires, the proceeds of the sale of such debentures shall be paid into the Treasury of the Colony of Queensland, or to the Agent-General of the said Colony in London.

The moneys so paid into the Treasury or to the said Agent-General shall be paid to the orders of the Company, but not unless and until the Treasurer shall be satisfied that such orders have been given and issued for payments to be made in accordance with the purposes set forth in the Act.

NOTE.—Clause 6 of the above Regulations was repealed on 9th February, 1894.—See Notice published in *Government Gazette* of 13th February, 1894.

## SCHEDULE.

## A.

## "THE SUGAR WORKS GUARANTEE ACT OF 1893."

*Application for Permission to Issue Debentures.*

To the Colonial Treasurer of Queensland.

1. The \_\_\_\_\_ Company, Limited, of \_\_\_\_\_, hereby applies for permission to issue Debentures under the seventh section of "The Sugar Works Guarantee Act of 1893," amounting in the aggregate to \_\_\_\_\_ pounds sterling, for the purpose of defraying the cost of Sugar Works and the erection of the same.
2. The land upon which it is proposed to erect the works is situated at \_\_\_\_\_, parish of \_\_\_\_\_, portion No. \_\_\_\_\_, and the cost price is £ \_\_\_\_\_.
3. The cost of the works is estimated at \_\_\_\_\_.
4. The nature of the buildings proposed to be erected is as per plan and specification herewith.
5. The nature of the machinery proposed to be erected is as per plan and specification herewith.
6. The estimated cost of the buildings is \_\_\_\_\_.
7. The estimated cost of the machinery is \_\_\_\_\_.
8. The probable mileage of tramway is \_\_\_\_\_ miles, at a cost of \_\_\_\_\_ per mile.
9. The particulars of the land upon which it is proposed to grow cane are endorsed on the other side hereof.
- The common seal of \_\_\_\_\_ was hereto affixed by \_\_\_\_\_, being the person duly authorised to affix the same, this \_\_\_\_\_ day of \_\_\_\_\_ 189 \_\_\_\_\_, in the presence of—

Particulars of the land upon which it is proposed to grow sugar for the Company.

Name of owner or cultivator :

Area : acres roods perches.

No. of allotment or portion and parish :

Description of land (whether forest, scrub, or planted with cane) :

## B.

## "THE SUGAR WORKS GUARANTEE ACT OF 1893."

*Guarantee by Company.*

Know all men by these presents, that [name of Company] is held and firmly bound unto our Sovereign Lady Victoria, by the Grace of God of the United Kingdom of Great Britain and Ireland Queen, Defender of the Faith, in the sum of \_\_\_\_\_ of good and lawful money of Great Britain to be paid to our said Lady the Queen, Her Heirs and Successors, for which payment well and truly to be made the said Company binds itself and its successors firmly by these presents.

Sealed with the common seal of the said Company, dated the \_\_\_\_\_ day of \_\_\_\_\_ in the year of our Lord one thousand eight hundred and \_\_\_\_\_.

Whereas under the provisions of "The Sugar Works Guarantee Act of 1893" the above-bounden Company has made the application hereunto annexed to the Colonial Treasurer of the said Company for permission to issue debentures to the amount of £ \_\_\_\_\_ for the purpose of defraying the cost of the Sugar Works and of the erection of the same, as set forth in the said application :

And whereas the said Colonial Treasurer has granted such permission on the condition that the said Company shall enter into the bond herein contained :

Now, therefore, the condition of the above-written bond and obligation is such, that if the said Company shall erect upon the land mentioned in the said application the sugar works and buildings, and place therein the machinery as set forth in the said application, and shall plant cane on the land set forth in the said application in sufficient quantity to keep such sugar works employed to the full extent of their average capacity during the ordinary season for manufacturing sugar, and shall duly carry on and maintain such planting, then this bond shall be void and of none effect, otherwise it shall be and remain in full force and virtue.

## No. 7.

## Annual Report of the Racecourse Central Sugar Company (Limited) for the year ending 31st December, 1894.

GENTLEMEN,—In placing before you their eighth annual report, your Directors have much pleasure in being able again to congratulate you upon the termination of a most successful season.

Crushing was commenced on the 19th of June, and completed on the 14th of December, during which time 23,313 tons of cane were treated for a return of 3,463 tons of sugar.

During the year improvements to the mill and buildings at a cost of £2,725 have been effected, £2,527 has been paid for interest and redemption on account of Government Loan, and £5,468 has been expended in the purchase of land for the purpose of securing a certain supply of cane for the mill, while £1,118 has been advanced to farmers at 6% interest. Yet, notwithstanding this heavy outlay, you will see that the very satisfactory balance of £7,029 remains to the credit of our current account with the Commercial Bank, while our fixed deposits of £4,000 still remain intact, making a total of £11,029 cash in hand.

The outlook for the coming season is, we regret to say, not so satisfactory, still there is reason to congratulate ourselves upon the fact that past successes have placed us in a position to be able to face, without serious apprehension, the heavy fall in the price of sugar, which your Directors trust will, to a certain extent, be only temporary.

Arrangements for the sale of the coming season's crop have not yet been made, though an offer from the Colonial Sugar Refining Company is daily expected.

With regard to the supply of cane, your Directors, owing to circumstances, are unable to speak with any degree of certainty, though, as far as can be seen at present, somewhere about 25,000 tons will be available.

In dealing with the funds in hand, your Directors propose to pay the shareholders a dividend at the rate of 1s. 6d. per ton on cane delivered by them during the past season, while the balance to credit of current account will remain available for any purpose for which it may be required.

The fixed deposits of £4,000 it is proposed to hand over to the Government, thus reducing our indebtedness.

Mr. G. H. Crompton has audited the books, and reports that he finds everything in order.

Two directors, Messrs. Cowley and Solway, now retire by rotation, but are eligible for re-election.

Mr. G. H. Crompton is also eligible for re-election as auditor.

J. W. COWLEY,

Chairman.

STATEMENT



## BALANCE-SHEET and Capital Account, 1894, showing Assets and Liabilities.

DR.	LIABILITIES.				ASSETS.				CR.	
	£	s.	d.	£	s.	d.	£	s.		d.
To nominal capital .....				21,005	0	0	By shareholders A .....	5	0	0
„ Government Loan .....	16,679	15	0				„ Shareholders B .....	21,000	0	0
„ Less redemption paid to the 30/6/95 (six months in advance) .....	1,297	17	0				„ Estate account (buildings, machinery, plant, tools, &c.)	16,159	10	0
				15,381	18	0	„ Additions and repairs during year .....	2,725	0	8
„ Balance transferred from profit and loss account .....				21,487	18	7		18,884	10	8
							„ Less 5 % depreciation written off to profit and loss account	944	10	8
								17,940	0	0
							„ Land purchase account .....	5,782	15	3
							„ Firewood in stock, 1,139 tons @ 6/6 .....	370	3	6
							„ Unsold sugar in C.S.R. Co.'s hands .....	116	11	4
							„ Less balance advances .....	0	9	7
								116	1	9
							„ Sugar in tanks, 40 tons at £6	240	0	0
								356	1	9
							„ Fixed deposit, Union Bank ..	2,000	0	0
							„ Fixed deposit, Commercial Banking Company.....	2,000	0	0
								4,000	0	0
							„ Balance to Cr. current account, Commercial Banking Com- pany, after payment of out- standing cheques .....	7,029	7	3
							„ Petty cash account, Cr. balance	1	7	0
							„ Suspense account, Commercial Banking Company.....	50	0	0
							„ Sundry debtors .....	222	1	10
							„ Sundry debtors (advances on cane) .....	1,118	0	0
								1,340	1	10
								£57,874	16	7

JOHN W. COWLEY, Chairman.  
J. F. JOHNSON, Secretary.

I hereby certify that I have compared the foregoing statement of profit and loss and the balance-sheet of the Racecourse Central Sugar Company (Limited), and find them to be a correct and fair statement of the position of the Company as at the 31st December, 1894.

Mackay, 31st January, 1895.

GEO. H. CROMPTON, Auditor.

## PARTICULARS of Manufacture for the year 1894.

	Tons cwts. qrs lb.			COST OF MANUFACTURE.				
	£	s.	d.	£	s.	d.		
Quantity of cane purchased—Shareholders ...	6,266	11	2	0	Firewood .....	1,402	16	1
Non-Shareholders	22,217	4	1	0	Wages and salaries (including Secretary) .....	2,920	2	11
	28,483	15	3	0	Mill supplies .....	459	11	4
Less plants sold .....	170	8	1	0	Kitchen and rations .....	456	3	1
	28,313	7	2	0	General expenses .....	134	13	8
Quantity of cane crushed .....	28,313	7	2	0	Horse feed, &c. ....	109	3	3
Quantity of sugar made.....	3,463	0	0	0	3,463 tons @ £1 11s. 8d. per ton =.....	5,482	10	4
Average quantity of cane used to make 1 ton of sugar @ 90.50 N.T. ....	8	3	2	5	Cane purchased, less plants sold .....	20,884	6	1
Average quantity of cane used to make 1 ton of sugar @ 88% N.T. ....	7	18	3	15	3,463 tons @ £7 12s. 3½d. =.....	26,366	16	5
Firewood used in mill.....	4,261	0	0	0	Sugar charges .....	887	10	2
Firewood used to one ton of sugar .....	1	4	2	0	Insurances .....	73	13	0
Average return sugar sold f.o.b. Mackay per ton.....	£12	5s	0d.		Legal expenses .....	4	7	8
Average strength of sugar ...	90.50	N.T.			Directors' fees.....	28	0	0
Average cost of cane per ton .....	14s.	8½d.			Hospital .....	5	0	0
Average cost of firewood .....	6s.	4d.			Cost f.o.b. Mackay, but not including Govern- ment interest £7 18s. 0½d. per ton =.....	27,365	7	3
Cost of manufacture per ton, including interest, depreciation, and all charges .....	£2	10s.	0d.		Government interest, 18 months.....	1,230	0	6
Average return per ton .....	12	5	0		3,463 tons @ £8 5s. 2d. =.....	28,595	7	9
Cost per ton as below.....	8	10	7		Depreciation written off Estate Account .....	944	10	8
Profit per ton .....	3	14	5		3,463 tons @ £8 10s. 7d. per ton =.....	29,539	18	5

COMPARATIVE statement of cane crushed, cost of manufacture, and profit made during the last five years.

	1890.	1891.	1892.	1893.	1894.
	Tons cwt. qr.	tons cwt. qr.	tons cwt. qr.	tons cwt. qr. lb.	tons cwt. qr. lb.
Cane crushed—Shareholders.....	2,332 2 1	2,313 13 2	3,032 18 1	3,363 5 0 0	6,266 11 2 0
Non-shareholders.....	7,200 0 2	5,397 2 1	9,036 3 1	17,984 10 2 0	22,046 16 0 0
Total.....	9,532 2 3	7,710 15 3	12,069 1 2	21,347 15 2 0	28,313 7 2 0
Sugar made .....	880 0 0	855 0 0	1,305 0 0	2,570 0 0 0	3,463 0 0 0
Average quantity of cane to 1 ton of sugar manufactured .....	10 16 0	9 0 0	8 15 0	8 4 0 15	8 3 2 5
Average quantity of cane to 1 ton of sugar manufactured @ 88 % N.T.....		8 12 0½	8 6 3½	8 4 0 15	7 18 3 15
Firewood used to 1 ton of sugar .....	1 13 0	1 14 0	1 6 1	1 4 0 0	1 4 2 0
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Average return of sugar sold f.o.b. Mackay.....		12 0 1	12 6 7½	12 0 9	12 5 0
Average cost of cane .....	0 14 4	0 13 6½	0 14 0	0 14 4	0 14 8½
Cost of purchase of cane, manufacture, and delivery f.o.b. Mackay, without interest or depreciation.....		9 0 6	8 18 9	7 18 5½	7 18 0½
Average profit per ton, without including interest .....		2 19 7	3 7 9½	4 2 3½	4 6 11½
Average profit per ton, after payment of Government interest .....			2 18 10½	3 15 6	3 19 10
Average profit per ton, after allowing for depreciation .....			2 1 3½	3 8 11	3 14 5
Average strength of sugar .....		92·63 N.T.	92·30 N.T.	68·00 N.T.	90·59 N.T.

### No. 8.

#### Directors' Report to the Shareholders of the North Eton Central Sugar Company (Limited).

LADIES AND GENTLEMEN,—I have the honor of now submitting to you your Directors' Seventh Annual Report and Balance-sheet, with statement of profit and loss for the year 1894, also statement of receipts and expenditure for the half-year ending 31st December, 1894.

As you will note, we have paid the Government all outstanding amounts, and have in addition, as shown in the balance-sheet, paid a further sum of £2,006 5s. to the Government as a full year's payment in advance.

Improvements amounting to the sum of £3,515 10s. 11d. have been effected during the year.

You will note that the capital account has now been entered up, and shows the position of the capital of the Company. The amount paid as redemption having, according to the articles of association, been credited to each shareholder in accordance with his shares, and the total amount thus credited being shown in the capital account. In order to do this the total sum of profit and loss to date has been reduced by that amount.

The profit for the year has amounted to £12,763 9s. 6d., not including depreciation, and including that item, it amounts to £11,418 1s. 2d.

You will note that the average of cane to a ton of sugar is very slightly different from last year. The cost of manufacture and of cane has, however, increased. This is due to the fact that we have paid the workers slightly increased wages. Still, in spite of these facts, the profit has kept up principally owing to the higher percentage of the sugar produced, thus increasing the return from the sugar. In comparing the results of the season with those of other mills I would like to point out that this mill pays 10s. per ton for the carriage of sugar, and our supplies obtained from town are equally increased in price.

As in previous years, tenders for firewood have been called amongst shareholders, price 5s. 6d. per ton delivered in the mill yard.

The Government Inspector of Audits, Mr. James Kimmond, made the usual inspection of the books during the year.

Mr. W. G. Hodges has audited the books and accounts, and reports that the accounts are correctly entered, and the books in good order.

Prospects of the coming year are encouraging as far as regards the supply of cane, as the shareholders and farmers of this part of the district are increasing largely the areas of land under cane. Under present circumstances we are unable to give an estimate of the coming crop, but we expect it to reach at least 3,000 tons of sugar. The Colonial Sugar Refining Company has not yet made any definite offer for the crop of the coming season, but we expect to hear about it shortly.

As you are aware, there has been lately a considerable fall in the sugar market; but your directors have deemed it advisable not to lower the price of cane, but to encourage the farmers around the mill to plant large areas of cane by increasing the price per ton.

This year the cane cost 15s. 2½d. as against 13s. 11½d. the previous year.

You will now be called upon to elect two directors in the place of Messrs. R. Cowan and M. Simpson, who retire by rotation; also an auditor in the room of Mr. W. G. Hodges, who is also eligible for re-election.

Your directors cannot close this report without referring to the excellent quality of the new machinery supplied by Messrs. Walkers (Limited), of Maryborough. We referred to this matter in our half-yearly report, and the result of the year's work has shown that our opinion of the machinery from its appearance has been fully borne out by the work it has been able to do.

Your

Your directors also desire to express their thanks to the officers of the Company for the manner in which they have carried out the manufacture during the year, and we would more particularly mention our engineer, Mr. Th. Wolfe, and sugar-boiler, Mr. W. H. Morley. Both these gentlemen, with the secretary, Mr. du Couret, may look back with pleasure to the very excellent results of the season just completed, and to them is chiefly due the success that has been attained.

F. L. DU COURET,  
Secretary.

J. ANTONEY,  
Chairman.

PARTICULARS of Manufacture for the years 1889 to 1894.

Cost of Manufacture till delivery on Railway.

	Season 1889.	Season 1890.	Season 1891.	Season 1892.	Season 1893.	Season 1894.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Contracts, manufacture .....	204 6 8	268 1 9	290 10 1	.....	.....	.....
Wages, manufacture .....	1,143 12 6	1,001 2 10	1,088 16 1	1,542 4 9	2,111 14 3	3,384 15 7
Firewood .....	299 7 6	518 3 6	587 11 9	632 14 10	839 4 10	1,226 19 3
Mill expenses .....	469 7 2	547 16 2	752 13 6	165 10 9	207 0 2	203 3 0
Stores .....	494 15 9	351 12 7	461 2 10	363 5 6	385 7 5	608 17 11
Working expenses .....	103 17 3	95 7 5	99 19 0	92 12 9	128 1 6	164 1 2
Horse feed .....	.....	.....	.....	26 4 7	.....	.....
	2,715 6 11	2,782 4 3	3,280 13 3	2,822 12 5	3,671 8 2	5,587 16 11
Sugar .....	895 tons	1,015 tons	1,210 t. 2 cwt.	1,565 tons	2,375 t. 3 cwt.	3,481 t. 2 cwt.
Cost per ton .....	£3 1 8½	£2 14 9½	£2 14 2½	£1 16 0½	£1 10 11	£1 12 1
Cost of labour per ton .....	.....	.....	.....	.....	0 17 9	0 19 5

Cost of Sugar until delivery on Railway.

	Season 1889.	Season 1890.	Season 1891.	Season 1892.	Season 1893.	Season 1894.
	£ s. d.					
Cost of manufacture as above ...	2,715 6 11	2,782 4 3	3,280 13 5	2,822 12 5	3,671 8 2	5,587 16 11
„ cane, including railage ...	6,602 4 1	6,593 0 10	7,458 18 6	9,143 14 2	14,127 9 9	22,084 16 2
	9,317 11 0	9,375 5 1	10,769 11 11	11,966 6 7	17,798 17 11	27,672 13 1
Cost per ton .....	10 11 9	9 4 8½	8 17 10	7 12 11	7 9 11	7 13 9
„ of cane per ton .....	.....	.....	.....	.....	0 13 11½	0 15 2½

Cost of Sugar for seasons 1890 to 1894, including railage and all expenses for the year, except interest.

	Season 1890.	Season 1891.	Season 1892.	Season 1893.	Season 1894.
	£ s. d.				
Cost as above .....	9,375 5 1	10,759 11 11	11,966 6 7	17,798 17 11	27,672 13 1
Stores (included in above for seasons 1891-4) .....	79 12 1	.....	.....	.....	.....
Plant and tools .....	39 12 3	38 8 7	41 6 10	46 13 10	51 18 7
Repairs .....	35 13 9	10 4 4	16 16 11	.....	2 18 0
Railage .....	366 10 9	136 0 1	27 14 9	45 5 5	48 17 1
Sugar charges (including railage of sugar, wharfrage, &c., for 1891-4) .....	279 14 0	961 10 9	1,136 8 8	1,386 3 4	2,180 8 2
Salaries .....	349 16 0	265 10 0	233 0 10	193 5 0	214 13 4
Travelling expenses .....	5 3 6	6 10 0	.....	.....	.....
Office expenses .....	19 9 2	14 14 7	28 12 9	11 14 3	17 13 8
Legal expenses .....	.....	0 10 6	76 17 8	.....	.....
Directors' fees .....	.....	.....	10 0 0	50 0 0	50 0 0
Furniture .....	.....	9 16 1	7 16 10	6 5 6	5 0 0
Harvest expenses .....	.....	.....	.....	.....	56 5 2
	10,550 16 7	12,223 16 10	13,545 1 10	19,538 5 3	30,300 7 1
Cost per ton .....	10 7 10½	10 0 1½	8 14 4½	8 4 6½	8 14 1

Quantity of Cane to 1 ton of Sugar.

	Season 1889.	Season 1890.	Season 1891.	Season 1892.	Season 1893.	Season 1894.
	tons cwt. q. lb.					
Cane crushed, shareholders .....	10,392 0 0	10,214 0 0	11,227 18 2	13,701 2 0 0	10,942 8 0 0	12,982 0 1 0
Non-shareholders .....	.....	.....	.....	.....	9,329 15 2 0	16,027 2 1 0
Sugar produced .....	880 0 0	1,015 0 0	1,210 2 0	1,565 0 0 0	20,272 3 2 0	29,009 2 2 0
Average quantity of cane per ton of sugar .....	11 16 0	10 1 1	9 5 2	8 15 0 10	8 10 2 23	8 6 2 18
Average quantity of cane per ton of sugar, reduced 88 per cent N.E. ....	.....	.....	.....	8 8 2 21	8 1 3 24	7 17 1 17
Quantity of firewood to 1 ton of sugar .....	.....	.....	.....	1 6 0 0	1 5 3 6	1 5 2 14







1895.

NEW SOUTH WALES.

## VINE DISEASES ACT, 1893.

(REGULATIONS.)

Presented to Parliament, pursuant to Act 56 Vic. No. 22, sec. 52.

Department of Mines and Agriculture, Sydney, 13 September, 1895.

## REGULATIONS UNDER THE "VINE DISEASES ACT OF 1893."

His Excellency the Lieutenant-Governor, with the advice of the Executive Council, has been pleased to make the following Regulations under the power conferred by section 52 of the "Vine Diseases Act of 1893."

SYDNEY SMITH.

## REGULATIONS.

1. Every person who shall contravene the provisions of any Proclamation published under the powers conferred by section 4 of the "Vine Diseases Act of 1893," with respect to the removal from any place within this Colony to any other place in this Colony of any vine cutting or rooted vine by removing or permitting to be removed any such vine cutting or rooted vine, or by receiving such vine cutting or rooted vine so removed, or any person upon whose premises any such vine cutting or rooted vine shall be found, shall be liable to a penalty not exceeding five pounds, and such penalty shall be recoverable in the manner provided by the said Act.

2. The Minister may permit any vine or part thereof, or any grapes, package, implement, matter, or thing connected therewith, to be introduced from any place outside the Colony at the Port of Sydney, after examination shall have been made by an Inspector, and such other precautionary measures shall have been taken as may be deemed necessary to prevent the spread of disease. Every person who shall contravene the provisions of any Proclamation published in virtue of section 4 of the "Vine Diseases Act of 1893" with respect to the introduction into this Colony from any place outside of this Colony of any vine or part thereof, or any grapes, package, implement, matter, or thing likely to convey disease, by receiving any such vine or part thereof, or any grapes, package, implement, matter, or thing likely to convey disease, shall be liable to a penalty not exceeding five pounds, and such penalty shall be recoverable in the manner provided by the said Act.



1895.

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

DEPARTMENT OF AGRICULTURE.

(REPORT ON FOREST-THINNING OPERATIONS AT NARRANDERA.)

*Ordered by the Legislative Assembly to be printed, 30 October, 1895.*

The Officer-in-charge, Department of Agriculture and Forestry, to The Under  
Secretary for Mines and Agriculture.

Sir,

Department of Mines and Agriculture,

Sydney, 16 October, 1895.

In accordance with your personal instructions I visited Forest Reserves 1,421, 1,251, and 2,652, at Ganmain, near Narrandera, to ascertain whether the quality of the pine growing on those reserves was of such an inferior description as not to justify the cost of thinning, and also whether the pine known as "whipstick pine" was a distinct species, which would not grow above the height of a few feet or so even if thinned out.

I met Mr. Forester Condell at Narrandera, and he was so extremely busy with matters connected with the thinning that I obtained the services of Mr. Laver, the surveyor, who had marked out most of the blocks for thinning, to assist me in my examination of the reserves.

I found on the reserves a vast amount of excellent young pine in various stages of growth, from seedlings an inch or two in height to trees from 30 to 40 feet high, having a diameter of a foot, and even a few trees having a diameter of 18 inches. In a few years the pines which are allowed to remain, after being freed from surrounding young pines in various stages of growth, will unquestionably be of considerable value.

The Consulting Botanist having carefully examined the specimens of pines, including the whipstick pines which I obtained, has determined that the species of them all is the same, viz., *Fraxinella robusta*, Syn., *Callitris robusta*. He states, "No botanical difference being apparent."

This entirely settles the question, and there can be no doubt that the small pines will develop into their normal size under favourable conditions. These young pines have sprung up thickly where old matured trees have been cleared away for saw-mill purposes, or where in days past seed-bearing pines have been ringbarked.

Where the thinning work has been in operation the difference in appearance of the young pines is remarkable, for at the first glance at an unthinned portion of the thickest parts of the forest it could hardly be imagined that such fine young pines could be growing there, many attaining a height of 20 to 30 feet.

An immense number of trees have been removed from the reserves for timber purposes, as is apparent from the stumps, some of which are standing within 15 and even 10 feet of each other, giving a very good idea of the distance required by the pines growing here to mature. In some instances I saw matured pines growing much closer together.

Timber from this district has been sent to considerable distances—to Corowa, Germanton, Wagga, Hay, Albury, Goulburn, and many other places in this Colony, and also to Wangaratta and Mildura, as well as to other places in Victoria. It is valued greatly in consequence of its being proof against the white ant. Imported American and European timber is almost useless for building purposes where the white ant prevails. At Wangaratta, in Victoria, the price of Narrandera pine is, I believe, 20s. per 100 superficial feet.

I was informed on reliable authority, that a few years ago a saw-mill proprietor who was cutting timber on one of the Ganmain reserves received an order for 20,000,000 feet of sawn pine from Western Australia, but railway freight was too high at the time to enable him to accept the order.

A land-owner in the district informed me that he sold the matured pine he had kept growing on his land at 6s. per tree, and he is now selling trees of comparatively inferior quality for 3s. per tree to the mill-owner.

It seems that an immense quantity of valuable timber has been recklessly destroyed by run-owners and others in the district of Narrandera, and no provision for timber requirements has been made except in rare instances. Had all the beautiful matured pine been allowed to stand until the present time, many of those who purchased land could have paid for their land from its sale.

A settler who adjoins Forest Reserve 2,652 informed me that about three or four years ago he thinned out a quantity of young pine, and trimmed off the under branches of those pines he allowed to grow. They have developed so well that he can now make use of them for many purposes.

I observed that a great many good pines had been ringbarked years ago on the reserves. This work had evidently been carried out by Chinese, and I am informed that a considerable amount of ring-barking and thinning has been done in this district by those people at cheap rates.

The forest reserves which are being operated upon, situated within the Ganmain run, are Forest Reserve 1,251, which contains 11,976 acres, and Forest Reserve 1,421, which contains 13,280 acres. Both of these reserves are within the resumed area.

Besides these, on Forest Reserve 2,652 an area of 3,000 acres is being thinned.

This last-mentioned reserve is situated within the leasehold area, and is, I presume, the particular reserve referred to by Mr. Fitzpatrick, M.L.A., last week in his speech moving the adjournment of the House.

The reserve was notified in 1882 during the administration of forestry by the Department of Lands. The reservation was applied for by the lessees, was reported upon favourably by Forester Allan, and strongly recommended by District Surveyor Bolton. Of the land lying between this reserve and the railway in the same leasehold, about 15 square miles was reserved under the heading of railway reserve, and is still Crown land.

In April, 1894, Mr. Inspecting Forester McKewen inspected this reserve with Forester Condell, and he recommended the cancellation of 20,000 acres. On this being referred to Mr. District Surveyor Orr, he advised that the revocation be held over until early in 1895.

In January, 1895, Mr. Orr recommended that the proposed revocation should be carried out, and in March of the present year 26,112 acres were revoked.

The reserve originally contained 62,473 acres, but the recent revocation reduced it to 36,361 acres.

I believe that in the course of a few years, say ten or fifteen, or even less, many of the young trees which are allowed to remain will have become sufficiently matured to be cut for saw-mill purposes, and I believe that some will be ready to cut much sooner; however, after the time named, there should be an annual output of at least ten trees to the acre, which, at the value of six shillings per tree (although I believe that the trees will be worth a great deal more by that time), is equal to an annual return of £3 per acre. This output I have every reason to believe could be continued for any length of time required. I have no doubt that very many persons will be amazed that there is so much value in timber, but I fully believe that as time advances our timbers will increase still more in value, and timber-growing, as in more populated countries, such as France and particularly Germany, will prove very profitable, perhaps more profitable than many other crops usually cultivated for sale.

Not only for supplies of timber for various purposes, but for the influences of forests on climate, and health as well, should a certain proportion of timbered to cleared land be rigorously maintained. I append a diagram showing the proportion which the total area of forest reserves bears to the total area of the Colony. This will give a far better idea than figures, and it may prove a surprise that this reserved area is so small.

I beg to add that it is beyond all question that the subject of forestry and the preservation of forests is commanding great attention at the present day in all civilised countries, and various nations are taking precautions to prevent wholesale depletion of timber. European nations particularly are on the alert, and in Germany and France forestry is treated as a science. Russia, also, is following quickly in their steps, and the United States and Canada are becoming seriously alarmed lest their once supposed inexhaustible forests will, before many years are over, give out, in consequence of "the reckless consumption of lumber."

It will be apparent, therefore, how necessary it is that the greatest care be taken, before it is too late, to preserve our own forests from wholesale destruction, and I cannot too strongly urge the importance of this matter.

The new industry of wood-pulping is likely to clear away pine forests far quicker than these forests can be renewed. Hence our own pine is likely to become more valuable than it is at present (not for pulping, but for lumber), consequently it will be all the more desirable to preserve it as much as possible.

The accompanying photographs will give some idea of the growth of the pine on the reserves. They are not so distinct as I should wish, as the weather was most unfavourable.

I have, &c.,

WALTER SCOTT CAMPBELL.

Mr. Forester Condell, Narrandera, to The Chief Clerk, Department of Agriculture and Forests.

Sir,

Narrandera, 17 October, 1895.

Referring to your telegram of even date, in which it is reported that Mr. J. Ashton, M.P., states that the work of thinning out, scrubbing, &c., is being badly done, and not according to specifications, I have the honor to inform you that any work I pass and pay for as being finished I can vouch for as being done according to specifications. It may not be done to the satisfaction of some of the lessees, who would like to see the timber destroyed. Every block is carefully examined before a final payment is made, and I am fully satisfied that the work is done in accordance with specifications; and I will be only too pleased for any officer the Minister may appoint to go over the work when finished, and to show him through and let him see for himself. Two blocks on Forest Reserve 1,890, county Mitchell, are now finished, and, though I had some difficulty and had to send the men back over some of the work, I am now pleased to say that the finished contract does them much credit.

I would respectfully submit that, after spending a life-time in the Government Service of this Colony, the Minister may depend upon it that I will have the work finished strictly in accordance with the terms of the contract and in the interests of my Department before being passed by me.

I know I have many enemies amongst mill-owners in the district, but it will be readily understood that any officer who strictly performs his duty, and does not allow the Department to be defrauded, will incur the displeasure of this class of people; but I am glad to say I am indifferent to their opinions.

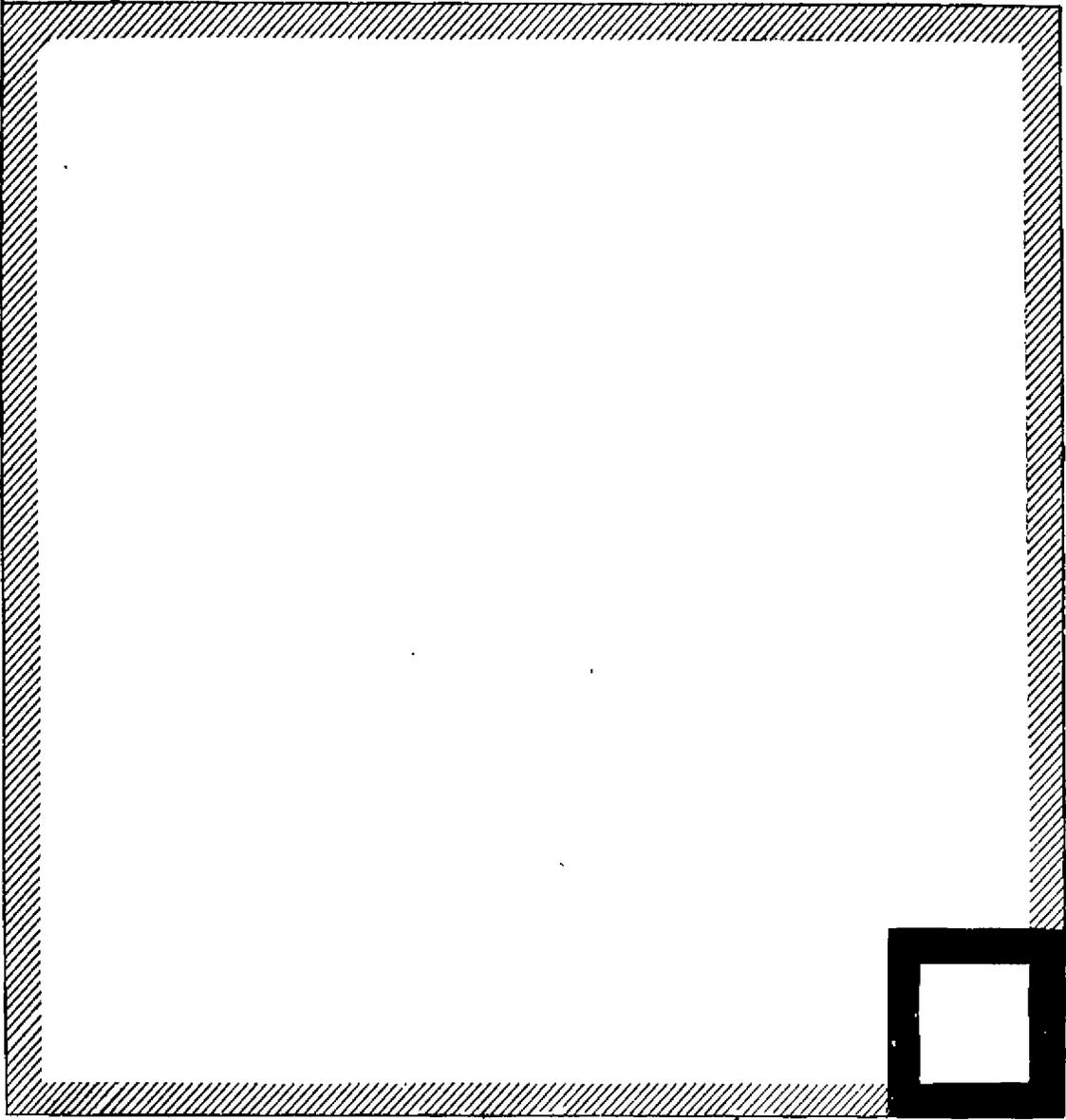
I have, &c.,

J. G. CONDELL,

Forester.

SHOWING

SHOWING comparisons between the area of the Colony, as shown by light shading, and the area of the timber reserves, as shown by dark shading.

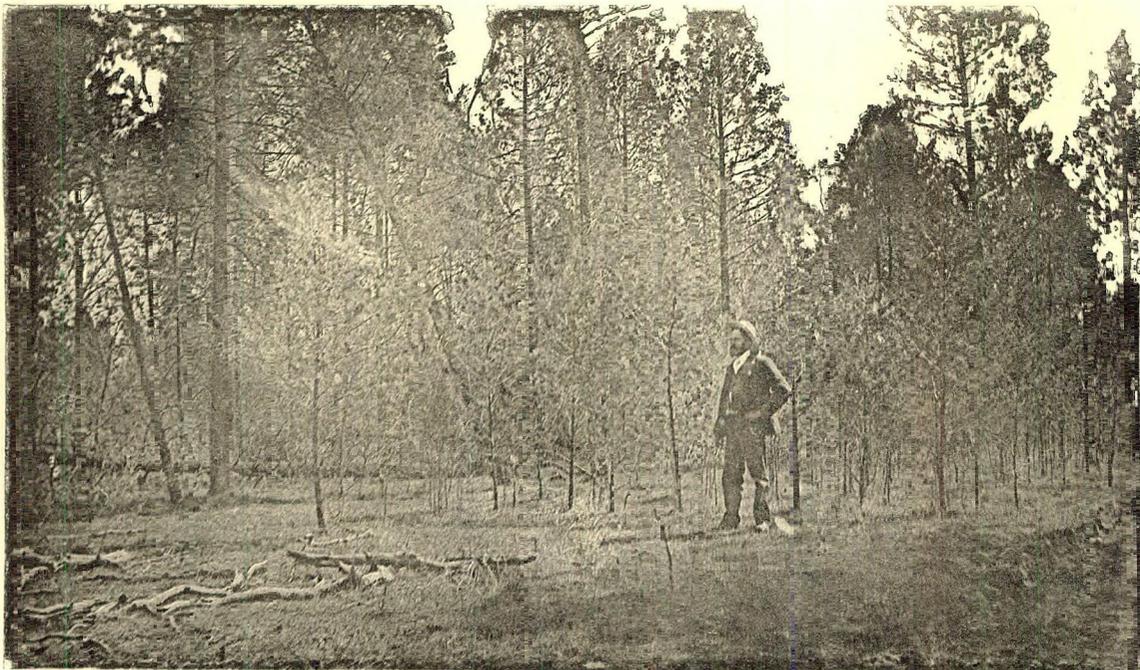
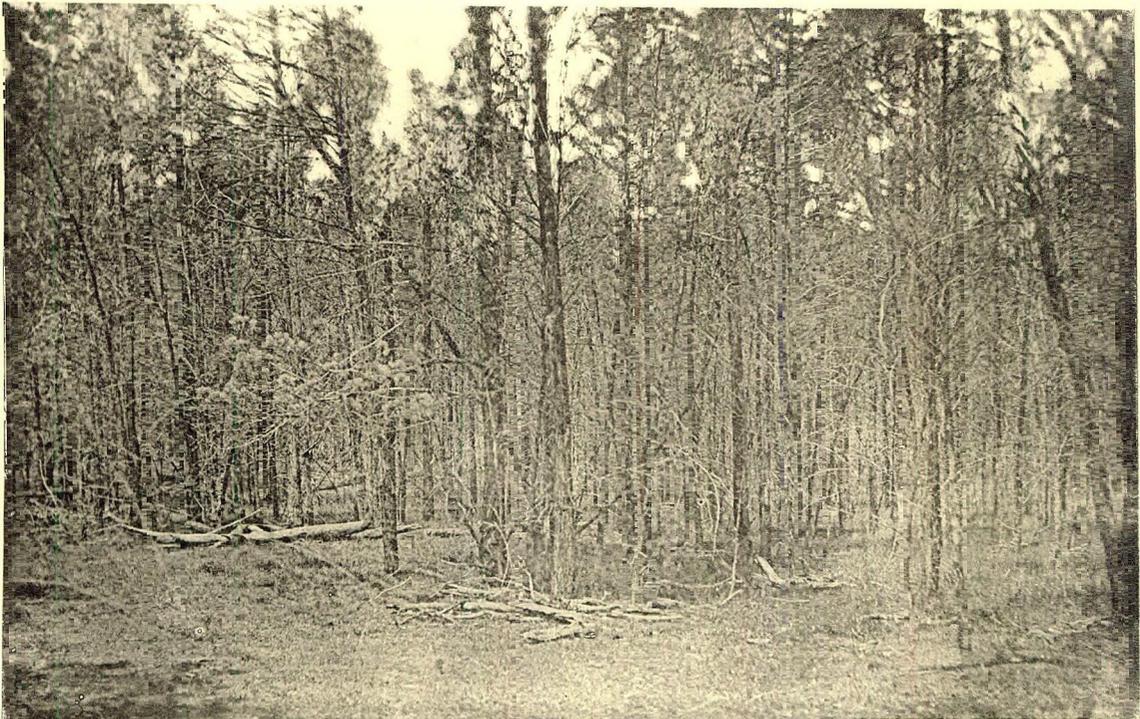


[Three photographs.]

Sydney : Charles Potter, Government Printer.—1885.

[6d.]





1895.

## LEGISLATIVE ASSEMBLY.

## NEW SOUTH WALES.

## AGRICULTURE AND FORESTRY.

(REPORT OF INQUIRY INTO THE ALLEGATIONS MADE TO THE MINISTER FOR LANDS BY MR. JOHN JACOB, STOREKEEPER, WHITTON, AGAINST MR. FORESTER CONDELL)

*Ordered by the Legislative Assembly to be printed, 28 November, 1895.*The Chief Clerk, Department of Agriculture and Forests, to The Honorable the  
Minister for Mines and Agriculture

Sir,

Narrandera, 16 November, 1895.

In accordance with your instructions, I held an inquiry into the allegations made to the Minister for Lands by Mr. John Jacobs, of Whitton, storekeeper, that Mr. Forester Condell accepts commission from the storekeepers on all business influenced by him in connection with supplies to gangs employed in forest thinning operations, and have the honor to report that I examined Mr. Jacobs, Mr. C. Dyring, the storekeeper at Narrandera who supplied the stores, and also Mr. Forester Condell.

I am satisfied that there is not one word of truth in the allegations, and in support of this beg to enclose a statement made by Mr. Jacobs, as well as a letter from him addressed to yourself withdrawing the allegations made by him against Mr. Condell. I also enclose a declaration made by Mr. Dyring before a Justice of the Peace, that no commission on goods supplied to the gangs was ever given nor ever offered by him to Mr. Condell.

I have, &amp;c.,

WALTER S. CAMPBELL.

The report of the Officer-in-charge, with attached declarations from the persons mentioned in connection with the charges made against Forester Condell, should be conclusive evidence that there is little truth in the representations made by members of gangs, and is submitted for the information of the Minister.—R.D.H., 19/11/95.

## [Enclosure.]

I, CONSTANTINE DYRING, of Narrandera, merchant, being duly sworn, maketh oath, and saith as follows:—I have been supplying several of the gangs of men employed in forest thinning in the Narrandera district with tools and general merchandise. The gangs are, to the best of my belief, under the control of Mr. Condell, and I have not paid any commission on the purchase of the said goods to Mr. Condell, nor have I entered into any agreement with him to do so, nor am I going to pay him any.

CONSTANTINE DYRING.

Sworn by the deponent, at Narrandera, the 16th }  
day of November, 1895,—

T. F. WILLIAMS, a Commissioner for Affidavits.

Mr. JACOBS was interviewed on Saturday afternoon, and I explained to him the serious nature of the charge made by him against Mr. Forester Condell in his letter of the , addressed to the Minister for Lands.

Mr. Jacob made the following statement:—The men, of course, explained matters to me in the most exaggerated way; I was also told that some of the gangers had asked Mr. Condell if they could not get a commission, and that he replied, "I cannot allow you a commission; I am a forest-ranger also"; I asked him if they would substantiate what they said; they said, "Yes"; I wrote to Mr. Condell asking what he meant, but he did not take any notice of the letter; Mr. Condell did not know there was such a store at Whitton; but I admit that had they come to me and asked for 200 or 300 axes, or anything like that, I could not have supplied them at that time; I admit that in acting on the statements of the men I was perhaps hasty, and wrote the letter without giving the matter much thought, and on the spur of the moment.

On Mr. Campbell pointing out how serious the charge was against a public servant, Mr. Jacobs said, "If I had perhaps taken a day to think I might not have written such a letter."

I asked Dyring did he allow Condell a commission and he said, "No."

Mr. Campbell: "Would you have any objection to giving me a letter withdrawing the statements made in this letter (to Lands)?"

Mr. Jacobs: "None whatever; I shall give such a letter without hesitation, and I am very sorry to do Mr. Condell an injustice."

Mr. Jacobs then signed the accompanying letter:—

Sir,

Narrandera, 16 November, 1895.

Since writing my letter of the 21st October, 1895, addressed to the Minister for Lands, with respect to the supply of stores to forest gangs at Whitton, I have learned that the information upon which I based my statements is incorrect, and I beg to withdraw the allegations made against Mr. Forester Condell.

JOHN JACOB.

The Honorable the Minister for Mines and Agriculture, Sydney.



1895.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

## MURRAY RED-GUM FOREST RESERVES.

(REPORT OF INSPECTING FORESTER MANTON ON.)

*Ordered by the Legislative Assembly to be printed, 4 September, 1895.*Mr. Inspecting Forester Manton to the Under Secretary for Mines and  
Agriculture.

Moama, 31 August, 1895.

## THINNING THE MURRAY RED-GUM FOREST RESERVES.

Sir,

Some months back there appeared several letters in the metropolitan papers in reference to the above subject, and various views were expressed by the writers, some condemning and others approving of the expenditure to be incurred in connection with such work, while others claimed the credit as having been the first to recommend it.

As the work of forest thinning on the Murray has ceased for the present, and the last gang of contractors were recently paid off, it may be of interest to know by whom and why this work was recommended, and whether the expenditure in connection therewith is likely to prove remunerative. To enable me to state the matter in a comprehensive manner, I beg to submit a concise report upon the Murray Forest Reserves.

The chief and characteristic timber of the Murray Forest Reserves is the red gum (*E. rostrata*), and the largest and most heavily-timbered reserves are on the Murray River frontage from the Ovens Junction to Campbell's Island, containing about 260,000 acres. I estimate that on these there are two matured red-gum trees to the acre fit for saw-mill purposes; trees of full growth, but valueless by reason of their being hollow, spongy, and winding growth, at about eight to the acre; young, vigorous, and healthy trees, varying from 16 in. to 20 in. in diameter, may be reckoned at seven to the acre; while on large areas there is a dense growth of young trees numbering in places over 2,000 to the acre.

Red gum is greatly in demand throughout the Colonies for railways and other works. It possesses great strength and durability, and is suitable for any class of engineering construction. The demand for this class of timber in Victoria exhausted some years back the greater part of the available timber on the southern bank of the Murray, and our forests were then laid under contribution for the supply of material for public works in that Colony. Some idea may be formed of the magnitude of that demand upon our forests by the amount paid to our Forest Department for royalty on the timber cut, which, at the rate of 1s. per 100 superficial feet, amounted for some years to between ten and fourteen thousand pounds per annum. But during the last few years this demand has greatly fallen off, owing to the commercial depression that has prevailed, and consequent almost entire cessation of railway construction and other public works in Victoria; but doubtless on the revival of prosperity the demand will again spring up. Had the demand of a few years back continued, it would have been impossible for our forests to have kept up the supply in their unassisted state; consequently, in 1878 I recommended that a judicious system of forestry should be adopted in connection with these forests, such as ringbarking the old and useless trees, so that others might take their place, and thinning out the saplings where the growth is excessive, so as to allow of the vigorous growth of the best young trees, instead of leaving them in their present state to struggle for existence, on the principle of the survival of the fittest, where but very few would arrive at maturity without having received such damage in the struggle as to render them valueless as marketable timber; whereas, by carrying out such a system as indicated, these forests could be made capable, not only of supplying our requirements, but to sustain an extensive export trade in the future, and thus provide an important source of wealth to the State for all time.

A few months after Mr. J. E. Brown took charge of the Forest Department he visited the Murray Forest Reserves, and saw the necessity of carrying out what I had recommended for so many years. Consequently, thinning operations were commenced in 1891, and continued for a short time. Another start was made the following year for a few months, and last year the work was again resumed, but had to be discontinued almost immediately owing to the early flooding of the reserves. In all, about 7,000 acres were thinned, with the result that there is now a magnificent young forest of straight-growing trees, from 50 to 100 feet in height, averaging about 350 to the acre. The development they have made

in girth and height since thinned is marvellous. On the area first operated upon thousands of piles, fully 60 feet in length, from 18 to 20 inches in diameter, and as straight as arrows, could now be obtained. Had the forests been left in their unassisted state, where there are now from fifty to sixty such trees to the acre there would probably not have been more than five or six. The Minister, who takes a great interest in forest conservancy, and with a view of improving our timber resources, at the beginning of this year decided to carry out a system of forest thinning on a larger scale than had hitherto been done, and gave instructions that portions of these forest reserves should be surveyed into areas of 1,500 acres. Consequently, twenty-nine blocks were marked out, embracing an area of 42,500 acres. The Minister, being desirous of giving as much of this work as possible to the unemployed, decided that the thinning should be done by contract under the Butty-gang system. Tenders were called for, and a large number of men, representing gangs of ten men and upwards, came from Sydney and other parts of the Colony to inspect the various blocks, with the result that 165 tenders were submitted, ranging from 5s., the lowest, to £2 12s. 6d. per acre. As these rates were so excessively out of proportion to the official estimate the Minister had called for before calling for tenders, he therefore decided to allot the work by ballot to such of the tenderers that were willing to accept it at schedule rates, which was on an average of about 5s. 2d. per acre. The whole of the blocks were taken up at the departmental rates, and the work completed on the 18th instant. There were a few men also engaged this year at daily wages, who thinned about 1,000 acres, so that the total area thinned on these reserves to date is about 50,500 acres.

The 7,000 acres referred to as having been first operated upon were chosen as those portions of the reserves on which the trees had arrived at the most advanced stage of growth, and from where I estimate that within five or six years there should be from ten to twelve trees to the acre fit for saw-mill purposes, which at the present rate of royalty—namely, 1s. 3d. per 100 superficial feet—should return from £6 to £7 10s. per acre. In twenty years there should be eighty or ninety such trees per acre, and by a judicious system of forestry and subdividing the forest reserves in suitable areas, and only taking the marketable timber in succession from each crop, the crops could be made to come in continuously in yearly rotation.

With reference to the forest-thinning operations carried out this year, the total area thinned out is about 43,500 acres, on which, taking the average, about 250 trees to the acre have been left, and assuming that only 100 will grow to marketable timber in the course of thirty-five years, many will be available long before that time, and that the market value should be only £1 per tree, which is a very low estimate as to what they probably will be worth, we should thus have a return in thirty-five years of £100 per acre, at expenditure to the State of 5s. 2d. or, say, 6s. 8d. per acre, as in four or five years a further thinning out will be required over the same areas at a cost of about 1s. 6d. per acre; therefore, looking at the expenditure in connection with this work in a purely commercial point of view, I cannot think of any investment where it could have been more profitably laid out by the State, or from what source a greater return for the outlay could be derived, and this from land utterly unsuited to any other purpose excepting grazing stock for a few months in the year, owing to its being subject to annual inundations. I may state that red gum possesses a remarkable aptitude for reproduction, and I have no hesitation in stating that where there was one young tree in 1875, when I took charge of these forest reserves, there are now twenty, and all that is required to make these reserves practically inexhaustable is the inexpensive work of thinning.

With reference to what has been said in regard to the work being useless, owing to the continuous reproduction of young trees, judging from the work first done I think there need not be the slightest apprehension in this respect.

I have, &c.,

JOHN A. MANTON.

1895.

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

TURPENTINE TIMBER.

(REPORT BY MESSRS. J. H. MAIDEN AND J. V. DE COQUE ON.)

Ordered by the Legislative Assembly to be printed, 29 October, 1895.

Minute Paper.

Department of Public Works, Engineer-in-Chief's Office,  
Sydney, 4 October, 1895.

*Subject*:—Timbers: New South Wales turpentine (*Syncarpia laurifolia*); Western Australian jarrah (*Eucalyptus marginata*). Relative to their powers of resistance to cobra.

I HAVE the honor to submit herewith the joint report of Mr. Maiden and myself on the turpentine timber. This report is signed by us in duplicate, and one copy has been forwarded by Mr. Maiden to the Minister for Mines and Agriculture.

It will be within the knowledge of the Engineer-in-Chief for Public Works that he verbally instructed me at the same time to inquire into the merits of the Western Australian jarrah as a cobra resistant; and I therefore communicated with one or two gentlemen interested, and submit their replies for information and further instructions.

I also attach an extract from the *Western Australian Review* of 5th July, 1894, dealing with the timbers of Western Australia.

I think the turpentine report will clearly demonstrate the fact that this timber is not to be depended on as a cobra resistant, and it still remains for me to practically settle the question whether the jarrah gives any more satisfactory results.

I find that little has been published regarding the value of the jarrah timber. You will please note that the attached letters bear dates of September and October, 1894; but I delayed producing them sooner as I wanted to submit the turpentine report in conjunction with them, and it is only now complete.

I should like to be permitted to point out that the delay in submitting this report was due to two causes—the difficulty Mr. Maiden and myself experienced in both getting away from our respective duties at the same time, and the wide field of investigation we felt it necessary to enter into, to make our report authentic and reliable.

The Assistant Engineer for Bridges.

J. V. DE COQUE,  
Inspector of Timber.

I have no doubt that the Engineer-in-Chief has such a large personal experience of jarrah as to render further inquiry in this direction unnecessary.—E. M. DE BUNEN, Assistant Engineer for Bridges.

I recommend that this valuable report be printed and laid upon the Table of the House, and copies freely distributed to all Departments using turpentine. With regard to jarrah, I have had a long experience with this timber, and never yet met with a case where it has been penetrated by the *Teredo navalis*. Jarrah is exclusively used for piles in Western Australia and South Australia, and very largely so in Victoria.—ROBT. HICKSON, Engineer-in-Chief for Public Works, 4/10/95. The Under Secretary.

For approval.—J. BARRING, Under Secretary for Public Works, 12/10/95. Approved.—J.H.Y., 14/10/95. Prepare to lay on Table.—Jno. P., 14/10/95.

## Report on Turpentine Timber, with especial reference to its resistance to Cobra (*Teredo*).

### Introductory.

1. In accordance with the instructions given us to inquire into the merits of turpentine timber, particularly in regard to its liability to damage by cobra, we have the honor to report that we visited the Hawkesbury district in December, 1894, and in March last. The local timber suppliers distinguish two turpentine timbers (botanically identical) in this district, viz.:—The swamp turpentine, growing on the flats, and also the hill turpentine, which latter they consider the better timber of the two in point of durability.

Our visit of inspection to the northern rivers was delayed until June-July of this year, owing to the difficulty we experienced in both getting away at the same time from our respective duties. We made most careful investigations at all the timber centres between Hexham and Kempsey, interviewing the timber suppliers, owners of saw-mills and residents of the different districts, inspecting several bridges and jetties where turpentine timber was in use, visiting the various forests containing turpentine timber, and having several trees felled for our inspection.

The evidence we obtained from many of the leading timber suppliers is of a most conflicting nature, rendering our task of sifting it no easy one. As the bulk of the piles and girders of turpentine used in public works is supplied from the districts we traversed, we deemed it advisable to make every effort to arrive at a satisfactory solution of the following important points:—

- 1st. Does the true turpentine resist the attacks of cobra when used in piles, girders, &c., in public works?
- 2nd. Are there two varieties of turpentine timber, one cobra-resisting, the other not?
- 3rd. Have any other timbers been substituted for turpentine timber and used for piles, &c.?

We propose herewith to submit notes on various points connected with the turpentine question, and, at the close of our report, to submit our recommendations and findings.

### II.—Characteristics of Turpentine Timber.

The following notes may be convenient:—Turpentine is, for a hardwood, soft when green, but hard when dry. It is of a sandy or gritty nature, rapidly dulling the saws; hence saw-millers do not like it. It splits and shrinks badly in sawn sizes free from bark, unless some attention is given to seasoning it.

It is very durable when placed in the ground, and a great recommendation for many purposes is the difficulty of burning it.

An illustrated article on the subject will be found in the *Agricultural Gazette* for July, 1894, so that it may not be necessary to amplify the above particulars.

### III.—Black and Red Turpentine.

At a very early stage of our inquiry we found it necessary to clearly understand what are the differences between black and red turpentine. The terms are not used in all parts of the Colony, the word "turpentine" being simply employed in some places. No one whom we questioned knew what differences in the trees corresponded to differences in the colour and appearance of the timber, although two different kinds of turpentine were recognised readily enough in most districts.

Black turpentine was originally so called to distinguish it from white turpentine, an old name of tallow-wood, a name which still lingers in the Port Stephens district amongst the old hands.

We felled turpentines growing a few yards from each other. The timber of small, youngish trees is of a fresh, sound, light red colour, and the timber is known as red turpentine, while the timber of the very old and large trees is of various shades of dark red up to purple brown, chocolate, and nearly black; this is black turpentine. There is no botanical difference between them; they simply present, in our opinion, different stages of growth or maturity of the same timber. We look upon black turpentine as over-matured timber, and perhaps in some cases the product of trees which have been injured, or whose growth has been interfered with in some way. We look upon red turpentine as timber thoroughly sound and full of life. In the Port Macquarie district we found it recognised that the bark of red turpentine is tougher, and the oleo-resin far more abundant than in the black.

Black turpentine is usually used for punt-bottoms, because of its size; red turpentine for piles.

### IV.—Miscellaneous Notes on Turpentine, chiefly obtained on the Northern Rivers.

The following notes on turpentine, with especial reference to its powers of resistance to cobra, will be found interesting, although somewhat contradictory.

Turpentine is excellent for the bottoms of punts; it is put in green, and coppered. (Mr. Breckenridge, Failford.)

Mr. J. Wright, Tuncurry, prefers red turpentine to black. Turpentine piles at Mr. Wright's wharf have been eaten off by cobra in ten and a half years.

Mr. Miles, Forster, says that the black turpentine is more cobra-resistant than the red turpentine.

The wharf at Ghinni Ghinni, on the Manning River, built about four years ago, has the turpentine piles now nearly eaten through. These piles were obtained from Sandy Creek, about 3 miles north-west from Wingham. The timber-getter who procured these piles states:—"I have also used turpentine timber that was got on the Lower Manning to build a punt with, and it did not resist the cobra."

Mr. Walters, of Coopernook, writes:—"I know you are aware there are two kinds of turpentine, viz., red and black; both kinds are used in Sydney Harbour. I say the black is 50 per cent. before the red for piles, and yet the Department uses both kinds, and does not make any objection to contractors using the red kind as well as the black."

Mr.

Mr. Walters further states that black turpentine is difficult to cut, and ruins the saws. He will have nothing to do with it, while red turpentine readily cuts—cuts like cheese. Mr. Walters coppers his punts.

The following correspondence and notes in regard to red and black turpentine are interesting:—Messrs. M'Kay and Bibby, of the Laurieton Steam Sawmills, write to Mr. Forester Brown of Port Macquarie:—In reply to your inquiry as to why some piles said to be turpentine are fairly free from cobra, whilst others are riddled with them, the matter is, I think, easily explained. There are two distinct kinds of turpentine, viz., red and black, and as I have used both I am in a position to say positively that black turpentine for piles is practically useless, and the cobra will attack it freely, whilst red turpentine will resist cobra for years, and very rarely enter further than the sap. These facts have come under my personal observation during the last twelve years. I find also that red mahogany and tallow-wood are good woods in the water, but of course not equal to turpentine." In conversation with us Mr. Mackay stated that "black turpentine should always be discarded, as it has not a quarter the life of the other."

The same gentleman looks upon black turpentine as an abnormal or diseased state of red turpentine.

Mr. Johnston, of Wauchope Sawmill, states that he built a steam punt (the "Maori") for logs for Messrs. Mackay and Bibby, of Laurieton, the flat bottom of forest turpentine (*Syncarpia laurifolia*). He called it "black turpentine." He saw the timber growing himself; got it under North Brother Mountain at Laurieton. The punt has been cleaned every year and has lasted now eleven years free from cobra. Also that there has been no borer in it up to five years in use.

To this statement Mr. Mackay replies:—"I cannot tell you the difference between the black and the red wood either by the leaves or bark; but I am sure Mr. Johnston is mistaken about the black turpentine being used in the steam punt he built so long ago. That punt is still at work, and was on our slip last Christmas, and the planks were apparently as good as when they were first built. I am sure that the black turpentine is not what we get for planking and piles."

Mr. Laurie agrees with Mr. Mackay that the red timber is the better—has more oleo-resin.

The life of turpentine piles was stated to us to be ten years at Laurieton. We saw turpentine piles at Laurieton saw-mills down five years. They had been only superficially injured then. At the same time we were informed that turpentine is hardly more durable than many other timbers if the bark be stripped. Coppering is the only cure.

Red turpentine is not only used here for piles, but also for punt bottoms, which are painted with copper paint about every twelve months. (Mackay.)

We observed that the standing ways for the punt slip at Laurieton were quite sound after having been down seven years. They are of red turpentine.

We were subsequently informed that Rogers' punt, at Laurieton, which was built about eleven years, and has the bottom cleaned sometimes once or twice a year, was riddled with cobra. The bottom was not painted. We did not see this punt.

There is any quantity of turpentine in the Laurieton district, but it is rarely cut, as it dulls the saws.

Mr. Cain, timber merchant of Wauchope, Hastings River, writes to Mr. Forester Brown:—"There are two kinds of turpentine—one grows in the brushes and has a very long stringy bark and very red timber, and the other grows out on the clear, and has a very thin scaly bark, and the timber is very dark inside. I cannot tell you, for certain, which is the timber that the cobra riddles. I have been asked the question by——, but I think it is the turpentine that grows on the clear that the cobra will eat, but I am not certain."

At Port Macquarie we made careful inquiries at Hibbard & Son's Mill, in company with Mr. Forester Brown, and Mr. Hibbard, jun., spared no pains to give us information.

Here the punts for up-river work are made of 2½-inch turpentine planking, covered with tar and felt. Below this a sheath of 1-inch turpentine planking is placed to take off chafing, and to avoid the cost of coppering. The inch planking is stripped off about every seven years.

The punts go into fresh water, but remain there a few hours at the most. The inch planking is cleaned from barnacles about every two years.

The punt slip at Hibbard's wharf consists of red turpentine and has been down fifteen years. It has gone below high-water mark. Between high and low water it is practically intact. It is partly covered with tallow-wood, which has been eaten away to about the same extent as the turpentine. Mr. Hibbard is of opinion that turpentine is undoubtedly the most cobra-resistant timber we have.

Rudders for droghers are made by Mr. Hibbard out of turpentine, showing that people have a leaning towards the timber.

It is all red turpentine at Port Macquarie; black turpentine is never used. A timber-getter here (Mr. Kilmorey, senior) says that "the turpentine, cut from swampy or moist land, is very soft to cut, has a thin bark, resin runs out like native honey, and that bees do not swarm to it when felled like they do to that which grows in the forest."

The fender piles of Greenhill's Wharf, West Kempsey, are eaten off between high and low water. They are of squared turpentine. The other piles are of ironbark, coppered. This wharf marks our northernmost limit, this trip.

The Government jetty at Coff's Harbour was stated to have been over twelve months building, and before it was finished, the turpentine piles first driven were stated to have been attacked by cobra.

Mr. G. Harriott says "that the 'Byron Bay' wharf piles, of forest turpentine, were riddled with cobra in a few years, and adds that turpentine growing in the brushes smells stronger (when cut into) of turpentine than the other." As regards the turpentine piles at Byron Bay, we attach a copy of a letter written by Mr. C. W. Darley, late Engineer-in-chief for Harbours and Rivers, to the Forest Department, and forwarded for our information. It not only shows that Mr. Harriott's statement must be considerably modified, but gives additional information of a valuable character.

"Two pieces of pile, recently taken from the Byron Bay jetty—one cut at low water and the other at 5 feet below low water—show how well turpentine will resist the *Teredo navalis* (cobra) in sea water. The pile from which the specimens were taken was driven about eight years ago. From them it can be clearly seen that while the *Teredo* attack, and to a great extent destroy, the sap-wood, they fail to touch the red heart-wood. They also show that the *Teredo* are not nearly so active a little distance below low water as they are at low water. Experience teaches me that it is only in pure salt water that this worm avoids the heart-wood of turpentine, for in rivers where fresh water is in excess of the salt water, the *Teredo* will penetrate the same wood rapidly. It is a question, however, whether the worm is really the same, and steps are now being taken (October, 1891) to test this question."

### V.—The Bark of Turpentine.

It has been stated that cobra never goes through the bark, or rather the bark, plus the layer of oleo-resin, which is reputed to be the great protector of the timber against cobra. Mr. Laurie, of Laurieton, says that the bark of any timber, even gum, gives increased resistance to cobra; in fact, that every tree will resist the pest more or less, provided the bark be intact. He is of opinion that turpentine is still the best, though it is far from being absolutely resistant.

Local opinion at Port Macquarie is in favour of turpentine, mahogany, and ironbark for piles, so long as the bark remains sound.

At the same time, on the Macleay River, we found turpentine piles, bark or no bark, destroyed by cobra in five years.

Mr. Forester M'Donald, of Kempsey, looks upon turpentine as only effective so long as the bark is intact. He would prefer other timbers—ironbark, for example, and preferably old seasoned, ringbarked timber—to turpentine for piles.

Mortise holes, which cut through the bark of a turpentine pile, are a common cause of mischief, allowing cobra free access into the timber.

Mr. Sydney Verge, of Kempsey, draws attention to the fenders on coppered piles, by means of which cobra can get up into the pile by a circuitous route. This seems to us a matter worthy of attention, for cobra, like white ants for timber and sugar ants for saccharine delicacies, will find out the weak spots in the defences by an instinct that never fails.

And now we come to a very important matter.

We are satisfied that if round piles of turpentine are driven in cobra-infested waters, with bark attached and uninjured, they will resist the attacks of cobra for a period largely dependent on the bark remaining intact and closely adherent, but, at the same time, we deem it practically impossible to procure and drive any number of turpentine piles, without injuring the bark more or less, and the smallest injury to the bark of the timber renders it more vulnerable to cobra. When the manner of procuring piles and conveying them to the work for which they are intended is taken into consideration, it is easy to see they cannot escape injury to their bark even under the most favourable considerations, viz., when the sap of the trees is down, and the bark consequently closely adherent to the log. The falling of the trees in the first instance, the hauling and spare chaining to the waggons, the friction of the waggon chains in road transit to the water's edge, the rough handling they receive in loading and unloading on vessels, and lastly, the action of the pile monkey in driving the piles to their required depth, cannot fail to more or less injure and separate the bark.

In the course of our investigations we saw turpentine piles, intended for Government wharves; with strips of bark torn off from end to end, and in some stacks we could not find a single log whose bark was intact. So that if the adherence of bark to the log is to be made a condition of contract, it should be enforced, and not dealt with as if it were a matter of slight consequence.

### VI.—Cobra and Turpentine.

Cobra is the common name (it is an aboriginal name, see Backhouse, "Narrative of a Visit," &c., p. 366) by which certain bivalve molluscs belonging to the genus *Teredo*, and included in the family *Pholadidae* are usually known. *Teredo navalis* is one of the most common and destructive species. It is generally about a foot in length, but sometimes grows over 2 feet 6 inches. Fourteen species of *Teredo* are known, some occurring at low water, some being found at a depth of 100 fathoms. They are very widely distributed, occurring from the coast of Norway to the tropics.

In addition to cobra, what are known as "borers" often do a good deal of damage to piles and timber-work below tide mark. Those found by us at Port Macquarie are isopods, belonging to the genus *Sphaeroma*, the members of which are distributed all over the world.

We believe that no timber has absolute power of resistance to cobra. That being our conclusion, it remains a matter for consideration to what extent the lives of timbers (turpentine or others) may be prolonged. At Cundletown wharf, on the Manning River, where there is a Government punt-slip, and where Mr. Kenny repairs punts, boats, &c., under the direction of Mr. F. W. Baker, the Engineer for Roads of the district, we found pieces of turpentine a mass of cobra-turpentine logs, a repulsive mass of writhing cobra—the logs now consisting of very much more animal than vegetable matter. Prickly tea-tree\* logs were also in a similar condition. Tallow-wood is here considered to be the most resistant timber to cobra.

Prickly tea-tree is considered at Kempsey to resist cobra better than turpentine, and at Laurieton we were shown small piles for a boat-wharf made of prickly tea-tree which had been down fifteen years, and which were quite sound. What the particular local conditions were in these cases we do not know, but, while we readily admit the high resistant power of prickly tea-tree, we frequently observed it riddled by cobra.

Anywhere within the influence of the tides on our coastal rivers and creeks, timber is attacked by cobra, and there is the most abundant and most convincing evidence that cobra is more injurious in tidal waters than in pure salt water.

In the northern rivers of this Colony, a reason why the effects of the cobra are so disastrous is doubtless because of the increased warmth of the water, which favours the growth of the pest.

The following appear to us to militate against the growth of cobra:—

1. Pure salt water.
2. Fresh water.
3. Foulness of water.

Mr. C. W. Darley (late Engineer of Harbours and Rivers), writes to the Forest Department:—  
"In pure sea water I have reason to believe that the redwood of turpentine will resist the *Teredo* for many years (I can speak for twenty years at least), but when there is some fresh water mixed with the salt water, as up rivers, I find the worm will go through and destroy turpentine piles within a year in some cases."

Piles

\* *Melaleuca styphelioides*.

Piles are more or less attacked in pure salt water, as witness the case of the piles at Coff's Harbour, Wallis Lake, &c. While cobra may flourish in clean sea water, the case of piles in the polluted waters of parts of Sydney Harbour is not a fair test of the resistance of timber to cobra.

A punt working in salt water may subsequently pass over muddy flats, which scrape off everything. The punt is all right in fresh water, in which cobra cannot, of course, live; hence the variation in the reports in regard to the resistance of turpentine to cobra. In examining specific instances of reputed resistance to cobra, we often find the circumstances very complex, and we are often without sufficient data to compare them.

### VII.—Turpentine Substitutes.

It occurred to us that perhaps the different reports as to the durability of turpentine might, in a measure, be owing to the substitution of some other timber; accordingly throughout the trip we kept this matter under notice.

We found on inspection of forests the true turpentine (*Syncarpia laurifolia*), also the brush or bastard turpentine (*Rhodamnia trinervia*) growing side by side, the latter bearing, in the Hawkesbury district, a strong resemblance to the former in colour of timber and bark. In no other part of the Colony visited by us have we seen the resemblance so strong. The leaf of the brush turpentine is readily known by its three prominent veins or nerves.

As however but a very small proportion of the turpentine timber used in public works in the Colony has come from this district, and finding no evidence to show that the brush turpentine was in use as a substitute for turpentine, also that it rarely if ever attains pile size along the northern rivers, we do not now attach much importance to the matter.

Brush turpentine in the Port Stephens and Manning River districts never seems to attain any size, but always accompanies true turpentine.

In the Port Macquarie district brush turpentine has the bark much like that of red mahogany, and could not easily be mistaken for turpentine. Mr. J. McInerney has seen red mahogany with a bark resembling that of true turpentine; this is particularly the case with timbers of pile size. It is sometimes sent down for that timber, and gets riddled very quickly by cobra.

The bark of turpentine is tough as compared with brush turpentine. The blacks have the same name for the two trees. Mr. Booth would as soon have red mahogany as turpentine for piles.

There is no brush turpentine large enough for piles in the places where the turpentine piles are obtained in the Port Macquarie district. It is quite possible that young tallow-woods, and even young stringybarks or white mahoganies, might occasionally be substituted for turpentine through ignorance, but the mistake would easily be rectified by any judge of timber.

We do not think that any wilful attempt has been made in the past to substitute other hardwoods in lieu of turpentine for piles, &c. In point of fact turpentine timber is so plentiful throughout the Colony that there is little or no inducement to unprincipled timber suppliers to substitute any other timber for it.

### VIII.—Acknowledgments.

We acknowledge the valuable assistance afforded us by the following gentlemen in particular, who all evinced the utmost readiness to give us the fullest information, and assisted us in our inquiry in various ways:—

- Mr. John Breckenridge, saw-miller, Failford.
- Mr. John Wright, saw-miller, Tuncurry.
- Mr. Miles, saw-miller, Forster.
- Mr. John Hibbard, jun., saw-miller, Port Macquarie.
- Mr. F. W. Baker, Resident Engineer for Roads, Taree.
- Mr. Sidney Verge, Kempsey.
- Mr. Kenny, in charge of repairs to punts, boats, &c., Government Slip, Cundletown.
- Mr. Forester Rudder, Booral.
- Mr. Forester Brown, Port Macquarie.
- Mr. Forester MacDonald, Kempsey.

### IX.—Summary of Findings and Recommendations.

To the 1st question,—Does the true turpentine resist the attacks of cobra when used in piles, girders, &c., and in public works?

Our answer is that turpentine is not an absolute resistant to cobra, either in pure salt water or in tidal waters, whether the bark is on or not. The turpentine will resist the cobra as well, or better, than any other hardwood, providing the bark remains uninjured.

That cobra is much more active in attacking turpentine in tidal waters, where salt and fresh water mix, than in pure salt water.

To the 2nd question,—Are there two varieties of turpentine timber, one cobra-resisting, the other not?

Our answer is, that there are two turpentines of the same species, called the black and the red, but although frequently no sufficiently sharp line of demarcation exists between the two timbers for us to single one variety for special commendation, we would prefer typically red turpentine. There is also a brush turpentine, whose botanical name is *Rhodamnia trinervia*, somewhat similar to true turpentine, but we found no evidence to show that it had been substituted for true turpentine, and we failed to find any inducement to timber-getters to do so.

To the 3rd Question,—Have any other timbers been substituted for turpentine and used for piles, &c.?

Our answer is, that we found no evidence that such is the case. Further, we failed to find any inducement to suppliers to do so, as turpentine is very plentiful in the coast districts.

We

We recommend,—

- (a) That in pure salt water, in special instances where it is known that cobra is not very active, also in very foul salt water, such as around Pyrmont and Glebe Island bridges, the use of turpentine piles be continued, providing they are driven with their bark attached and uninjured. In cases of outside piles, exposed to the friction of the sides of vessels, some protection or guard should be adopted to prevent damage to the bark of the piles.
- (b) That where turpentine piles are specified to be with the bark on, the condition should be rigorously enforced, piles found to show defect in the bark below high-water mark being condemned as unfit for use.
- (c) That turpentine piles be, as far as possible, felled in the summer, as the bark then clings to the log, and is not so likely to start when felled. In the winter, when the sap is down, the bark is readily separable.
- (d) That in unpolluted tidal waters, turpentine piles be protected by metal sheathing.

Speaking more generally, and taking into consideration the fact that turpentine is not absolutely resistant to cobra, and the very great expense the Department of Public Works is annually put to in replacing cobra-infested timber, we recommend that for the future the use of turpentine timber, either with or without bark, or in squared or sawn sizes, when placed in any position in which cobra is known to be active, should be discontinued in the public works of this Colony, unless it is absolutely protected throughout its entire face and ends by copper or some other equally satisfactory protective covering.

We would recommend the sheathing of turpentine piles, without any exception whatever, if the question of expense did not stand in the way; and the only exceptions we recommend are those of piles on the coast and in parts of Sydney Harbour, as already stated.

The cost of coppering piles, or rather the increase of the practice of coppering piles, will at once claim attention; but we would observe that the expense of the piles themselves is not the only consideration. If they are eaten through, the superstructure may have to be replaced, perhaps at a cost many times exceeding that of the piles themselves. The matter of the life of a pile involves other considerations than that of the durability of a post in fencing which carries no superstructure.

Turpentine is plentiful in most of the coast forests of New South Wales. It is essentially a pile timber, growing as it does in suitable sizes, straight and even in the barrel, and up to 90 and 100 feet in length, and it is the cheapest class of hardwood procurable in the round in the Colony. If the timber be coppered there will be no necessity, except in rare instances, to use coppered ironbark for piles, and the drain on ironbark for this particular work will be very largely reduced. We desire to encourage the use of turpentine for piles, but subject to all the precautions we have indicated.

J. H. MAIDEN,  
Consulting Botanist, Departments of Agriculture and Forests.

J. V. DE COQUE,  
Inspector of Timber, Department of Public Works.

Signed in duplicate.—J.V.D.C., 3/10/95. Submitted.—E. M. DE BURGH, Assistant  
Engineer for Bridges, 4/10/95. Engineer-in-Chief for Public Works.

1895.

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LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

---

NEWCASTLE HARBOUR IMPROVEMENTS BILL.

(MESSAGE No. 4.)

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*Ordered by the Legislative Assembly to be printed, 21 August, 1895.*

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FREDK. M. DARLEY,  
*Lieutenant-Governor.*

*Message No. 4.*

In accordance with the provisions contained in the 54th section of the Constitution Act, the Lieutenant-Governor recommends, for the consideration of the Legislative Assembly, the expediency of making provision to meet the requisite expenses in connection with a Bill to sanction the carrying out of certain works of Harbour Improvements at Newcastle ; and for other purposes.

*Government House, Sydney,*  
*20th August, 1895.*

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1895.

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

FLOOD PREVENTION ON THE CLARENCE RIVER.  
(RETURN RESPECTING.)

*Ordered by the Legislative Assembly to be printed, 10 September, 1895.*

RETURN to an *Order* of the Honorable the Legislative Assembly of New South Wales, dated 10th April, 1895,—

“That there be laid upon the Table of this House copies of all letters, papers, plans, and other documents relating to Mr. Archibald’s proposals for flood prevention on the Clarence River.”

(*Mr. McFarlane.*)

SCHEDULE.

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No. 1.

Mr. W. Archibald to The Under Secretary for Public Works.

Sir,

Taloumbi, near Palmer Island, 20 August, 1893.

Enclosed herewith, I beg most respectfully to present for the consideration of the Honorable the Secretary for Public Works, a provisional sketch of my Clarence River engineering scheme, in the reasonable hope that it will meet with his invaluable support.

2. The navigation section will not, I am convinced, have to undergo much modification hereafter. But beyond this, the scheme is still in the embryonic stage. I am naturally anxious to mature it as speedily as possible, and to that end shall not fail to make the very best use of whatever opportunities may await me.

I have, &c.,

W. ARCHIBALD.

3—A

[*Enclosure.*]

[Enclosure.]

Taloumbi, 20 August, 1893.

EPITOME of W. Archibald's Clarence River engineering scheme, submitted provisionally to the Honorable the Secretary for Public Works, with letter, dated 20th August, 1893, to be supplemented with further details, proofs, and plans, hereafter, at the earliest date practicable.

*Introductory.*

THE key to the leading engineering problems, connected with the Clarence River, and to some of those relating to the Richmond District also, is, I apprehend, to be found at "The Gorge," a narrow pass through which the entire drainage of the Western Division of the Watershed, is poured as soon as it is brought into a single channel by the union of the Mitchell and the North Clarence, which takes place about 45 miles above Copmanhurst. These western waters are practically the sole cause of the floods that so often devastate the delta lands of the eastern side of the watershed, where the present population is concentrated; for it has been repeatedly proved that the heaviest rainfalls, which ever occur, confined to the coastal region alone, are quite harmless in their effects upon the spacious estuary of the Clarence. At this "Gorge," nature presents that rare conjunction, a perfect site for dam construction upon a high scale, and directly above it, a ready-made reservoir of stupendous proportions for the storage of the waters impounded by such an agency, both being, moreover, in the most effective positions possible for economic purposes. Amongst the greater objects which this unique conformation renders possible are the following:—

1. The establishment of a new navigation system within the trough of the Mitchell Clarence Valley, extending from Tabulam to Jackadgery, and working in perfect harmony with the railway system projected for the Clarence and Richmond Districts.
2. The total abolition of floods in the main valley of the Clarence from the Mitchell Junction to the sea.
3. The advancement of tropical agriculture with white labour, throughout the greater part of these districts, by the introduction of a new climatic factor inimical to frost.
4. Irrigation by gravitation throughout the eastern division of the Clarence watershed.
5. Water-power upon a great scale.
6. The improvement of the Clarence Port.
7. The exploitation of the concentrated gold deposits occurring in the pockets and settling basins of the Clarence and Mitchell Rivers, within the limits otherwise embraced by the scheme, and the profitable working of the gold, disseminated through the alluvial drift of the flood channels.

All these objects, with many minor ones, may be attained, or made attainable, either separately or simultaneously, by the construction of a waterproof dam of appropriate design across the "Gorge," conjoined with suitable provision for regulating the delivery of the waters impounded above the dam into the river channel below it; the scope of the scheme depending mainly upon the height of the dam, and the level at which the waters are normally maintained. For the construction of such a dam, with all necessary adjuncts, the gorge offers the most complete facilities. From end to end it measures about 6 miles, its breadth varying from about 300 yards to half a mile. Its floor, which is a flat pavement of hard trap rock, is strewn throughout with beds of shingle, sharp, clean gravel, and boulders of every size and shape. Its opposite pillars are steep, solid, and unshaken, and upwards of 1,000 feet in height above the river channel, and presenting further inexhaustible stores of suitable material for the works proposed. Thus it will be seen that, there is absolutely no assignable limit to the strength and solidity, which could be embodied in the design for the dam, without transgressing the bounds imposed by reasonable financial considerations. As above indicated, the constructive resources of the locality are such that besides affording the most complete means for building a dam that would stand for ever, unless shattered at some future time by an earthquake, they also afford the best possible material for the super-addition of a safe guarding provision fully capable of securely meeting any contingency whatever, not even excluding one so remote as this. I enclose herewith a cross-section which illustrates my own views upon this aspect of the design whether approving this or not. I have, no doubt, that the engineers who will be entrusted hereafter with the actual designs will err very liberally upon the safe side, and will furnish an equally satisfactory reply to the inevitable question, as to what would happen if the dam were to burst. Any further explanations that may be desired at this stage, and which are not included in the following short summary of each feature of the scheme I shall be glad at any moment to supply.

*1. Navigation Scheme.*

The vast natural reservoir, to which I have already alluded, as occurring above the "Gorge" is the Mitchell Clarence Valley, the trough of which is so flat that, a waterproof dam built across the "Gorge" to a height of only about 100 feet measured from the floor of the junction, would back the impounded waters up the Clarence as far as Tabulam in a northerly direction, and up the Mitchell as far as Jackadgery in a southerly direction; thus forming a narrow lake fully 80 miles in length—in other words, a navigation system no less extensive than that of the Clarence estuary itself from Copmanhurst to the Heads. The Mitchell Valley runs counter to the Clarence, and pending railway construction, the two navigation systems could readily be connected by means of a trans-lake from Jackadgery to the Ramornie bank of the Clarence, opposite Copmanhurst; a distance of about 15 miles. [See map herewith.] Thus supplemented the new navigation system which I propose, would pioneer for commerce and civilisation, the large, capable, and beautiful district lying midway between the Glen Innes-Tenterfield table-land, and the coastal districts of the Clarence and Richmond Rivers. The surveyed railway line from Casino to Tenterfield crosses the Clarence at Tabulam, and that from Grafton to Glen Innes crosses the Mitchell at Jackadgery, and the two crossings could easily be chosen at about the same level. Under the full scheme the railway bridges would always be in slack water, and their floors could readily be carried up above flood-mark as assumed in the longitudinal section of the Mitchell-Clarence Valley herewith enclosed. For this navigation scheme taken by itself undoubtedly the best site which the "Gorge" offers for the dam, is the highest site, that is, the first below the Mitchell-Clarence junction which is about 300 yards across. The river could easily be turned here, by means of a short tunnel through the western extremity of the New Bold Range, so as to give the workmen dry footing for the erection of the dam. A rather large area of fine pastoral lands would have to be resumed for the new flood channel, but not amounting in extent to more than a small percentage of the rich orchard, and heavy brush lands situated mainly upon the terraces on the west of the valley, which under this section of the scheme would be opened up for profitable occupation. The whole region abounds in forest wealth of the most varied description including immense quantities of cedar, beech, and pine, in addition to excellent hardwoods. The waters of the lake would afford the cheapest possible means of transport to the dam or off take, where the water-power available would enable the timber to be worked up at a minimum of cost also. The large and remunerative field of employment which would thus be opened up by the export lumbering industry alone, would help to keep the settlers going, until their holdings became reproductive enough to support their families. With such attractions, and with such facilities for traffic to begin with, and with the assured prospect of railway connection with the settled districts adjacent in the near future, a great tide of settlement would speedily set in for the new country. The cost of this section of the scheme separately considered would be extremely moderate, less than one-fourth of the whole scheme.

This section at least, could be financed by the revenues derivable from the lands, forests, and mines tapped by its agency supposing these to be vested in a trust armed with suitable powers for the purpose. To my mind the feasibility of this navigation scheme is so transparent in every detail, while its dynamical bearings upon the largest interest, of these northern districts, particularly in regard to railway construction, for which it would immediately pave the way, are so manifest, that I cannot doubt it will secure early attention at the hands of the Minister. As a part of the general scheme it could, of course, be brought into operation as soon as the dam was carried upwards 100 feet, and it would be of great service in prosecuting the remainder of the undertaking.

W. ARCHIBALD.

*Flood Prevention.*

Within the limits of the Gorge the channel falls about 100 feet in a series of cataracts and rapids. I am not yet quite certain that the excellent site named for the navigation section would answer for the full scheme. If not, I am satisfied that a site eligible in all respects can be got lower down the Gorge. Whatever site may eventually be chosen, the waters might be maintained normally at any desired level by means of a short tunnel or narrow trench through the range just mentioned on the south side of the dam. That is the range forming the eastern boundary of the Mitchell Valley, which would deliver the waters at any required rate into the present channel a short distance below the dam. The exact height to be chosen as the normal level for the waters, so as to secure a maximum of advantages with a minimum of inconvenience, can only be determined by survey. Speaking approximately, I should say it would be found at about 150 feet above

above the junction, and I shall now assume this for the normal level, and the total height of the dam at 200 feet. To the best of my judgment, the waters at 100 feet upon the dam would have an area of about 40 miles; at 150 feet, 250 miles, and at 200 feet, over 300 square miles. As far as I have been able to ascertain, the greatest flood that ever occurred in the Clarence sent no more than about 1 cubic mile of water through the Gorge. Supposing the normal area of the lake at 150 feet to be what I have stated (250 square miles) this would not raise the waters more than 21 feet, or 29 feet below the top of the dam, and probably the space still available would amount to 2 cubic miles more. Thus, with the tunnel constantly open, it is extremely improbable that the waters would ever rise within 20 feet of the top of the dam. Besides the paramount object aimed at in the next section, one great advantage which would accrue from thus employing the higher and broader expansions of the valley only, for the storage of flood waters, would be the contraction of the breadth of the flood channel upon each side of the lake, which would thus be effected. At this level, moreover, the shores would slope rapidly towards the lake all round it. Thus the inconveniences of every description which would follow in the wake of great floods, if the waters were usually maintained at a much lower level, would be escaped without greatly increasing the total area of land to be resumed. This consideration would develop into one of the utmost importance hereafter, when the districts around the lake became thickly populated. As far as the adequacy of the scheme for flood-prevention purposes is concerned, it is only necessary to know the volume brought down by the greatest floods and the storage capacity of the upper regions of the reservoir thus expressly reserved for their retention, until they would be gradually drained off by the tunnel or other agency provided for the purpose, for there are no tributaries of any consequence received by the Clarence below the Mitchell Junction, except the Orara, and the Orara has been known to be in high flood from mere coast rains, without interrupting the usual punt traffic across the river at Grafton. The catchment area of this lake is about 7,000 square miles, while the entire watershed is about 9,500 miles. It must, indeed, be manifest from a careful glance at any good map of the Clarence watershed that if this scheme were carried out floods would be absolutely abolished for all time in the main valley of the Clarence from the Mitchell Junction to the sea.

### 3. Frost Prevention.

At 100 feet high the waters would form a lagoon some 80 miles in length and 300 or 400 yards wide at its extremities, and gradually increasing to about 3 miles towards the centre. This would, of course, be incapable of producing any marked climatic effect far beyond its immediate margin. To this end a much greater breadth of waters would be needed. If the waters were kept at about 150 feet, as already proposed, the lake would have a length of about 90 miles, and an average breadth exceeding 3 miles, omitting its mere extremities. Such a body of waters would certainly produce sensible results on the climate of the adjacent regions, and these must be greatly accentuated by its happy position immediately under the eaves of the New England Table-land; directly upon the border line between the temperate climate of that region and the subtropical climate of the coast district; the isothermal lines here having, like the lake itself, a north and south direction.

Of these results, the most prominent would, I anticipate, be the prevention of frost throughout the region lying to the eastward of the lake. Under existing circumstances two or three degrees of frost is the utmost ever experienced in this region at present, and this small amount is due solely to the transfer of the New England atmosphere, effected by the westerly winds, being caused, partly by the direct reduction of temperature which they occasion, and partly by the increased degree of radiation promoted by reason of their comparative dryness.

As already implied, the proposed lake lies, broadside on, directly across the path which these winds must take to reach the coast districts, and my contention upon this extremely important topic is that in their passage across this lake these New England winds cannot fail to be warmed and moistened to the small extent which the case demands, to render them quite impotent to produce frost in their advance eastwards over an area of about 3,000 square miles. This area comprises the northern half of the eastern division of the Clarence watershed and the southern half of the Richmond district; and it could very readily be extended in both districts by the construction of smaller dams across the tributaries to the north and south of the main lake, and by the same means the navigation scheme could be greatly extended with advantage to the railways. Thus a dam 100 feet high, a little above the Nymboi junction, would back the waters of that stream up to Buccarumbi. Other tributaries might also be brought under contribution; though not quite so effectively as shown by the green markings in the sketch. Though the amount of frost occurring at present in these districts is no greater than I have stated, it is quite sufficient to utterly disqualify by far the larger part of the land for purposes of tropical agriculture, being, small as it may appear, terribly destructive to such tender products as bananas and sugar-cane. Owing mainly to these comparatively light frosts, the culture of the former crop has been practically abandoned in these districts while that of sugar has been reduced to very narrow limits. Except for their greater liability to frost from their comparative remoteness from the sea, by far the most suitable areas on the Clarence for the culture of sugar are the rich well drained soils from Woodford Island upwards; very large areas from the meridian of Copmanhurst westwards would be equally well adapted, and these are under the immediate shelter of the proposed lake. Indeed, there can be no doubt that if my views are at all correct upon this feature of the scheme, an immense amount of capital would be attracted to these districts for investment in the sugar industry alone, with the certainty of extremely profitable results as soon as the climate was thus ameliorated, as there is scarcely a doubt that it would be immediately the lake was created.

### 4. Irrigation. And 5. Water Power.

The capacity of the scheme to meet every possible demand under these heads is too manifest to call for exposition at this stage. The waters could be maintained at a higher level in the winter than in the summer, and drawn off during the latter season for irrigation and mechanical purposes. In the driest seasons the tributaries would pour into the lake more than sufficient to make good the loss from evaporation.

### 6. Harbour Improvement.

The intimate bearings of the full scheme upon the future of the Clarence port are obvious. Not only would the long train of evils directly resulting to the navigation channels from successive floods be altogether escaped, but the flood waters themselves would be converted into a tremendous weapon for scouring the bar with at pleasure.

### 7. Gold-mining.

The whole region sluiced by the tributaries of the Mitchell and Upper Clarence is auriferous. Amongst the localities which have at one time or another figured more or less conspicuously in the mining annals of the Colony are:—Fairfield, Solferino, Timbarra, Little Rocky, Long Gully, Glen Elgin, Tooloom, Boonoo Boonoo, Pretty Gully, Cangai, Dalnorton, and many others. All the streams descending from the table-lands to the north, south, and west of the Clarence-Mitchell Valley have a very rapid fall, while, as already noted, the keel of the joint valley from Tabulam to Cangai below Jackadgery is very flat, and it abounds in extensive settling basins. It is, however, not merely arguable that the gold ought to be here; the actual existence of concentrated deposits in these reaches is well known to many practical miners in these districts. But these richer deposits are inaccessible to poor men, as they can only be got at by means of costly dredging and diving plants. On the other hand, the auriferous drift of the exposed parts of the flood-channel can only be made to pay by sluicing on a large scale, which is very expensive also, owing to the great distance from which water would have to be brought to obtain the requisite fall, while there is a perpetual risk of the works being destroyed by floods. Thus it happens that from Tabulam to Jackadgery, and from the Mitchell junction downwards towards Copmanhurst, or over an aggregate of river channel amounting to no less than 125 miles, both the grain and the chaff remain to this day to be harvested. Under the full scheme, the facilities for working the channel below the Gorge would be perfect. The Gorge of itself contains an immense natural ground sluice, over a mile long and upwards of 100 feet in depth, which as a gold-saving apparatus could not be surpassed if specially designed by human art for the purpose, and the accumulations of all the ages of the past are there to be had for the gathering as soon as the waters are stopped. Besides affording the Minister strong presumptive evidence as to the probability that the various concentrated gold deposit within the limits named would form an important factor in financing the scheme if dedicated to this purpose. I hope when submitting it in its matured form to show how, at no great cost, the Government may provide the unemployed with fairly remunerative works in sluicing the alluvial drifts of the main valley below the dam. As the mines gave out it is very likely that a large proportion of the miners would become peasant proprietors in the lands opened up to such desirable enterprise by the navigation scheme and by the railways, which, as a necessary corollary, would follow in its train.

W. ARCHIBALD.

Refer to Mr. Darley.—W.J.L., 11/9/93. Mr. Carleton to peruse and report on outline of scheme.—C.W.D., 15/9/93. Preliminary report herewith.—H.C., 26/9/93. (See No. 3, page 6.)

No. 2.

J. McFarlane, Esq., M.P., to The Chief Secretary.

Dear Sir George,

I beg to forward herewith plan and proposals for a flood prevention scheme in the Clarence district, which I trust will receive best consideration.

Sydney, 24 August, 1893.

I am, &amp;c.,

J. McFARLANE.

[Enclosures.]

[By favour of John Macfarlane, Esq., M.P.]

Sir,

Owing to the receipt of additional data from various sources, Taloumbi, near Palmer Island, 11 August, 1893. I am now in a much better position to forecast the scope of my engineering scheme than was the case when I addressed you with reference to it some four weeks ago, by favour of the Honorable John See, and as that letter is still under consideration, I beg leave now to submit in connection with it the revised outline herewith enclosed, in lieu of the original brief outline forwarded with my previous letter.

Soliciting your early consideration of my previous letter under the additional light afforded by this "revised outline."

I have, &amp;c.,

W. ARCHIBALD.

[Sub-Enclosure.]

10 August, 1893.

1. Revised outline of scheme; 2. Map of Clarence and Richmond (illustration); 3. Horizontal section of M.C. Valley; 4. Cross section, showing elements of proposed dam.

Revised outline of W. Archibald's scheme for engineering the Clarence River, presented to the Honorable the Premier by favour of John Macfarlane, Esq., M.P., in lieu of the "brief outline" forwarded by favour of the Honorable John See, which outline was prepared from more imperfect data.

*Introductory.*

The key to the leading engineering problems connected with the Clarence district, and some of those relating to the Richmond district also, as I apprehend, to be found at the "Gorge," a narrow gap through which the entire drainage of the western division of the watershed is poured immediately after being collected into a single channel by the union of the Mitchell and the North Clarence. These waters are practically the sole cause of the floods which devastate the delta lands of the eastern side of the watershed, for it has been repeatedly proved that the heaviest rainfalls which have ever occurred confined to the coastal region alone, are quite harmless in their effects upon the spacious estuary of the Clarence. At this "Gorge" nature presents that rare conjunction, a perfect site for dam construction, and directly above it a ready-made reservoir of immense proportions, for the storage of the waters impounded by the agency of the dam, both being in exactly the most effective positions possible. Amongst the great objects which this unique conformation renders possible are the following:—

1. The establishment of a navigation system within the trough of the Mitchell Clarence Valley, extending from Tabulam to Jackadgery, and working in perfect harmony with the railway systems projected for the Clarence and Richmond districts.
2. The total abolition of floods in the main valley of the Clarence from the Mitchell Junction to the sea.
3. The advancement of tropical agriculture throughout the greater part of those districts by the introduction of a new climatic factor inimical to frost.
4. Irrigation by gravitation throughout the eastern division of the Clarence watershed.
5. Water power on a great scale.
6. The improvement of the Clarence port.
7. The exploitation of the concentrated gold deposits occurring in the pockets and settling basins of the Clarence and Mitchell Rivers within the limits otherwise embraced by the scheme, and the profitable working of the gold disseminated through the alluvial drifts of the flood channel below the dam.

All these objects may be attained, or made attainable, either separately or simultaneously, by the construction of a dam of appropriate design across the Gorge, conjoined with suitable provision for regulating the delivery of the waters impounded above the dam into the river channel below it. For the navigation scheme alone, there is no doubt that the highest site is altogether the best, whether this would answer for the full scheme or not, others could be found lower down, adapted for the construction, not only of the dam itself, but for the tunnel and offtake, all remote from one another, leaving the dam under all circumstances intact from the action of running waters. The floor of the "Gorge" is a flat pavement of hard trap rock, and its opposite walls are steep, solid, and unshaken. Everything requisite for the construction of the dam and its adjuncts is upon the spot in boundless profusion, with the exception of hydraulic cement. The sketch showing the leading elements of the dam accompanying this outline illustrates this important factor in the feasibility of the scheme. Without at this stage entering into constructive details, I may here anticipate the inevitable question: What would happen if the dam were to burst? by remarking that, even in that all but impossible case—possible, in fact, only upon the extreme supposition of the occurrence of an earthquake—nothing unusual would take place as far as the delivery of the waters was concerned—that is to say, no dangerous results whatever would ensue, as a safe-guarding provision of the design would then come into play, restricting the escape of the waters within moderate limits until the whole lake proposed in the scheme was drained off (see sketch). Any further explanations called for at this stage that are not included in the following short summary of each feature of the scheme I shall be glad at any moment to supply.

*1. Navigation Scheme.*

The stupendous natural reservoir, to which I have already alluded as occurring above the Gorge is the Mitchell Clarence Valley, the trough of which is so flat that a waterproof dam built across the Upper Gorge to a height of only 100 feet would back the impounded waters up as far as Tabulam in a northerly direction and as far as Jackadgery in a southerly direction, thus forming a narrow lake fully 80 miles in axial length; in other words, a navigation system no less extensive than that of the Clarence estuary itself from Copmanhurst to the heads. The Mitchell Valley runs counter to the Clarence, and, pending railway construction, the two navigation systems could readily be connected by means of a tram-line from Jackadgery to the Ramornie bank of the Clarence opposite Copmanhurst, a distance of about 15 miles (see map herewith). Thus supplemented, the new navigation system which I propose would pioneer for commerce and civilization the large, capable, and beautiful district lying midway between the Glen Innes-Tenterfield table-land, and the coast districts of the Clarence and Richmond Rivers. The surveyed railway-line from Casino to Tenterfield crosses the Clarence at Tabulam and that from Grafton to Glen Innes crosses the Mitchell at Jackadgery, and the two crossings could easily be chosen at about the same level. The railway bridges would always be in slack water, and their floors could be carried above flood mark, either under this section of the general scheme, or under the scheme in its entirety.

A rather large area of pastoral lands would have to be resumed for the new flood channel, but not amounting in extent to more than a small percentage of the rich orchard and heavy brush lands which, under this section of the scheme would be opened up for profitable occupation. In fact, in that part of the Clarence District, the pastoral stage of settlement would rapidly give place to the agricultural in its highest departments. The whole region under consideration abounds in forest wealth of the most varied description, including immense quantities of cedar, beech, and pine, in addition to the best hardwood. The waters of the lake would afford the cheapest possible means of transport to the dam or off-take, where the water-power available would enable the timber to be worked up at a minimum of cost also. The large and remunerative field of employment which would thus be afforded by the lumbering industry alone would help to keep the settlers going until their holdings became reproductive enough to support their families. With such attractions, and with such facilities for traffic to begin with and with the assured prospect of railway connection with the settled districts adjacent in the near future, a great tide of settlement would speedily set in for the new country.

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So far, at least, the scheme could be financed by the revenues derivable from the lands and forests which it would tap, supposing these to be vested in a Trust with appropriate powers for the purpose. The whole cost would certainly be very moderate. To my mind the feasibility of this navigation scheme taken by itself is so transparent in every detail, while its dynamic bearings upon the largest interests of these northern districts, particularly in regard to Railway construction, are so manifest that I cannot doubt it will receive early attention at the hands of the Government. As a part of the general scheme it could be brought into full operation as soon as the dam was carried upwards 100 feet. If taken by itself the tunnel could be dispensed with altogether, and the dam could be allowed to overflow at all times. If desired, however, this could be avoided by carrying the dam up 50 feet higher and bringing the waters in flood or otherwise through a gap on the north side of the river, which presents a magnificent site for an off-take. Probably the site which I have in view for this dam alone would answer for the whole scheme. This point I have not yet been in a position to determine, the flooded state of the river at the time of my last visit having prevented me from crossing for this purpose.

#### 2. Flood Prevention.

The Gorge, I should here remark, is about 6 miles in length, and within its limits the river channel falls about 100 feet in a series of cataracts and rapids. From end to end its floor is strewn with beds of shingle, and with boulders of every size and shape. For flood prevention purposes alone perhaps the cheapest scheme which could possibly be devised would consist in the construction of a massive dyke across the Gorge, composed of these materials loosely piled up to a height of about 150 feet, the amount of percolation possible being regulated to meet the requirements of the case. By this arrangement the delivery of the flood-waters could be extended over a few weeks, instead of rushing with terrific velocity down the Gorge in the course of twenty or thirty hours, as they do at present. For the navigation scheme and flood prevention combined, a dam of waterproof masonry, 100 feet high, backed by a dyke of the above description, carried up to a total height of about 180 feet, would suffice. To attain other important objects of the full scheme, however, a dam would have to be built waterproof throughout to a height of about 200 feet measured from the floor of the Gorge at the junction. This could be breasted on the upper side by an embankment of fine sandy loam, which, like everything else, is procurable upon the spot in unlimited quantity, and backed by a dyke of the description named both to support the dam and in case of accident, to operate as a safe guarding provision. I think a site could be obtained, eligible in all respects, and not more than 400 yards across. The site at the junction is, I believe, less than this, but I am not yet positive that the gap at the back of the Sugarloaf Mountain, which in this case would form the northern boundary of the dam, is fully 200 feet above the floor of the Gorge here. Lower down the Gorge there could be no overflow under 400 feet at least, the main ranges on both sides being about 1,000 feet high. Whatever site may be chosen within the Gorge for the full scheme the waters could be permanently maintained at any level desired by means of a tunnel a few hundred yards in length through the range on the south side of the dam; that is the range forming the eastern boundary of the Mitchell Valley. If this were driven at 100 feet above the floor of the junction, the full storage capacity of the reservoir above this level would be available for the retention of flood-waters, a provision which I believe would be ample even to the verge of extravagance. This space must amount to several cubic miles, whereas about one cubic mile is the largest volume of water that any single flood has ever yet sent through the Gorge. I am, of course, not yet in a position to prove the lateral dimensions of the reservoir, but I fully believe that at 100 feet on the dam the impounded waters would have an area of about 40 miles, at 150 feet 250 miles, and at 200 feet 300 square miles. The Orara is the largest tributary received by the Clarence below the Mitchell junction; and it has been known to be in high flood from coast rains without interrupting the usual punt traffic across the Clarence at Grafton. It is manifest, in fact, from a single glance at any good map of the watershed, that if this scheme were carried into effect floods would be absolutely abolished in the main valley of the Clarence from the Mitchell junction to the sea for all time.

#### 4. Frost Prevention.

At 100 feet high upon the dam measured from the floor of the junction the waters would form a lagoon some 80 miles in length, 300 or 400 yards wide at its extremities, and gradually increasing to about 3 miles towards the centre. Beyond its immediate borders this would not be capable of producing any marked climatic effect. To attain this a much greater breadth of water would be necessary. If the waters were kept in the winter season at 150 feet upon the dam, this would give a lake about 90 miles in length, and to the best of my judgment at least 3 miles in average breadth. If desired the level could be lowered during the summer season, utilising the waters for irrigation or harbour improvement. Such a body of water as this lake at 150 feet would, of course, produce sensible results upon the climate of the adjacent regions, of which the most important, I anticipate, would be the prevention of frost upon the lands lying to the east of the lake. Its general effects must be greatly accentuated by its happy position immediately under the caves of the New England tableland—that is directly upon the border-line between the temperate climate of that district and the sub-tropical climate of the coast, the isothermal lines here having, like the lake, a north and south direction. Under existing conditions, 2 or 3 degrees of frost is the utmost ever experienced in the region between the lake and the sea, and this small amount is due entirely to the transfer of the New England atmosphere effected by the westerly winds. Frosts never occur in these parts except in the wake of westerly winds, being due in some measure to the reduction of temperature which they directly occasion, and partly to the increased degree of radiation promoted by reason of their comparative dryness. Small as this amount of frost may appear, however, it is terribly destructive to such strictly tropical products as bananas and sugar-canes. On this account mainly the former crop has been practically abandoned in this district, while the culture of sugar has been reduced to narrow limits and an uncertain tenure. My contention in regard to this extremely important question is that the westerly winds in their transit over the lake would be warmed and moistened by its vapours to the small extent necessary to render them quite impotent to produce frost in their further advance eastwards over an area amounting to upwards of 3,000 square miles. This area includes the southern half of the Richmond and the northern half of the eastern side of the Clarence basin. The area thus shielded could be very readily increased in both districts by the construction of smaller dams to the north, south, and west of the main lake, as shown by the green markings upon the chart, and by the same means the navigation scheme could be considerably extended with advantage to the railways. For example, a dam 100 feet high across the Nynhoi a short distance above its embouchure would back its waters up as far as Buccarumba. If frosts could really be prevented in this way an immense amount of capital would be attracted to these districts for investment in the sugar industry alone with the certainty of meeting with extremely profitable results. In fact, the advantages accruing both to the Richmond and Clarence districts would be incalculable.

#### Harbour Improvement.

The intimate bearings of the full scheme upon the future of the Clarence port are obvious. Not only would the long train of evils directly due to the occurrence of floods be altogether escaped, but the scheme would provide a tremendous weapon for scouring the bar with at pleasure. And it is well that it is so, for it is plain that if the scheme is feasible in other respects, these northern districts must shortly enter upon such a splendid career of advancement and prosperity as will render the possession of an ocean port of the first rank an imperative necessity.

#### 5 and 6. Irrigation and Water Power.

The capacity of the whole scheme to meet every possible demand relating to these important ends is so self-evident that it will suffice merely to mention them at present.

#### 7. Gold-mining.

The whole region sluiced by the tributaries of the Mitchell and the Upper Clarence is auriferous. Amongst the localities scattered over the watershed which have at one time and another figured in the mining annals of the Colony more or less conspicuously are:—Fairfield, Solferino, Lionsville, Timbaria, Little Rocky, Glen Elgin, Pretty Gully, Tooloom, Boonoo Boonoo, Cangai, Dahmorton, and many others. All the streams descending from the tablelands to the north, west, and south of the Clarence-Mitchell Valley have a very rapid fall, while, as already remarked, the keel of the joint valley from Tabulam to Cangai, below Jaekadgery is very level, and abounds in extensive settling basins. The natural inference needs no enunciation, and to my personal knowledge it has been experimentally verified over and over again. To the average miner, however, these deposits are altogether inaccessible by reason of the water, as they can only be reached either by turning the river, or by means of elaborate dredging and diving plants. On the other hand, the exposed drifts of the higher parts of the flood channel cannot profitably be worked for want of water. There is, in fact, "water, water everywhere," but not a drop to mine with, owing to the great distances from which it would have to be brought to get the requisite fall.

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There is not sufficient inducement for capitalists to enter upon such enterprises, owing to the extreme liability of the rivers to destructive floods. All this would be altered under this scheme, and both the grain and the chaff which, for the above reasons remain to this day to be harvested, could be profitably won from Tabulam to Jackadgery, and from the Mitchell Junction downwards towards Copmanhurst, or over an aggregate length of river channel not less than 125 miles. Under the full scheme the facilities for working the channel below the dam would be perfect. The Gorge itself contains an immense ground sluice over 100 feet in depth and upwards of a mile in length, which, as a gold-saving apparatus, could not be surpassed by human art, and the accumulations of all the ages of the past are there to be had for the gathering as soon as the waters are stopped. In short there is a strong probability that the concentrated gold deposits within the limits embraced by the scheme would suffice alone to finance it, if dedicated to this purpose as already suggested. Besides affording the strongest presumptive evidence on this point, I hope, in submitting my scheme in its matured form to the Honorable Secretary for Public Works, to clearly show how, at no great cost, the Government may provide all the unemployed in the Colony with fairly remunerative work in sluicing the alluvial drifts of these valleys. As the mines gave out it is very likely that a large proportion of the miners would become peasant proprietors in the new lands opened up to enterprise by the navigation scheme, and by the railway which, as a necessary corollary, would follow in its train.

I have, &c.,

W. ARCHIBALD,  
Taloombi, near Palmer Island.

Sir George Dibbs, K.C.M.G., Premier of New South Wales, Sydney.

This should perhaps be referred to the Works Department.—C.W. Refer.—G.R.D., B.C., 5/9/93. The Under Secretary for Public Works. Mr. Darley.—D.C.MeL. (for U.S.), B.C., 6/9/93.

### No. 3.

#### Report by Mr. H. R. Carleton to The Engineer-in-Chief for Harbours and Rivers.

##### Mr. Archibald's scheme for flood prevention in Clarence River.

I HAVE read Mr. Archibald's report carefully, and can only say that if the levels and other particulars are as he states, he has propounded a grand scheme.

I have been able to verify, from information kindly supplied by the Engineer for Railway Surveys, the levels given by Mr. Archibald at Tabulam, and in or about Jackadgery, and at these two points he has if anything understated his case, but I fear that the height above sea level of the river at the Gorge—the junction of the Mitchell and the Clarence—will prove to be considerably less than 260 feet, the elevation given by Mr. Archibald.

I suggest that Mr. Campbell be sent to obtain this level, and a cross section of the channel at the Gorge, at the most suitable site for a dam, and to collect all information with regard to the nature of the bottom and sides, &c., necessary for a preliminary investigation of the scheme.

The levels could be obtained by running across from the Casino to Tabulam Trial railway line, or by working down the river from the point where the railway crosses it.

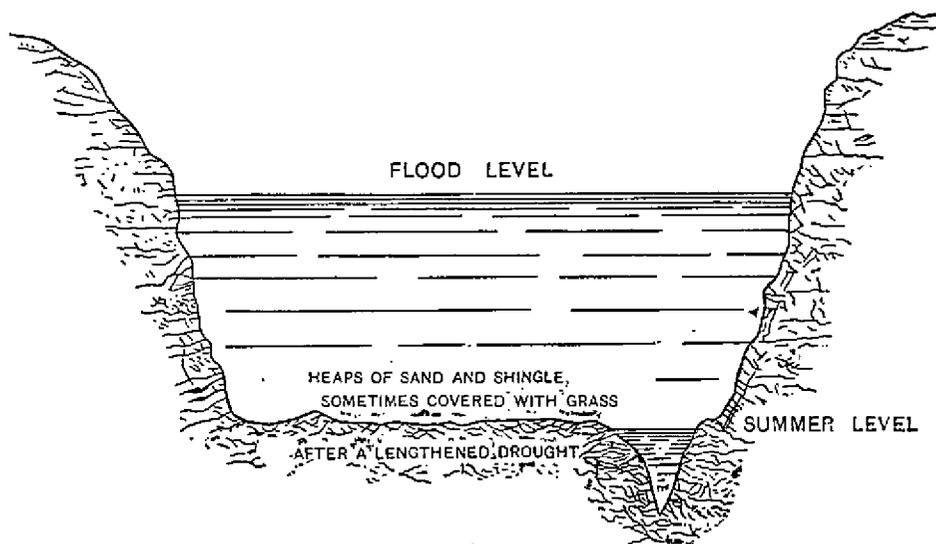
Should Mr. Archibald's figures prove correct the advantages of his scheme are stupendous, not only can he impound a whole flood, and run it off at pleasure, but he can also retain one flood for power purposes and run no risk, as he will still have available storage capacity for another.

Half a cubic mile of water, with an available head of 50 feet, if used continuously day and night, and spread over a year, represents over 13,000 horse-power, and this is but a fraction of the power which would be made available. Possibly this power could be conveyed electrically to Glen Innes, Tenterfield, Grafton, Casino, Lismore, and other towns.

The greatest recorded flood on the Hunter only discharged about half a cubic mile of water, and a Clarence flood would be about the same, as although the rainfall of the Clarence district is greater, the watershed is less than that of the Hunter.

Some of the advantages of the proposal are,—

1. The prevention of floods, with its many attendant advantages.
2. The prevention of the erosion of the river banks.
3. The decreased expenditure in dredging.
4. The saving in cost on all roads, railways, and bridges in the district.
5. Irrigation.
6. Practically unlimited water-power.



From my own personal knowledge of the northern rivers, and speaking generally, the cross section of the rivers, in the upper compartments, is somewhat like the above sketch. It seems to me, therefore that

that a very large storage capacity could be obtained, provided the levels are as stated, without the necessity of resuming land, which could possibly be used for any purpose other than grazing, and the benefit derived to the low-lying and richer lands down stream by perfect immunity from floods would more than compensate for any loss of area above the dam.

23/9/93.

H. R. CARLETON.

RAILWAY TRIAL SURVEY LEVELS ABOVE HIGH WATER, GRAFTON TO TABULEM.

	ft.
At Ogilvie's Gap, on top of ridge... ..	= 530·00
" Bugilbar Creek, about 45 miles ... ..	= 400·00
" Flagstone Creek (bed of creek), about 50 miles ... ..	= 230·00
" Clarence River, about 57 miles ... ..	= 290·00
" " about 65 miles ... ..	= 330·00
" Timbarra River, about 68 miles ... ..	= 365·00

GRAFTON TO MITCHELL.

At Talgae Creek, about 32 miles ... ..	= 310·00
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No. 4.

J. McFarlane, Esq., M.P., to The Secretary for Public Works.

Sir,

Sydney, 4 October, 1893.

I beg to enclose herewith further communications from Mr. W. Archibald respecting his proposed scheme for flood prevention, and trust same will have your best consideration.

I am, &c.,

J. McFARLANE.

The Honorable the Minister for Works.

[Enclosures.]

My Dear Sir,

Taloumbi, 29 September, 1893.

Will you kindly present the enclosed supplement to the sketch of my scheme, which is already in Mr. Barling's hands. It is mainly intended to show where the money is to come from. I must again thank you for your kind attention to my last. I daresay you will hesitate before going sponsor for a child of this sort again; but, though it takes a lot of looking after, yet I trust that it will not disgrace either its father or its godfather in the long run. I am sorry I have not had time to tell Mr. Lyne what a good child this really is; but, after all, four and twenty pages of foolscap at a time is as much as any man can safely stand, especially after an attack of the measles. If he does not want to undergo any further trials of this sort, the best thing he can do is to give me a speedy answer.

Believe me, &c.,

W. ARCHIBALD.

P.S.—The longitudinal section of the valley is not materially different from the former one, though it looks so, owing to the different scales employed.

J. McFarlane, Esq., M.P., 121, Sussex-street, Sydney.

Sir,

Taloumbi, Palmer Island, 29 September, 1893.

To the provisional sketch of my Clarence River engineering scheme, which I did myself the honor to submit last month for the consideration of the Honorable the Secretary for Public Works, I now beg leave to add the enclosed supplement, which contains much additional matter having a vital bearing upon the whole subject, together with a fresh section of the Mitchell-Clarence Valley, embodying such corrections as from subsequent inquiry I have found called for.

To furnish a more accurate prospectus of the scheme than these communications taken together will be found to afford, is beyond my present opportunity, but I trust that, imperfect as their contents of necessity are, they will suffice to make the general mechanism of the scheme clearly understood, and to establish a decisive presumption in favour of its general feasibility. I would especially solicit the Minister's attention to the paragraphs exhibiting the monetary aspects of the scheme, which go to show if it were heartily entered upon, it would not only finance itself from the wealth of its own creation, but would be the means of attracting sufficient public and private capital to those districts to permanently restore the industrial and commercial prosperity of the Colony.

I would not have submitted the scheme to the notice of the Government until after the forthcoming Christmas vacation, when I might have hoped to present it in a much more complete form, but that, with a strong conviction of its capacity to provide a field of unequalled fecundity for the investment of capital, I felt bound, in view of the distressful depression of the times, to get so money-breeding and wage-finding a business under way at the earliest possible date.

I have, &c.,

W. ARCHIBALD.

The Under Secretary, Department of Public Works, Sydney.

SUPPLEMENT TO THE PROVISIONAL SKETCH OF W. ARCHIBALD'S CLARENCE RIVER ENGINEERING SCHEME, DATED 20TH AUGUST, 1893, SUBMITTED IN CONNECTION THEREWITH TO THE HONORABLE W. J. LYNE, SECRETARY FOR PUBLIC WORKS, BY FAVOUR OF J. McFARLANE, ESQ., M.P.

SUPPLEMENT to the Introductory Section.

A.—Physical Basis of the Scheme.

THIS scheme being based upon a general reading of the Clarence watershed, a short account of this will furnish its proper preface. To what I have already said under this head, it is only needful to add the following, partly by way of expansion, and partly for the purpose of correcting some inaccuracies in my former paper, at the time of writing unavoidable.

The total catchment area of the Clarence, measured horizontally, exceeds 8,000 square miles. Of the whole surface fully three-fourths belongs to the inland or western division, which includes the rapid seaward slopes and escarpments of the Glen Innes-Tenterfield table-land and its easterly offsets. This great division stretches in the form of a rectangle from the northern frontier of the Colony southwards to the Macleay Range, a distance of 150 miles. Its average breadth is about 45 miles, being limited westwards by the crest of the New England Range, and partitioned off from its own eastern complement, and further to the north, from the Richmond District, by a very continuous and well-defined line of elevations situated, roughly speaking, a little to the west of the meridian of Copmanhurst. From its great extent, bold sculpture, and superior altitude, this western region is the great gathering ground for the floods so frequently experienced in the districts through which its drainage escapes to the sea. All the drainage of its southern end is focused at Jackadgery by the union of the Upper Mitchell and its great tributary, the Nymboi; the Mitchell thus augmented flowing northwards for 32 miles. Similarly the drainage-waters of the northern end are focussed, just below Tabulam, by the union of the Timbarra and North Clarence. From this point the main stream trends southwards for 48 miles to meet the Mitchell, and after receiving it turns sharply to the east through that narrow cleft in the subdividing barrier above referred to, called "The Gorge," where, as described in my former contribution, the opportunity is so happily presented for placing this collective volume of drainage under lock and key.

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As regards the elevation and fall of the river channels, it appears from the railway survey, Grafton to Glen Innes, that the bed of the Mitchell is 460 feet above Grafton at the Nymboi junction; but at the railway crossing over the Mitchell, 5 miles below the junction, it is only 310 feet. For the rest of the course there is no record, but below these rapids the fall is moderate to Cangri, apparently not more than 4 feet per mile for the 7 miles, while from Cangri to the Mitchell junction, a distance by the channel of 20 miles, the fall is very much less, probably about 1 foot per mile. In the case of the North Clarence the bed of the river is only 338 feet above Grafton at the Tabulam crossing of the Casino to Tenterfield survey line. There is no rise for the next 3 miles upstream, but after this long reach is passed the channel rapidly rises beyond the limits of the scheme. It is certain, then, that the Clarence at Tabulam, and the Mitchell about 3 miles below the Nymboi junction, are at the same level as shown in the longitudinal section of the joint valley enclosed herewith. From Tabulam downwards there is no further record, but all the way from the Tabulam Falls to the Mitchell junction, 48 miles by the watercourse, the fall is certainly very uniform and moderate throughout, probably about 2 feet per mile on the average. As to the main channel from the Gorge to Copmanhurst; within the Gorge itself there are two waterfalls of 20 feet each, one of 10 feet, and several others from 3 feet to 6 feet, aggregating, possibly, for this 5 miles about 120 feet. For the remaining 30 miles the rate would appear to be about 4 feet per mile. These approximate estimates would make the Clarence-Mitchell junction about 260 feet above Grafton, more or less.

With the exception of the railway crossing at Tabulam, no cross sections of the valley have ever been made, so far as I can learn; and pending such a survey it is, of course, quite impossible to give a reliable estimate of its cubic capacity, regarded as a reservoir for the storage of the waters of its drainage basin. A general description is all that will be expected here. Towards the Nymboi junction the valley is very confined, the breadth at 50 feet above the flood channel probably not exceeding 1 mile. Below Jackadgery it opens out to about twice this breadth and again closes in towards Cangri. Below Cangri again it expands very considerably; and at 100 feet above the flood channel it must average 4 miles throughout. The valley of the North Clarence is, generally speaking, open until the reach at Tabulam is passed; and abounds in extensive expansions at no great height above the flood channel. Beyond Tabulam the valley contracts rapidly. At high-flood mark at Tabulam the channel is over a mile across—that is, at 410 feet above Grafton, or thereabouts. At the intersection of the same horizontal plane the whole valley must, I think, average 3 miles across, at some points contracting to much narrower, at others opening out to much wider limits, and abounding in lateral valleys. This plane, which coincides with the normal level, which I have conditionally proposed for the lake, would cut the channel of the North Clarence about 6 miles above Tabulam, and that of the Mitchell about 2 miles below the Nymboi junction, having an axial length measured by the river channels of about 84 miles. A plane 50 feet higher would reach 2 miles further up the Mitchell and about the same distance higher up the North Clarence, that is to the junction of Tooloom Rivulet, parish of Bonalbo. In fixing the minimum level for the lake waters, the object will be to secure the greatest average breadth possible, with the least possible increase for the next 50 feet or 60 feet above, so as to narrow the beach and the flood basin as much as the case will permit.

With respect to the eastern boundary of the Mitchell-Clarence Valley, I believe it to be ironbound throughout, up to at least 300 feet above the level of the Mitchell-Clarence junction. At the Mitchell end the only gap which calls for mention is that dividing Purgatory Creek from a small stream flowing into the Mitchell, at Jackadgery, which gap I take to be not less than 600 feet above Grafton. This dividing ridge is very narrow, and it may afford a most convenient point at which to tap the waters of the lake, both for irrigation and water-power. As regards the North Clarence, the lowest gap to be taken into account is probably the "Yellow Pines," in the parish of Pucca, in the northern boundary of the watershed of Gordon Brook Creek, and this, I think, is somewhat higher than the gap opposite Jackadgery. This matter will require some investigation of course, but I have now no apprehension of any possible overflow of the flood waters into the eastern division within 300 feet above the junction.

To accurately determine all questions that will be raised by my proposals, surveys would have to be made along the perimeter of the horizontal planes, intersecting the Mitchell-Clarence Valley at 120 feet above the junction, at 150 feet, at 200 feet, and possibly at other levels, but I think that their general feasibility might be clearly indicated by taking twenty or thirty cross sections at well-chosen intervals between Tabulam and Jackadgery, together with a survey of the Gorge itself and the Mitchell-channel in its western vicinity.

#### B. Finance.

The cost of the undertaking cannot be gauged until its actual dimensions are determined by survey, nor on the credit side can the financial resources inherent to the scheme be even approximately estimated pending an extensive course of inquiry. They will, however, without doubt fall largely under the following substantial heads:—

1. Revenues from the Sale of Land.—This will comprise (a) the large areas that will be opened up for settlement in the western division of the watershed by the agency of the navigation system, or the lake viewed as such, and which should readily bring from £1 to £5 per acre, exclusive of town lots; (b) the equally large areas which will be fitted for profitable occupation under the irrigation section of the scheme, situated on the eastern quarter of the watershed, and in the southern extremity of the Richmond basin, worth, when reached by the irrigation pipes, at least £20 per acre, taking Mildura as a standard.

2. Royalties upon the Timber furnished by the Forests which will be tapped by the Navigation Scheme.—These forests are co-extensive with the whole western division, but 2,000 square miles of them will be within 12 miles of the lake and its navigable arms. They will be easy of access, too, as the timber roads will all be inclined planes, sloping towards the lake. The region includes whole Schwartzwalds of pine and many millions of feet of cedar, beech, and other valuable scrub woods, while the supply of hardwood is practically unlimited. The net revenues from this source should greatly exceed £10,000 per annum for thirty years at least, at the lowest calculation.

3. Revenues from Taxation under the Betterment Principle.—This will no doubt be the mainstay of the whole undertaking, seeing that it is a betterment business from first to last, enormously increasing the value of landed property, reckoned in hundreds of thousands of acres. The lands thus brought under contribution will include a much larger area under the flood-prevention section of the scheme than the total at present under cultivation, since it will include not only these, but all the low-lying swamp lands adjacent, which will be altogether reclaimed by this agency. These are reputed to be in the richest lands on the Clarence, and their total area cannot be far short of that of the cultivated land. The area which will be prodigiously increased in value under its irrigation provisions will be a constantly increasing quantity, with an ultimate limit certainly not short of 1,000,000 acres. To these may be added the taxes upon town property.

4. Revenues from the water supply, comprising (a) rentals from irrigation companies and (b) from water-mill proprietors; water supply for towns would doubtless be included with irrigation works.

The solidity of such assets is beyond all question, and though the amount of the various items cannot be determined pending exhaustive investigation, it is certain that they will prove in the aggregate very large indeed. Personally, I have not the slightest doubt that when full inquiry is made into their value, the prospective solvency of the scheme will be placed in the clearest possible light. Under such circumstances the whole question virtually resolves itself into one of physical feasibility. Once this is demonstrated by actual survey, to the satisfaction of the Government, I can see no insuperable difficulty in the way of finance. The survey and other investigations, however vigorously conducted, must occupy a considerable time. Then legislation will be necessary, and it is very possible that by the time the project is ripe for floating, the London money market may present a less forbidding aspect than it has worn of late. However this may be, the guarantees which may be attached to this particular scheme are of so extraordinary a character as, when fairly considered, must place it in a category by itself. The whole scheme is, in short, a high-pressure farming scheme, to be worked under ideal conditions, and capable of embracing in its wide range all the choicest products of temperate and sub-tropical climates. To the west of the lake lies the Cote d'Or of the Colony for the production of wine, while the region to the east of it would, under irrigation, rank second to none in the wide world for the culture of sugar. In these two exportable products alone the field which would be opened up by the scheme for profitable enterprise would be sufficient to employ whole argosies of merchant vessels between England and this country. Vast as the amount of negotiable wealth must prove which the scheme would directly create, this would only be a part of the security which it would offer to the British investor. Here, as elsewhere, agriculture would become the prolific mother of a thousand other industries. Very soon the problem would be to find men for the work which would be offering in every direction, and not its unhappy converse. Thus population would be attracted on a large scale, and population means revenue. Under such circumstances it is only ascribing a reasonable amount of discernment to English financiers to suppose that they would discriminate most emphatically in favour of the scheme, and that when the money required to carry it into effect was properly applied for, it would be immediately forthcoming. [See Irrigation section.] I cannot believe that a scheme of this character would be viewed with

disavour

disfavour by Englishmen; it appears to me far more likely that besides the money required for the works, a very large amount of British and Foreign capital would be attracted to this district, when it can be proved to afford one of the most varied and lucrative fields for its employment to be found anywhere. At Mildura water is supplied at 15s. per acre; here it should be worth no less, to say the least of it, considering the climatic superiority of the district, and its contiguity to one of the best ports in the Colony. Here, then, is a prospective income of £500,000 per annum to be divided amongst the irrigation companies alone.

1. Supplement to navigation section, with regard to the comparative heights of the two railway-crossings.—I have recently learnt that the difference is 48 feet, as already implied, and that they could be brought to the same level by removing that at Jackadgery about  $1\frac{1}{2}$  miles higher up the Mitchell, which could be done without detriment of any kind to the route. On further reflection, however, I think that even for the navigation scheme alone the dam at the Gorge should be carried up about 20 feet higher than I suggested before, so as not only to afford a deep navigable channel from bridge to bridge, but to remove the whole of it from the sphere of silting processes. The watershed of the main channel from the Mitchell-Nymboi Junction to the Clarence-Timbarra Junction is very narrow throughout, the western waters being caught by the Timbarra, the eastern by the Clarence River below the Gorge; and hence no tributary of any consequence is received between these points. At 350 feet above Grafton, for the normal level of the waters, the embouchure of the Timbarra would be about 2 miles inland from the main channel, while that of the North Clarence would be about 4 miles above the bridge at Tabulam; and as the alluvions in both cases are of the heaviest character, I have no doubt that they would be quickly deposited when the terrific pace of the current slackened down in the comparatively still waters of these extremities of the lake, and that many ages would elapse before they could shoal the waters within the limits covered by this section of the scheme. At the opposite end, however, the case would be very different, as what would then be the mouth of the Mitchell would be situated only half a mile above the bridge, and from the great quantity of coarse gravel which it might be expected to sweep down into this end of the lake some special remedial measure would have to be adopted, which, however, could easily be provided in the design for the bridge itself. Under the full scheme such difficulties would vanish altogether.

2. Supplement to Flood prevention Section.—It should be particularly noted that the benefits of this section of the scheme will not be by any means restricted to the lands at present under cultivation in the vicinity of the estuary. The bog-lands of the richest description from Grafton downwards, which will be immediately made available for agriculture, must have an aggregate area not far, if at all, inferior to the total amount under cultivation at present in this part of the district. The uses to which the flood-waters stored up in the lake may be put are shown under the other sections of the scheme, the chief of course being irrigation. It will thus happen that while the disgusting feculence of floods will be altogether escaped, their fertilising principles will be systematically infiltrated into the soil, not only over the whole area at present liable to inundation, but over the whole surrounding districts, as shown under the section relating to irrigation. Every time the lands are saturated by flood-waters they are, of course, benefited, the waters afterwards evaporating and leaving their mineral constituents behind; but it may be safely affirmed that for every pound thus given to the soil thousands of tons are carried out to sea. As to the mere silt deposit, it is probable that in sweeping over the cultivated lands the floods take away quite as much as they leave. With the suppression of floods the sanitary conditions of the district will be greatly improved, as this will pave the way for—what is now unpracticable—a thorough-going drainage system. Amongst the secondary evils resulting from floods are the noxious weeds which they sow broadcast all over the farms. The farmer, in short, has everything to gain and nothing whatever to lose by exemption from floods; and he will be willing to pay a handsome price to be forever delivered from such a curse.

3. Frost-prevention.—Under this head, which has most important financial bearings, I desire now to point out the active influence which the establishment of a great irrigation system over the region to the east of the lake must exert in the same beneficial direction as that great body of water itself. It is well known that within certain limits frost can be prevented by artificial clouds of smoke. If so, this can be done, *a fortiori* by artificial clouds of fog, such as could be produced at pleasure by the timely uses of irrigation appliances. If my views upon this subject are at all correct, sugar must become one of the staple articles of export from this Colony as soon as the scheme is brought fairly into operation.

4. Irrigation.—The Clarence District enjoys a high average rainfall, and if this were only evenly spread over the year there would be no occasion for schemes to abolish drought any more than for schemes to prevent floods.

There is, indeed, plenty of rain, but it falls at irregular and uncertain intervals; hence droughts are as frequent as floods, and so, under existing conditions, farming is a mere lottery, as the phrase goes, and such it must for ever remain until these conditions are artificially altered. At present cultivation in the Clarence District is confined almost exclusively to the richest delta lands—a mere fringe around the estuary. The great bulk of the land is either in a state of nature or not far removed from it, simply because of its inferior capacity to retain moisture. In the former case agriculture is full of risks; in the latter it is impracticable altogether. Such is virtually the state of the case as things are at present. Needless to say, the backbone of this scheme is its capacity to alter all this.

The waters of the lake being about 400 feet above Grafton, it is safe to affirm that considerably below this level there are fully 1,000 square miles eligible for irrigation under a gravitation system within the eastern division of the watershed, to which may be added about an equal area of similar country at the southern side of the Richmond Basin, adjoining. By far the greater part of the whole region belongs to the carboniferous basin, of which Grafton is the centre. The surface is almost everywhere either level or gently undulating, and the soil, whether rich or poor, deep and porous; while there is every variety of soil, its prevailing character is decidedly sandy. Hundreds of thousands of acres are almost pure sand of a fine texture; hundreds of thousands more are sandy loam of tolerable fertility; hundreds of thousands, too, are of the richest possible quality. The proportion of clayey soils is very small indeed.

Upon the average the Clarence brings about 2 cubic miles of water through the Gorge per annum. Half of this would supply 31 inches to the whole available area, which is all that would be wanted in the driest years, and so leaving an ample supply for other purposes. Then, waters do not come from a desert country; they come from regions often rugged, indeed, but almost everywhere of unsurpassable fertility. The Nymboi basin, for example, is for the most part one vast exuberant scrub growing in deep volcanic soil, while the basin of the North Clarence includes an immense variety of the richest soils, clothed with luxuriant forests. Throughout the whole western division the rocks out of which these waters ooze are of the richest chemical composition, comprising tracts of trap, felspar, granite, basalt, limestone, and others of like properties. Waters derived from such sources are meat and drink to vegetable life. Every gallon of it employed in irrigation must bring its quota of potash, lime, magnesia, and the like vivifying ingredients to nourish the crops to which it will be applied, and to fertilise the soils in which they grow. It is really a most fortunate coincidence that all the soils of the Clarence and Richmond districts which are best adapted for and most in need of irrigation are thus situated at a low average level, exactly where they can be treated with the greatest facility, and that the waters to be employed for the purpose are calculated to make good every deficiency which may be expected in such soils. Upon the most moderate computation the commercial value of the mineral manures dissolved in its waters which the Clarence carries through the Gorge every year, and afterwards out to sea, must exceed £1,000,000 per annum. Under irrigation upwards of 10 per cent. of this will, on the average, be yearly transfused and infiltrated into the porous soils of the east, steadily raising their fertility from year to year. While good results may be expected from every acre brought under irrigation, it is very possible that the best will be got from the very poorest of the sandy soils, since they will afford the best mechanical conditions for the water to do its nutritive work. The crops growing in such soils will really derive most of their sustenance from the mountains and valleys of the west, and they will want for nothing which it is in the power of that vast storehouse of plant-food to supply. There is not an acre of this despised land that will not be worth more money under irrigation than the best lands on the river-banks are without it, not an acre that will not bring its owner a larger and surer return for his labour. I do not wish to imply that, even at present, any large proportion of these lands are really under the curse of barrenness. Far from it. After a long spell of parching summer weather, let the rain descend, and these apparent deserts become oases, verdure quickly clothes the hills, and the plains wave with succulent grass, thus proving that the soil is not altogether infertile, and unmistakably illustrating its capabilities under irrigation.

In laying out the works very little deadwork would have to be done. As soon as the main pipes were laid through the Gorge the vast theatre for future enterprise would be entered upon in the thousands of acres of rich friable soil of the most perfect contour for irrigation, which occupy the main valley from this point to Copmanhurst, with a breadth ranging from 3 to 10 miles. Here the carboniferous basin of the Clarence would be met with, and from this onward the breadth available for treatment would rapidly increase to 20 miles and upwards. Twelve miles east of Copmanhurst Grafton would be reached, the centre of operations in the Clarence district, while the centre of the county of Richmond would probably be of still easier access.

As the water is of crystalline transparency, well aerated, and of excellent quality for drinking purposes; irrigation would in this case comprehend water supply also to the whole district, as well as sewerage for the towns.

Considering the magnitude of the field to be operated upon, and its perfect adaptability for irrigation, as well as its advantageous commercial situation—considering the abundance of the water provided, its purity, richness, and commanding mechanical position—considering the salubrity of the climate, the forcing powers of its summer warmth, and the mildness of its winters—considering, too, the broad foundations for the application of the system which have already been laid, by the present agricultural population, in the clearing of the main valley from the fountain head to the sea, and the long apprenticeship which they have already served in the culture of the staple crops to be grown under the scheme, and especially in the sugar industry—considering, moreover, the admirable relations which have always subsisted between capital and labour in these districts, as exemplified in the history of that industry, and the large amount of private capital within and beyond the Colony seeking opportunities for investment under such satisfactory conditions—considering, finally, the masterly management and the high scientific and technical skill which could safely be postulated for the administration of the whole scheme,—it is, indeed, hard to see how it could possibly fail of success, or to fix a limit to the wealth which it would create, and to the advantages which it would confer upon the Colony.

5. Water-power.—The capabilities of the scheme under this head being sufficiently manifest, it is only necessary at present to point out wherein its utility would lie. This has already been done in regard to its most immediate application as a motive-power for the saw-mills needed to work up the forest wealth of the region surrounding the lake. Perhaps one of its earliest uses would be to furnish the electro motive-power for navigating the lake and light for all the towns in the surrounding districts. Its prospective utility in this respect will be evident when it is borne in mind that, by direct wire, the works would be only 34 miles distant from Grafton, 47 from Casino, 60 from Lismore, 36 from Tenterfield, and 55 from Glen Innes—all short distances for the transmission of electricity. It will be recalled as a standard for comparison that at the Electrical Exhibition held in 1891 at Frankfort on the Main the waterfall supplying all the electricity employed was distant 105 miles from that town. The lake will speedily develop into the most valuable fishery in the Colony, and the water-power will afford, at a mere nominal cost, the means of providing refrigerating-chambers for the teeming supplies which will be drawn from this source, as well as for the beef and mutton from the surrounding districts. Similarly, cool storage will be provided for the fruits, wines, and dairy products which, at no distant date, must become staple articles of export from this district. When connected by rail with New England, the Gwydir, besides rendering those districts similar services, it will grind all their wheat, and wash skins, and weave all their wool. For such work as this in Scotland water is valued at from £2 to £4 per horse-power per annum, and though it might not be worth so much here, it might still help to solve the problem of ways and means, especially in the earlier stages of the proposed enterprise.

6. Harbour Improvements.—Postponed.

7. Gold-mining.—Postponed.

Taloumbi, 22 September, 1893.

W. ARCHIBALD.

Mr. Darley.—D.C.McL. (for U.S.), B.C., 9/10/93. Mr. Carleton for any remarks on the further data supplied by Mr. Archibald; previous papers herewith—C.W.D., 13/10/93.

Nothing more to add at present, except that I think the scheme well worth further investigation, and recommend that the levels, &c., which I mentioned in my first report be taken as soon as possible.—H.C. 14/10/93. The Engineer-in-Chief.

I have looked sufficiently into this proposal to show that the scheme is well worth investigating further, and recommend that I be allowed to send an assistant up to take some levels and sections, which it will be necessary to take before I can form a correct opinion. So far as I can judge at present, Mr. Archibald has brought forward a scheme which may be a possible solution of the floods-prevention question on the Clarence River. I suggest that Mr. Archibald be informed, in reply to his letter, that his scheme will be investigated. The preliminary cost will be about £150, chargeable to Harbours and Rivers surveys.—C.W.D., 26/10/93. The U.S., P.W.

Submitted.—J.B., 27/10/93. Approved.—W.J.L., 27/10/93. Inform Mr. McFarlane, then to Mr. Darley.—J.B., 27/10/93.

#### No. 5.

The Under Secretary for Public Works to J. McFarlane, Esq., M.P.

Sir,

Department of Public Works, 30 October, 1893.

With reference to the scheme for flood-prevention in the Clarence River district, submitted by Mr. W. Archibald, of Taloumbi, through you, I am directed by the Secretary for Public Works to inform you that the scheme will be thoroughly investigated, and with a view to this being done, an officer will be sent to the district to take some levels, sections, &c., which are required in order that a correct opinion of the scheme may be formed.

I have, &c.,

J. BURLING,

Under Secretary.

#### No. 6.

J. McFarlane, Esq., M.P., to The Secretary for Public Works.

Sir,

Sydney, 13 November, 1893.

I beg to enclose herewith communication and plans further in relation to his flood-prevention scheme for the Clarence, and I hope same will be duly considered.

I am, &c.,

J. MCFARLANE.

[Enclosure.]

[By favour of John McFarlane, Esq., M.P.]

Sir,

Taloumbi, near Palmer Island, 9 November, 1893.

Enclosed herewith I beg leave to hand you a second supplement to the provisional sketch of my scheme already in your possession, my chief object being to bring the papers submitted to your Department into harmony with the account of the scheme, which will appear in the Press after the survey is sufficiently advanced to warrant publication.

I have, &c.,

The Under Secretary, Department of Public Works, Sydney.

W. ARCHIBALD.

SUPPLEMENT No. 2 TO THE PROVISIONAL SKETCH OF THE CLARENCE RIVER ENGINEERING SCHEME, PROPOSED BY  
W. ARCHIBALD.

Proposed Works.

SUBJECT to such modifications as may appear called for after survey, my proposal for the full scheme is to build the dam across the Gorge at the first site below the Mitchell-Clarence junction, to a height of 220 feet above the river-bed there—that is, to a height of 480 feet above Grafton and Casino, 20 feet above the level of the Nymboi junction, and 120 feet above the river-bed at Tabulam. I think that the top of this dam would be about level with the crest of the gap behind the Sugarloaf Mountain on its north side, where I propose to fix the main offtake for regulating the delivery of the surplus flood-waters into the river channel below the dam. Under the plan which I now beg leave to submit, in lieu of that attached to my original sketch of the scheme, no tunnel would be necessary. After a more adequate study of the whole problem, I have come to the conclusion that all the requirements and conditions of the case would be best met by means of a Cyclopean dyke formed of stones from 2 feet to 8 feet in diameter, mined from the upper parts of the mountains on both sides of the channel, and shot into position from trambines, giving the up-stream side a very gradual batter, and paving it, when

when completed, with cement concrete of sufficient thickness to render it thoroughly waterproof. During the progress of the work the river would be allowed to percolate through the rockwork, no blinding of any kind being used. After the dyke had been carried up to 100 feet in height it would have a sensible effect in reducing the volume of floods; at 150 feet it would be fairly effective; and at 180 feet entirely so. (As I remarked in a previous paper, a dyke of this sort would constitute a complete flood-prevention scheme in itself, temporarily backing up the waters, and automatically regulating their delivery.) As will be seen by the sketch plans herewith enclosed, I propose to give the up-stream slope a domed surface, the curvature gradually diminishing from the base towards the top, the main object being to preclude the formation of permanent cracks in the concrete facing. The concrete might, I think, be very conveniently applied to the rough surface of the dyke from punts moored immediately in front of it, the works being carried upwards from the base with the gradual rise of the waters until the whole job was completed. As I stated in former papers, the materials at hand in that vicinity cannot possibly be surpassed for the manufacture of concrete. I have recently learned, from a highly qualified contractor, who is acquainted with the conditions of the case, that the rock work could be safely tendered for at 2s. per yard cubic, and the concrete at 25s. Upon this basis I have made some estimates, which will be found attached hereto. The off-take might advantageously consist of a series of narrow trenches (say) 12 feet wide each, across the gap above alluded to. The cuttings would not be more than 120 yards in length. Their floors would, of course, be upon a level with the minimum determined for that of the lake. They would be all the better to be cemented throughout, notwithstanding the hardness and solidity of the rock, and they would require to be equipped with suitable flood-gates.

For the conveyance of plant and stores to the works a tram-line from Copmanhurst, via Gordon Brook, some 30 miles in length, would be necessary. There are no difficulties in the way, and by the time the works were completed the line would be a commercial necessity. I think the four points most convenient for tapping the waters for economic purposes will be—1. At the main off-take; 2. The range dividing Purgatory Creek from Jackadgery; 3. The Yellow Pinch Range, forming the northern boundary of Gordon Brook Creek; 4. The Richmond Range, in the vicinity of the "Bull's Nest," between the head of Myrtle Creek and the streams flowing in the opposite direction into the North Clarence, above Yugalbar. By this route the waters can be taken through excellent country straight to Casino, which is the centre of an immense irrigable area of the highest capabilities. I enclose a sketch in which these points are all marked.

*Rough Estimates.*

A.—For rockwork dyke across "gorge," for flood prevention purposes alone; supposed breadth, 400 yards:—		£
No. 1—150 feet high, containing 1,700,000 cubic yards.....		170,000
No. 2—180 feet high, containing 2,400,000 cubic yards.....		240,000
B.—For full Scheme.		£
Rockwork dyke, 220 feet high, containing 3,400,000 cubic yards .....		340,000
Concrete pavement, 14 feet thick at base, 4 feet on top, average measurements being (say) in yards, 420 x 160 x 3,201,600 cubic yards, at 25s. ....		252,000
Off-take (say) .....		100,000
		£692,000

The remaining expenses would probably be nearly as great for a flood-prevention scheme alone as for the full scheme, the principal item, of course, being cost of land resumptions and other compensations.

For the full scheme I think the Bill would stand somewhat thus:—		£
Proposed works (say) .....		700,000
Tram from Copmanhurst .....		40,000
Tram from Copmanhurst to Jackadgery .....		25,000
Tram from Tabulam to Casino .....		30,000
Land resumptions .....		150,000
Compensations of various kinds.....		40,000
		£985,000
Total for full scheme (say) £1,000,000.		

<i>For flood prevention alone.</i>		£
Dyke, 150 feet high .....		240,000
Tram from Copmanhurst.....		40,000
Land resumption .....		140,000
Various compensations.....		40,000
		£460,000
Say, in round numbers, £500,000.		

<i>For navigation scheme alone.</i>		£
Dyke, 120 feet high .....		80,000
Concrete, 2 yards thick .....		90,000
Tram, Copmanhurst to Jackadgery .....		25,000
Land, &c. ....		100,000
		£295,000
Say, £300,000.		

Mr. Darley,—D.C.McL. (for U.S.), B.C., 15/11/93. Seen. Put with previous papers on same subject.—C.W.D., 16/11/93.

No. 7.

Mr. W. Archibald to The Colonial Treasurer.

Dear Sir,

Taloumbi, near Palmer Island, 13 November, 1893.

I beg to acknowledge the receipt of your esteemed favour of the 10th instant, informing me that you had laid those papers (my application for aid in the preparation of my scheme with the accompanying outline of it) before the Premier; and to return you my sincere thanks for having rendered me this service. As you may suppose, I learnt from the papers long since the unwelcome tidings of your severe and protracted illness, which, of course, explains everything; otherwise I might have ventured to address you again on the subject in the hope of learning the Premier's decision on that matter. My own department, however, declined to grant me the two months' leave, notwithstanding that my application was stoutly supported by Mr. McFarlane. Under these circumstances there was nothing for it but to lay the scheme in its immature form before the Minister for Works, who has recently promised Mr. McFarlane that my proposals shall be thoroughly investigated without delay. I need not say how earnestly I trust that the result will prove entirely satisfactory to all concerned. I have given the various sections of the scheme unremitting study since I took it in hand in March last, and have collected information from every available source, but being hampered by my office my progress has been much slower than my desires. But the Christmas vacation is now happily at hand, and I hope to turn those four weeks to such good account in personally examining such portions of the district as I am not at present familiar with; that I shall be in a position to publish the scheme towards the end of January if

the

the survey is then sufficiently advanced to warrant such a step. I hope by the diligent study of all the parish maps, added to what I already know and shall learn during the holiday, to give definite and reliable data as to the amount of valuable land that will be tapped by the new navigation system, as well as a faithful account of its forest wealth and mineral resources, also the area of the lands nearer home that will be bettered by the remaining provisions of the scheme. I hope to be able to prove most conclusively where the money is to come from to pay the interest on the necessary loan. I enclose some estimates which I think will interest you. Again thanking you for your good offices on my behalf, and trusting that your restoration to vigorous health may prove complete and lasting,

I have, &c.,

W. ARCHIBALD.

Mr. C. Darley, with compliments.—J.S., 17/11/93. Acknowledge and put with papers.—  
C.W.D., 18/11/93. Acknowledged.—20/11/93. Mr. Campbell.—J.P., 20/11/93.

*Estimate No. 1.—For Full Scheme.*

	£
Rockwork dyke 220 feet high, domed on up-stream side and faced with waterproof pavement of cement concrete, as shown in vertical cross-section through centre, attached hereto ... ..	600,000
Off-take for regulating the delivery of the waters ... ..	100,000
Tram-line from Jackadgery to Copmanhurst, 15 miles, connecting the proposed lake with the existing navigation system ... ..	25,000
Tram from Copmanhurst to the gorge for conveying plant and stores ...	40,000
Tram from Tabulam to Casino, connecting lake with Richmond River navigation	30,000
Land resumptions (say) ... ..	150,000
Compensation of various kinds ... ..	40,000
	£985,000
Say ... ..	£1,000,000

*Estimate No. 2.—For Flood Prevention Alone.*

	£
Rockwork dyke, without concrete, made of very massive stones, mined from upper parts of mountains, and shot into position from tram-lines; 180 feet high ... ..	240,000
Tram from Copmanhurst ... ..	40,000
Land resumption and other compensations ... ..	180,000
	£460,000

NOTE.—This dyke would, in time of flood, cause temporary obstruction of waters, allowing water to percolate through by slow degrees only; the amount being regulated to meet the requirements of the case by the use of finer materials upon the upper side of the dam.

*Estimate No. 3.—For Navigation Scheme Alone.*

	£
Extending from proposed railway crossing at Tabulam to proposed crossing at Jackadgery (Grafton to Glen Innes line); dyke faced with concrete 120 feet high ... ..	247,000
Tram, as in No. 1 ... ..	95,000
Land resumption, &c. ... ..	90,000
	£332,000

No. 8.

Mr. D. F. Campbell to The Engineer-in-Chief for Harbours and Rivers.

Sir,

Clarence River, 6 December, 1893.

I beg to forward progress report of Mr. Archibald's Clarence River Flood Prevention Scheme Survey.

Commencing at Copmanhurst on the 22nd ultimo, I ran a line of levels to the Clarence-Mitchell Junction, making summer level at this point 150·00 feet, and continuing the section up the Mitchell, closed on railway, B.M. No. 67, at the Jackadgery Creek Crossing, making the value 412·23, the value given by the Railway Department being 415·40.

The following summer level heights along the Mitchell River give the approximate grade of river bed:—

Feet.	Miles.	chains.	
150·00	0	0	Clarence-Mitchell Junction.
152·70	0	50	Opposite Coombadjha Creek.
175·10	4	0	Opposite Gap Creek.
192·00	8	50	Opposite Welsh's Creek.
213·88	9	45	Opposite Hanging Rock Creek.
222·35	11	27	
222·60	13	0	
230·22	14	27	
247·43	16	40	
247·50	17	54	Opposite Casson's Creek.
262·72	19	40	
263·20	21	60	
279·26	23	40	
279·40	23	70	
303·00	27	0	
310·80	28	40	Railway crossing.
340·00	31	0	Approximate.

I have roughly taken out the quantities from the cross sections, and with a dam 200 feet high, the capacity of the Mitchell Valley would be about a quarter of a cubic mile.

I am spending a day at the junction completing the cross section on the dam site, as the river was rather high for crossing on the journey up, and will proceed with the examination of the Clarence Valley to-morrow.

I hope to reach Tabulam about the 23rd instant, and on receipt of this, letters, &c., should be forwarded to that place.

D. F. CAMPBELL.

Seen, Mr. Carleton to see.—C.D., 11/12/93. Seen.—H.C., 12/12/93.

### No. 9.

#### Memorandum by The Engineer-in-Chief for Harbours and Rivers.

##### PROPOSED FLOOD PREVENTION DAM ON CLARENCE RIVER.

Height of Dam.	Cost.	Capacity.	Land to be resumed.	Length water could be thrown back the Mitchell and Clarence River.
Feet.	£		Acres.	Miles.
100	350,000	10,841 cubic feet = $\frac{1}{3}$ cubic mile .....	2,740	35 $\frac{1}{2}$
150	500,000	35,648 ,, = $\frac{1}{2}$ ,, .....	11,020	58 $\frac{1}{2}$
200	1,000,000	93,156 ,, = $\frac{2}{3}$ ,, .....	28,095	78 $\frac{1}{2}$

100 feet dam would store about as much water as is contained in Sydney Harbour, or about six times the capacity of Prospect Reservoir.

C.W.D.

Put with the papers, re Clarence River scheme, 11/8/94.

### No. 10.

#### Minute by the Engineer-in-Chief for Harbours and Rivers.

##### Mr. Archibald's scheme for flood prevention in the Clarence River.

26 October, 1894.

I DIRECTED Mr. Campbell to prepare a survey and investigate this proposal, and now forward his report which goes very fully and clearly into the matter.

It was soon found that the gigantic storage capacity, which Mr. Archibald states could be obtained, was not practicable, inasmuch as Mr. Archibald was mistaken in the level of the river at the Gorge to the extent of 120 feet. Notwithstanding this great discrepancy, a very large storage capacity could be obtained by the construction of a high concrete dam; but it would probably cost about 1,000,000 sterling to purchase the land that would be flooded, and construct a dam 200 feet high, which, after all, would hardly hold back more than a moderate flood. Still there is, no doubt that holding back such a volume of water, and releasing it gradually, would prevent the destruction which now takes place during a high flood in the Clarence River.

A dam 150 feet would cost about £470,000, and a dam only 100 feet high would cost about £355,000, both including land purchase, but neither of them would hold sufficient water to create a benefit in proportion to their cost.

Dams 150 or 200 feet high would throw the water back to cover 28 and 58 square miles of country respectively, much of this land along the river banks being alluvial flats, and the most valuable part of the country through which the river passes.

I am forced to come to the conclusion that the benefit that might be derived would not compensate for the great cost of this undertaking.

Had it been possible to provide storage capacity for a volume of water equal to that brought down by, say, two floods, then the scheme would be worthy of serious consideration, for a volume equal to, say, one flood could be retained for power purposes, irrigation, &c., while capacity to take a second flood would be held in readiness should another flood occur. Under no circumstances can the double duty of storing water to prevent floods, and reserving water for power and irrigation, be entertained as part of one scheme, the two duties being so opposed to one another; for if there is only capacity for one flood then who is to say whether it should be let go or retained? If let go, the water will be lost for power or irrigation; if retained, and another flood immediately follows, it will sweep down the valley and do as much harm as if no dam existed.

I, therefore, cannot recommend that Mr. Archibald's scheme be seriously entertained.

The Under Secretary for Public Works.

C. W. DARLEY.

A copy of this report may perhaps be sent to Mr. McFarlane, M.P.—J.B., 29/10/94. Approved.—J.H.Y., 30/10/94. Write.—D.C.McL. (for U.S.), 31/10/94.

REPORT on Mr. W. Archibald's scheme for the prevention of floods on the lower Clarence River, by the construction of a dam immediately below the junction of the Mitchell River with the Clarence. COMMENCING operations at Copmanhurst on the 22nd November, 1893.

Copmanhurst is situated on the Clarence River, at a point measured by the stream 68 miles distant from the mouth of the river, and on the above date I estimated the water level at the Copmanhurst wharf to be 1.75 feet above high-water level at the mouth. When the river is particularly low the tidal influence is perceptible at the wharf, and as my levels carried through checked very closely with the railway levels at Jackadgery Creek, on the Grafton-Glen Innes survey, and also at various points on the Grafton-Tabulam railway survey, I consider the above-mentioned estimate of 1.75 at Copmanhurst wharf may be taken as correct.

Copmanhurst

*Copmanhurst to Clarence-Mitchell Junction.*

Taking a set of levels from Copmanhurst to the Clarence-Mitchell junction, I obtained the following water-level for the river at various points, viz.:—

Copmanhurst Wharf ... ..	68 miles from mouth ... ..	1·75
Gordon Brook ... ..	92 .. ..	69·30
Entrance to Gorge ... ..	97½ .. ..	84·15
Proposed site for dam... ..	103 .. ..	140·00
Mitchell-Clarence Junction ... ..	103½ .. ..	140·20

Mr. Archibald estimated the height at the junction to be about 260 feet above high-water mark, against 140 feet, being a difference of 120 feet. This is a serious discrepancy, and at a most critical point, for a realisation of Mr. Archibald's enormous quantities can hardly be expected if it be found that the heights for the water level on the railway survey crossings at Jackadgery Creek and Tabulum, 310 feet and 358 feet respectively; concur with the height of 140 feet at the Clarence-Mitchell junction.

With the object of checking my levels from Copmanhurst, I decided upon investigating the valleys of the two rivers, and closing my levels on to the railway surveys.

In carrying out this examination I confined myself within the limits of the contour for top water level of a dam 200 feet high, at the same time taking particular notes, so that in the event of the capacity exceeding expectation, quantities relating to dams 150 feet and 100 feet high might be correctly obtained.

*Mitchell River Valley.*

Proceeding first up the Mitchell River for 5½ miles, including the Coombadjha Creek basin, the valley is hemmed in by high mountains, rising almost from the waters edge, and but for the great depth of water the conserving capabilities would be very limited; from 5½ miles and extending to 10½, the valley expands considerably, a magnificent storage basin being formed, the contents of which are equal to about one-half the capacity of the Mitchell Valley; from 10½ miles to 20 miles, on account of the physical features of the country, no large conserving basins are met with; and from 20 miles to 30 miles the water is almost wholly confined within the river banks, although along this length there are several extensive flats which would be submerged by a slight increase in the height of the dam.

*Clarence River Valley.*

Now, taking the Clarence River in hand, from 0 to 3 miles the section of the valley is contracted, the river running between high ranges of mountains, from 3 to 7 miles, including the basins of Dumbadgery and Fourteen-mile Creeks, a large conservation of water could be effected. From 7 to 15 miles the cross sections are again contracted over nearly the whole of this length; and above 15 miles, and extending to 47½ miles, the end of the lake formed by a dam 200 feet high, although flats of 2 and 3 square miles in area are covered to a depth of a few feet, and many others of a similar area would be submerged by increasing the height of the dam from 10 to 30 feet, under the limit of a dam 200 feet high the bulk of the water is retained within the river banks. Had the estimated height of 260 feet for the junction of the two rivers been verified, the storage capacity of the upper valley of the Clarence River would have been enormous.

*Combination of the two Valleys.*

Combining the two valleys, and entering now upon the merits of the scheme, the unfortunate discrepancy of 120 feet between the actual and estimated height at the point proposed for locating the dam, and the height for the terminal points at Jackadgery Creek and Tabulum being common to both, a comparison with Mr. Archibald's quantities is decidedly disappointing; but notwithstanding the wholesale shrinkage, quantities of considerable magnitude yet remain to be dealt with, but I consider the scheme can now only be applied to flood-prevention purposes. A small quantity, say that retained by a dam 30 feet high, supplemented by the normal discharge of the river, might be appropriated for water supply and other purposes.

A dam 100 feet high would conserve 10,841,000,000 cubic feet, or one-thirteenth of a cubic mile. This would fill a tank with a superficial area of 15 square miles, and an average depth of 26 feet. To compare this with a familiar counterpart as an aid to imagination, I should say that Port Jackson would about answer the requirements for comparison.

A dam 150 feet high would conserve 35,648,000,000 cubic feet, or a quarter of a cubic mile; area of water surface with dam full, 17,870 acres, or 28 square miles; area of land submerged between top-water contour and the river banks, 11,020 acres.

A dam 200 feet high would conserve 93,155,000,000 cubic feet, or five-eighths of a cubic mile; area of water surface with dam full, 37,180 acres, or 58 square miles; area of land submerged between the top-water contour and the river banks, 28,095 acres.

*Outlet Works.*

Provision would have to be made for passing the flood-waters either through specially designed flood-gates or openings in the dam, or through tunnels under the ends of the dam, there being no other point where independent outlet works could be placed, the lowest gap in the watershed being at a point immediately behind the Sugarloaf, a mountain situated in the elbow of the Clarence River, at the junction with the Mitchell. Mr. Archibald estimated the height of this gap at about 220 feet above water-level at the dam site, whereas it is actually 398 feet, and as the lake would have to be almost entirely emptied after each flood, a tunnel at this point would have to be at least three-quarters of a mile long.

*Adoption of Scheme.*

The question of the maximum flood discharge would first have to be approximately determined. The estimates vary from half a cubic mile to 1 cubic mile. I think it very probable that from the inception of a record flood, and until the flood-waters subsided and the river again assumed a normal condition, a discharge of 1 cubic mile would be registered; but this process would extend over a period of several weeks, or very probably months. I am, therefore, inclined to consider that as a basis for deciding the height of dam required, it would be sufficient to assume the flood discharge to be half a cubic mile. The entire retention of, say, half this amount—that is, a quarter of a cubic mile—should have a most appreciable effect upon floods, and would minimise the amount of damage generally caused. A

## 15

A quarter of a cubic mile is an enormous body of water, particularly when looked at in different shapes, it will cover an area of 100 square miles to a depth of a little more than 13 feet.

A dam 150 feet high, erected at a total cost of £460,000, will conserve this quantity of water. should this not be considered sufficient by the construction of a dam 200 feet high, at a cost, however, of £900,000, a conservation of  $\frac{1}{3}$ ths of a cubic mile could be effected.

Attached in tabulated form are the principle items in reference to dams 100 feet, 150 feet, and 200 feet high, also a type section of the dam from which the quantities for concrete have been calculated, plans of the reservoir showing contour of water retained by dams 150 feet and 200 feet, and longitudinal and cross sections, and a cross section on the centre line of the proposed site for the dam.

In estimating the cost of the dam, I have allowed 35s. per cubic yard for concrete. This may seem rather high, considering the large quantity to be put in place, but special arrangements would have to be made for conveying cement and plant from Copmanhurst to the site of the dam, a distance of 35 miles, and at present the only means of conveyance over the last 9 miles would be by pack horse, so that a heavy initial expenditure would be incurred before any remunerative work would be commenced.

The Engineer-in-Chief, Harbours and Rivers.

D. F. CAMPBELL, 20/6/94.

Height of Dam.	Area of Water Dam full.	Area of Dam full.	Capacity of Dam.	Capacity of Dam.	Length of Lake.	Mean width.	Area of Land to be Resumed, &c.	Concrete in Dam.	Cost.			
									Dam.	Outlet works.	Land compensation for Buildings, &c.	Total.
Feet.	Acres.	Sq. miles.	Million cubic feet.	Cubic miles.	Miles.	Miles.	Acres.	Cubic yards.	£	£	£	£
100	7,000	11	10,841	$\frac{1}{8}$	36 $\frac{1}{2}$	$\frac{1}{2}$	2,740	198,480*	320,800	10,000	{ 16,000 11,000	{ 355,800 360,800
150	17,870	28	35,048	$\frac{1}{4}$	58 $\frac{1}{2}$	$\frac{1}{2}$	11,020	231,688	405,000	10,000	{ 55,000 45,000	{ 470,000 460,000
200	37,180	58	83,156	$\frac{1}{2}$	78 $\frac{1}{2}$	$\frac{1}{2}$	28,005	444,549	778,000	12,000	110,000	900,000

\* Note.—The quantities for the first 100 feet in height of a dam proposed to be ultimately raised to a height of 150 feet have been inserted here.

Concrete in every case is estimated at 35s. per cubic yard.

## No. 11.

The Under Secretary for Public Works to J. M'Farlane, Esq., M.P.

Sir,

Department of Public Works, 6 November, 1894.

With reference to the question asked by you in the Legislative Assembly on the 18th ultimo, in regard to Mr. Archibald's scheme for the prevention of floods in the Clarence River, I am directed by the Secretary for Public Works to forward herewith for your information a copy of a report on the subject which has been received from the Engineer-in-Chief for Harbours and Rivers.

I have, &c.,

J. BURLING,

Under Secretary.

## No. 12.

J. M'Farlane, Esq., M.P., to The Secretary for Public Works.

Sir,

6 December, 1894.

Will you kindly let me have copy of Mr. Campbell's report on Mr. Archibald's proposal for flood prevention on the Clarence, and much oblige,

Yours, &c.,

J. M'FARLANE.

Mr. Darley.—D.C.M'L. (for U.S.), B.C., 8/12/94. I have no objection to a copy of Mr. Campbell's report being sent if the Minister consents.—C.W.D., 11/12/94. The Under Secretary Public Works. Submitted for approval.—J.B., 11/12/94. Approved.—J.H.Y., 12/12/94. Send.—J.B., 12/12/94.

## No. 13.

The Under Secretary for Public Works to J. M'Farlane, Esq., M.P.

Sir,

15 December, 1894.

In compliance with the request contained in your letter of the 6th instant, I am directed to forward herewith a copy of Mr. Engineer Campbell's report respecting Mr. Archibald's scheme for flood prevention in the Clarence district.

I have, &c.,

J. BURLING,

Under Secretary.

## No. 14.

J. M'Farlane, Esq., M.P., to The Secretary for Public Works.

Sir,

Sydney, 8 January, 1895.

I have the honor to enclose herewith communications from Mr. W. Archibald, of Taloombi, Clarence River, further on proposed flood prevention scheme. Mr. Archibald has gone to a vast amount of trouble over the matter, and his proposals seem feasible, and trust that they will receive due consideration.

I am, &c.,

J. M'FARLANE.

Please also supply him with particulars asked for.

[Enclosure.]

[Enclosure.]

[By favour of John M'Farlane, Esq., M.P.]

Taloumbi, near Palmer Island, 4 January, 1895.

Sir,

I beg to acknowledge, with much satisfaction, the receipt of Mr. Campbell's report upon my scheme, per favour of Mr. M'Farlane. Of the errors noted by Mr. Campbell I have long been aware, as might be seen by reference to my voluminous correspondence with Mr. M'Farlane. They were, of course, quite unavoidable at the outset. It was to eliminate such errors that the survey was necessary. The immense storage capacity which I described was located, I said, between the planes of 350 feet and 400 feet above Grafton. What this meant above the Gorge could only be determined after survey, since the site for the dam is shown to be only 140 feet above Grafton. It is clear enough now that a dam 200 feet high would not suffice to carry out all the objects of the scheme. To do so, however, a dam 250 feet high would fully suffice. Since the date that my proposals were originally submitted to your Department through Mr. M'Farlane, 20th August, 1893, I have made several visits of two or three weeks' duration to the region affecting my scheme to determine various points in connection with it, and during my last visit I made an elaborate examination of the whole Clarence-Mitchell Valley, from Nymboi Junction to the flats below Tabulam, with a view of determining approximately the area that would be submerged by a dam 250 feet in height, Mr. Campbell having restricted his investigations to the effect of a dam only 200 feet high, and I arrived at the conclusion that at the very lowest estimate 100 square miles would be submerged. In making these calculations I had an excellent aneroid, which I almost hourly checked by a reference to the river levels in the vicinity. Mr. Campbell's survey itself shows that after the first 100 feet upwards is passed, every additional 50 feet in the height of the dam more than doubles the area successively submerged. A dam 100 feet high backs the waters over 11 square miles of country; a dam 150 feet high backs them over 28 square miles; another 50 feet higher and the waters cover 58 square miles; and if the same rate of increase were to continue, of which there can be no reasonable doubt, then a dam 250 feet high should back the waters over 120 square miles of country. That it would really do so I have not the slightest doubt, but I will content myself at present with the very safe assumption that it will send the waters over 100 square miles of country only.

Now let me point out the minimum capabilities of such a dam for carrying out the three main objects of my scheme, viz. :—

- A. The establishment of a new navigation system within the Mitchell-Clarence Valley.
- B. Irrigation and power.
- C. Flood prevention.

*Section A.*—As regards navigation, if the waters were permanently retained at a level not lower than 180 feet upon the dam, we should have a lake about 70 miles long, stretching from Jackadgery to within a few miles of Tabulam, and sending numerous navigable arms far into the surrounding country on both sides. This would open up an immense district to profitable settlement. A tramline or light line of railway only 30 miles long would connect this new navigation system with the present one. Such a connection could be effected, for example, between the Long Swamp Gap at the back of Yugilbar and Moleville, some 12 miles above Grafton.

*Section B.*—The next 50 feet upwards within the reservoir, that is, the entire volume of water between the horizontal planes of 320 and 370 above high-water mark, and covering an area exceeding 60 square miles, supplemented, too, by the normal delivery of the rivers at Tabulam and Jackadgery, could be devoted to irrigation and power, and would suffice for a very large scheme. Nothing could be better adapted for irrigation than the deep sandy soils of the eastern division of water shed, and no waters could be better calculated to supply the usual deficiencies of such soils than those of the Upper Clarence, which hold in solution magnesia, lime, potash, iron, and other fertilising ingredients derived from the mountain rocks in which they originate.

*Section C.*—After making due provision for navigation, irrigation, and power, ample space would yet remain in the highest portion of the reservoir for the temporary storage of flood-waters, viz., that between the horizontal planes of 370 feet and 390 feet above high-water mark, with an area of 100 square miles. If the waters were drawn off at levels ranging from 180 to 240 on the dam, very short tunnels through the saddle connecting the Sugarloaf Mountain, on the east side of the dam, with the main range at the back, would suffice for the purpose.

3. Of the entire feasibility of such a scheme there can ultimately be no doubt; but, as I have already said, Mr. Campbell's survey has shown that it is beyond the scope of a dam only 200 feet in height, and I am well aware that before so costly an undertaking could be seriously entertained by the Government, very extensive inquiries and investigations in addition to those so ably carried out by Mr. Campbell would have to be made, inquiries which it would take at least twelve months to complete, however vigorously conducted, and which would involve considerable outlay. But whilst a correct decision with regard to the complete scheme could scarcely be arrived at under a year or two, there is, I respectfully submit, on the strength of Mr. Campbell's report, no necessity for delay with respect to the flood-prevention section of the scheme, which relates to a matter of the highest practical urgency and importance. It would, of course, be quite practicable to carry out this section of the general scheme in a thorough going manner by itself, and at the same time to lay a solid foundation for future development on the lines above indicated, should circumstances hereafter appear to warrant it, agreeably to my anticipations.

4. Holding these views, I deem it expedient to submit for your consideration a smaller scheme dealing with the problem of flood-prevention alone. In order to form a correct opinion as to the value of this flood-prevention scheme considered by itself, it will not be necessary for the Department to incur any fresh expense, as Mr. Campbell's survey and admirable report cover all the ground which I intend to traverse. My proposal will be simply to form a large regulating reservoir in the Clarence-Mitchell Valley by means of a dam at the Gorge, only 150 feet in height, with suitable vents for regulating the delivery of the impounded waters into the present channel below the dam.

In order that I may be able to lay my scheme properly before the Department and before the public, I beg now to apply for tracings of all Mr. Campbell's plans and sections furnished to you with his report, a list of which is attached hereto.

I have, &c.,  
W. ARCHIBALD.

## LIST OF PAPERS APPLIED FOR.

Type section of the dam from which the quantities for concrete have been calculated.  
Plans of the reservoir, showing contour of water retained by dams 150 feet and 200 feet high.  
Longitudinal and cross sections.  
Cross section, or the centre line of the proposed site for the dam.  
Also information as to height of river-bed at the mouth of the Durdohra, and Cangai Creek (Mitchell River), and of the height of the Clarence River bed at the mouth of Joseph's Creek, Yugilbar, at the mouth of the Washpool, at Deadman's Creek, and at Booth's Creek.

W. ARCHIBALD.

With my letter, dated 4/1/95.  
The Under Secretary, Department of Public Works, Sydney.

[By favour of John M'Farlane, Esq., M.L.A.]

Sir,

Taloumbi, near Palmer Island, 2 January, 1895.

I had the honor to receive some few weeks ago, by favour of Mr. M'Farlane, a copy of the report of the Engineer-in-Chief for Harbours and Rivers, upon my scheme for dealing economically with the flood-waters of the Clarence River, and I am now in receipt of Mr. Campbell's report on the same subject.

I find that in Mr. Darley's report Mr. Campbell's figures are misquoted from end to end, and that Mr. Darley's strictures are based upon these erroneous quotations alone. Whatever the explanation of these unfortunate discrepancies may be, I have no doubt that as soon as Mr. Darley discovered their existence, he will, in the public interest, and in justice to me, withdraw that report. I trust, at least, that he will see fit to do so, and to deal with the whole subject *de novo* at the proper time; that is, when my scheme duly amended in the light of the figures supplied by Mr. Campbell's survey has been properly laid before the Department. I would remind him that my sketch of the scheme was only provisional, and that, under the circumstances, certain errors were quite unavoidable.

I have, &c.,  
W. ARCHIBALD.

The Under Secretary, Department of Public Works, Sydney.

[By

[By favour of John McFarlane, Esq., M.L.A.]

Sir, Taloumbi, near Palmer Island, 2 January, 1895.  
I have the honor to apply for a copy of Mr. Campbell's survey of the proposed site for the dam at the Gorge, also for the following river heights:—The Mitchell bed at the mouth of Durdohra Creek, and at Cangai Creek; the bed of the North Clarence at the mouth of Joseph's Creek (Yugilbar), at the mouth of Deadman's Creek, and at the mouth of Booth's Creek.

2. The above, together with the contents of Mr. Campbell's admirable report upon my scheme, coupled with the results of my own personal investigations, will enable me to complete it, which I am desirous of doing as soon as possible. An early response to this application would therefore greatly oblige.

Sir, Yours, &c.,  
W. ARCHIBALD.

The Under Secretary, Department of Public Works, Sydney.

Mr. Darley.—D.M.L. (for U.S.), B.C., 11/1/95. Mr. Campbell for report.—C.W.D., 14/1/95.  
Report herewith.—D.F.C., 19/1/95.

### No. 15.

#### Report by Mr. D. F. Campbell.

Sir, Harbours and Rivers Branch, 19 January, 1895.

*Re* Mr. Archibald's further report on the Clarence River scheme, in which he explains that it is in the upper portion of the Clarence Valley where he expected to conserve the greatest quantity of water, I beg to report that if his original estimate of 260 feet above high-water mark had been confirmed, this would have been the case; and also by adding 50 to the height of the proposed 200-foot dam, the capacity would be more than doubled, as large flats below Tabulam on the Clarence and above Cangi on the Mitchell would be submerged to a considerable depth.

Mr. Archibald, however, in his present report puts on one side the question of a dam 250 feet high, and now confines himself to urging the construction of a dam 150 feet high for flood prevention only.

A dam of this height was fully gone into in my general report, and though in your report there was a clerical error in the surface area of water held back by dams 150 feet and 200 feet high it does not affect your decision as to the merits of the scheme, and the question of forwarding tracings of plans, &c., will, I think, depend on your recommendation as to whether it is advisable to go further into this matter.

The Engineer-in-Chief, Harbours and Rivers.

D. F. CAMPBELL.

The advantage to be derived from the construction of a dam 150 feet high are so much less than was first stated, in consequence of an error of 120 feet in levels, at the junction of the Clarence and Mitchell that I could not recommend its construction at the present time.

There is very little advantage in building a storage or relieving reservoir unless its capacity is equal to the amount discharged by two floods. Floods have been known to follow one another so rapidly that with storage capacity for only one flood we should be compelled to run off the stored water at a rate equivalent to, or perhaps greater than, ordinary flood discharge.

I put aside altogether the question of constructing a dam 250 feet high. No dam of this height has yet been built. The highest is that of Furens in France, 170 feet. The matter has now been thoroughly thrashed out, and although perhaps not unpracticable, I think it may be said to be considerably before its time.—H.C., 1/2/95. The Engineer-in-Chief. I concur.—C.W.D., 4/2/95. The Under Secretary for Public Works.

### No. 16.

#### J. McFarlane, Esq., M.P., to The Secretary for Public Works.

Sir, Sydney, 17 January, 1895.

I have the honor to enclose herewith communications from Mr. Archibald in reference to further matter in connection with his scheme for flood prevention on the Clarence. Mr. Archibald has gone to a vast amount of trouble and considerable expense in furthering the movement, and his action has been much appreciated by the residents interested, and I trust that you will give the question best consideration.

I am, &c.,  
JOHN MCFARLANE.

#### [Enclosures.]

Sir, Taloumbi, near Palmer Island, 10 January, 1895.

Enclosed herewith I beg to hand you a fresh sketch of my Clarence River Flood Prevention Scheme, which I have re-cast in the light of Mr. Campbell's survey, and to which, divested of all connection with my larger conservation scheme, I would respectfully solicit the attention of the Honorable the Secretary for Public Works, in the hope that he will see fit to call for an early report upon the narrower issues herein involved.

I have, &c.,  
W. ARCHIBALD.

THE CLARENCE RIVER FLOOD PREVENTION SCHEME, PROPOSED BY W. ARCHIBALD, AND SUBMITTED TO THE CONSIDERATION OF THE HONORABLE THE SECRETARY FOR PUBLIC WORKS, BY FAVOUR OF JOHN MCFARLANE, ESQ., M.P., WITH LETTER DATED 10TH JANUARY, 1895.

Form, within the Mitchell-Clarence Valley, a capacious reservoir from the temporary storage of the flood waters brought down from the New England table-land and its easterly offsets, by the Nymboi-Mitchell, Timbarra, and North Clarence.

Provide this reservoir with an outlet, or with outlets, capable of tapping the reservoir, and discharging its contents at an appropriate rate, into the river channel below the reservoir.

This reservoir and open outlet combined, will form a regulating apparatus capable of safely manipulating any flood.

Let the pressure-proof dam requisite for forming the proposed reservoir be 150 feet in height, and placed across the Gorge, about half a mile below the Clarence-Mitchell Junction, at the site surveyed by the Harbours and Rivers Department in 1893.

Let the outlet or outlets for relieving the reservoir have a discharge capacity in high flood amounting to (say) 300 million cubic feet per hour.

These provisions will fully satisfy all the requirements of the case.

Mr. Campbell's survey shows that the dam above proposed would back the waters of the Clarence and Mitchell up so as to form a lake 28 square miles in area, with a cubic capacity of 35,648 millions, of cubic feet which, with him, I consider sufficient for the purpose of temporary storage.

Constructive

Constructive details I leave to the Department, but may point out that a tunnel driven into the upright mountain wall, forming the west boundary of the site, and after passing round under the end of the dam issuing from the mountain again at a suitable distance below the dam, and being 40 feet in diameter across the neck, funnelled slightly at the upper or receiving end, and much more so at the lower or delivering end, would perform the required function, supposing the waters at flood time to average 120 feet upon the dam, that is, supposing the reservoir to be about one-third full, as may readily be verified by calculation. During the five days covering the climacteric of a great flood such an outlet would be capable of discharging 36,000 millions of cubic feet, and as the reservoir would hold back about an equal amount before overflowing, the combined agency would be fully equal to the disposal of about half a cubic mile of water within the brief period named. In the course of a fortnight, supposing a widespread and protracted phenomenal rainfall to occur, it would be capable of safely grappling with a full cubic mile of water.

From the position of the dam it would intercept the whole volume of drainage now sent rapidly down from the New England table-land and its easterly offsets, comprising an only too effective catchment area exceeding 6,000 square miles. These western waters are practically the sole cause of the Clarence floods. Stop, or adequately restrain these waters in their passage through the Gorge, and the problem of flood prevention for the agricultural districts is solved.

As to the flood discharge from the eastern section of the watershed, this is much less than its area which approaches 2,000 square miles, would appear to indicate owing to the general flatness of its surface and to the absorbent nature of its deep sandy soils. Though no exact figures are available yet experience has repeatedly shown that the coastal rainfalls that flood the Orara, &c., produce of themselves scarcely any perceptible results upon the estuary beyond freshening it, and giving it a constant outward trend over the bar, varying, however, in its force according to the strength of the tide. Before the tidal influence can be altogether extinguished a strong augmentation from Copmanhurst is always necessary, and which I estimate at not less than 300 million cubic feet per hour to fully utilise the discharge capacity of the flood channel over the bar.

As the river channel at Grafton is 700 yards wide, and the current there in the initial stages of a flood not less than 5 miles per hour, the amount sent down from the reservoir would, not of itself, raise the waters there more than about 6 feet. If, therefore, I state the total rise possible at Grafton under this scheme, at the harmless amount of 8 or 9 feet I shall be, to the best of my belief, fully within the mark.

It may be that, to attain this great result, a somewhat larger reservoir, with a smaller outlet, would be requisite; or on the other hand, more accurate investigation of the determining phenomena may show that a smaller reservoir with a larger orifice would suffice. I am contending for a principle only, and not for the exactitude of my assumptions, which, though carefully made, are approximate only.

But to whatever unforeseen extent, modification in detail may appear necessary hereafter, there can surely be no doubt, taking a broad view of the hydrographical features of the entire water-shed, that we have in the general mechanism of this scheme which arrests the progress of the great bulk of the descending flood-waters, immediately they are collected into a single valley, and gradually releases them into the spacious channel below the works, at a rate well within its carrying capacity. We have the means of practically abolishing floods, in the main valley of the Clarence from Gordon Brook to the sea; that is throughout the whole of the agricultural district, and for some 20 miles above them, and this at a cost that might freely be paid considering the magnitude of the interests at stake.

With regard to Mr. Campbell's estimate of cost, viz., £460,000, I beg to point out that he was in error with regard to the necessity of packing cement from Gordon Brook to the Gorge; and that the freight by bullock teams would be very low, as there is an excellent dray road *via* the valley of Dumbudgery Creek. Further, the scheme must be credited with the value of the rich Crown lands below Grafton which may be altogether reclaimed under its agency; and which may safely be set down at £60,000, at the least. Moreover, the pastoral lands above the dam which have to be resumed under this scheme will not represent unproductive outlay. As a matter of fact, their value for grazing purpose will not be greatly depreciated when the scheme comes into operation. Enriched by flood deposits from the still waters of the temporary lake, they will always be covered with magnificent grass in the dry season, when they are alone wanted by the squatters; for in the wet seasons, when they will be partially or wholly submerged, there is always an abundance of sweeter grass upon the adjoining hills. Hence these lands will readily let for fattening paddocks, at a rental which will go a long way towards paying the cost of resumption.

Upon the whole, then, I am hopeful that the net cost, will yet be reduced to the vicinity of £300,000. At any rate it will be much the lowest on record for an enterprise of such dimensions.

W. ARCHIBALD,

Taloumbi, near Palmer Island,

10th January, 1895.

Mr. Darley.—D.C.M.L. (*pro* U.S.), 18/1/95. Mr. Campbell, for any further remarks he may have to make.—C.W.D., 22/1/95. I do not think the Engineer-in-Chief has seen my further report of the 19th instant *re* this matter.—D.F.C., 26/1/95.

## No. 17.

### *Précis.*

#### MR. ARCHIBALD'S SCHEME FOR FLOOD PREVENTION AND NAVIGATION PURPOSES—CLARENCE RIVER.

6 February, 1895.

The scheme proposed by Mr. Archibald is briefly to construct a waterproof dam of appropriate design across the Gorge, a narrow pass through which the entire drainage of the Western Division of the watershed is poured, as soon as it is brought into a single channel by the union of the Mitchell and North Clarence, which takes place about 45 miles above Copmanhurst. The object of this dam, 220 feet high, would be to impound a whole flood, and run it off at pleasure, but it would also retain one flood for power purposes and run no risk, as it would still have available storage capacity for another.

Some of the advantages of the proposal are:—

1. The prevention of floods with its many attendant advantages.
2. The prevention of the erosion of the river banks.
3. The decreased expenditure in dredging.
4. The saving in cost on all roads, railways, and bridges in the district.
5. Irrigation.
6. Practically unlimited water power.

Mr. Darley studied the scheme, and considered it well worth investigating further, but of course no correct opinion could be formed before levels were taken. Mr. Lyne, on the recommendation of Mr. Darley, approved on 27th October, 1893, of an officer being sent to make a survey and take the necessary levels. Mr. Campbell took the necessary levels, and it was soon found that the gigantic storage capacity which Mr. Archibald states could be obtained was not practicable, inasmuch as Mr. Archibald was mistaken in the level of the river at the Gorge to the extent of 120 feet. Notwithstanding this great discrepancy, Mr. Darley considered a very large storage capacity could be obtained by the construction of a high concrete dam, but it would probably cost about one million sterling to purchase the land that would be flooded and construct a dam 200 feet high, which, after all, would hardly hold back more than a moderate flood.

A dam, 150 feet, would cost about £470,000, and a dam only 100 feet high, would cost about £355,000, both including land purchase; but Mr. Darley is of opinion that neither of them would hold sufficient water to create a benefit in proportion to their cost. After fully considering the matter he came to the conclusion that the benefit that might be derived would not compensate for the great cost of the undertaking, and he could not recommend that the scheme be seriously entertained.

Mr. McFarlane, M.P., on the Minister's approval, was supplied, 20th October, 1894, with a copy of Mr. Darley's report.

Mr. Archibald now urges the construction of a dam 150 feet high for flood prevention only.

Mr. Darley has nothing further to say, as the matter has now been thoroughly thrashed out. The advantages to be derived from the construction of a dam 150 feet high are so much less than was first stated in consequence of an error of 120 feet in levels at the junction of Clarence and Mitchell, that its construction could not be recommended.

There is very little advantage in building a storage or relieving reservoir unless its capacity is equal to the amount discharged by two floods, as floods have been known to follow one another so rapidly that with storage capacity for only one flood we should be compelled to run off the stored water at a rate equivalent to, or perhaps greater than, ordinary flood discharge.

F.E.P.

[Eleven diagrams.]

[FOOTNOTE.—*The colours in the original sketches by Mr. Archibald have been omitted, with a view to save expense.*]

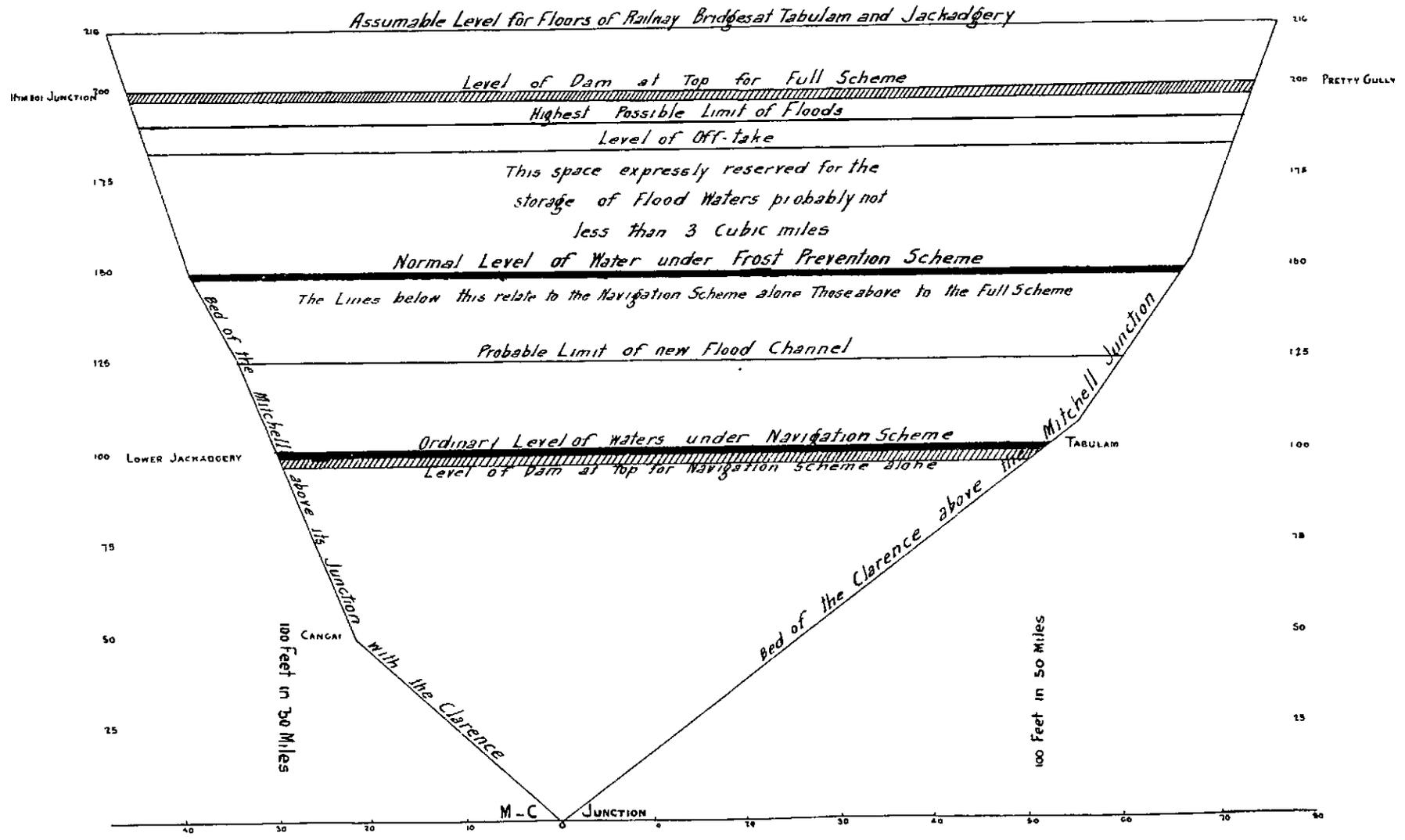




APPROXIMATE LONG SECTION  
OF  
MITCHELL AND CLARENCE VALLEY

FROM PRETTY GULLY TO NYMBOI JUNCTION

NOTE Heights in Feet above Level of Junction which is about 250 above H Wat Crafston  
Horizontal Distances in Miles measured both ways from the Junction



(S. 3)

— CROSS SECTION —

Referred to shewing elements of

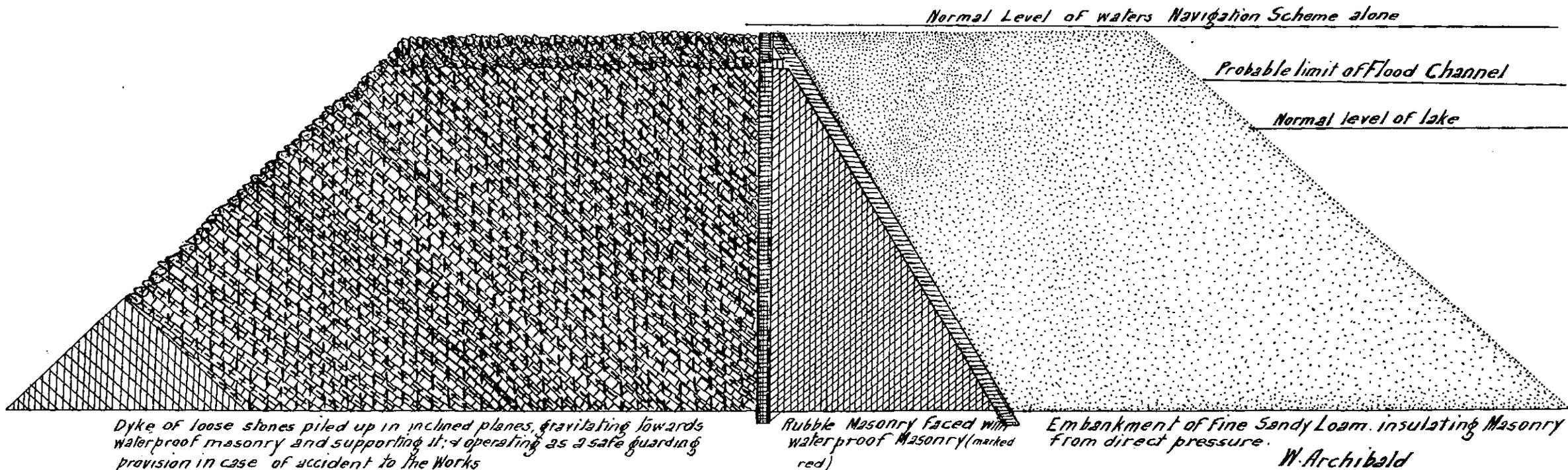
— PROPOSED DAM —

Scale

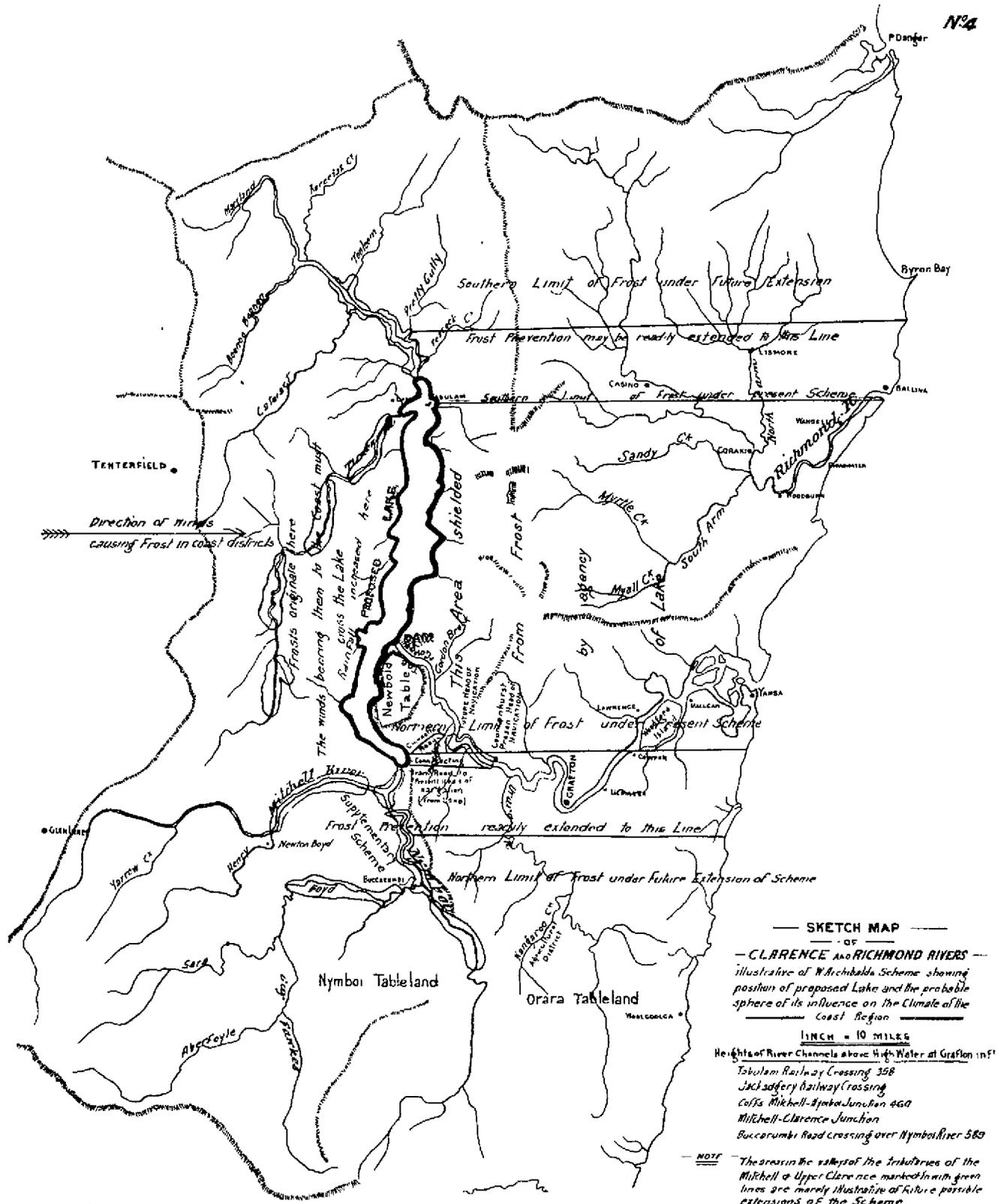
For full scheme read 50f<sup>t</sup> = 1 inch omitting top blue line

For Navigation . . . alone read 25f<sup>t</sup> = 1 inch omitting green & lower blue line

— NOTE — *All materials for a work of this description  
procurable on the Spot, cement alone excepted*



(Sig. 3)



(Sig. 3)

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

— SKETCH MAP —  
 — OF —  
 — CLARENCE AND RICHMOND RIVERS —  
 illustrative of N. Mitchell Scheme showing  
 position of proposed Lake and the probable  
 sphere of its influence on the Climate of the  
 Coast Region

1 INCH = 10 MILES

Heights of River Channels above High Water at Grafton in ft

Eskdale Railway Crossing 358  
 Jackaderry Railway Crossing  
 Coffs Mitchell-Nymboi Junction 400  
 Mitchell-Clarence Junction  
 Buccarumbi Road crossing over Nymboi River 580

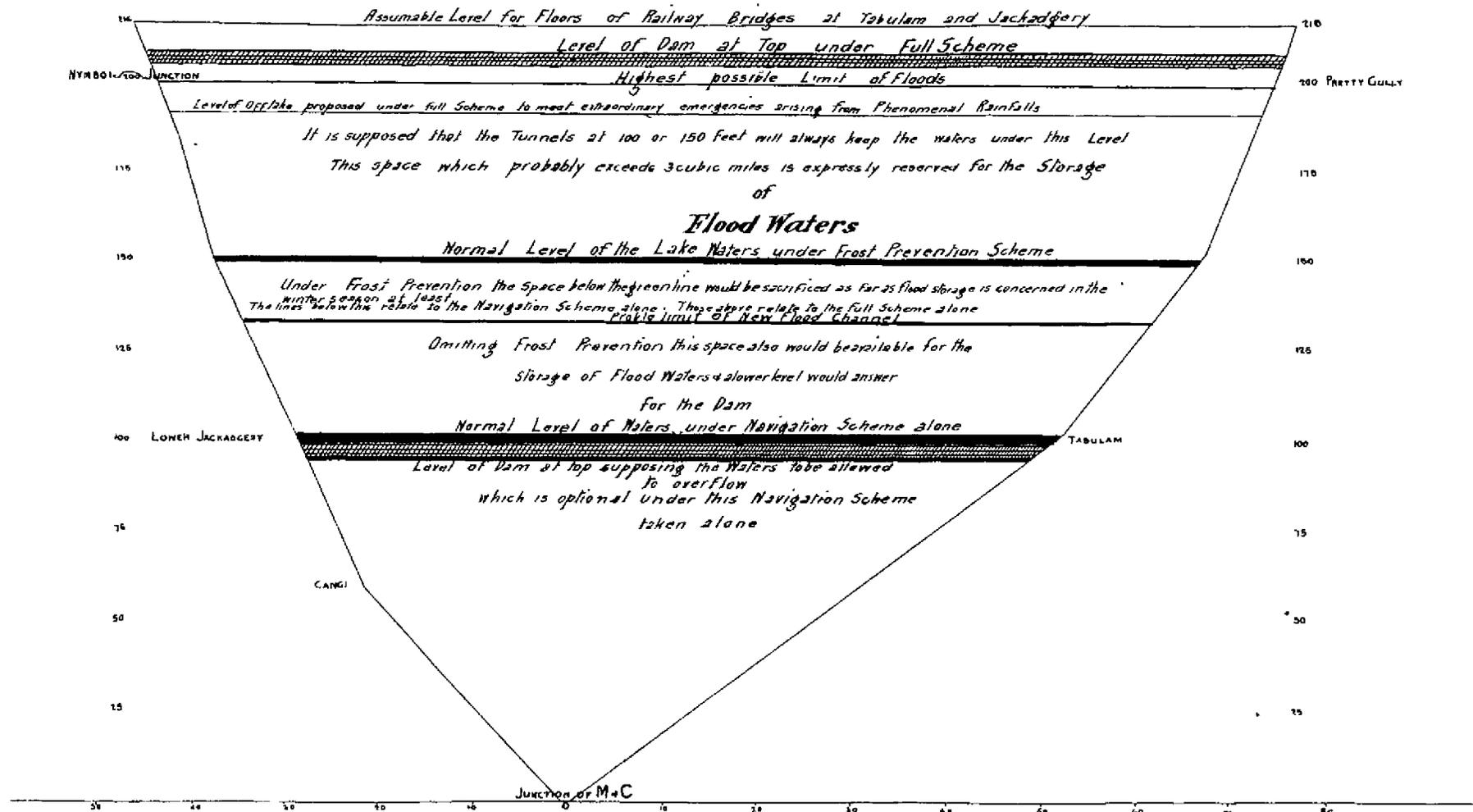
— NOTE —  
 The areas in the valleys of the tributaries of the  
 Mitchell & Upper Clarence marked in with green  
 lines are merely illustrative of future possible  
 extensions of the Scheme

APPROXIMATE LONGITUDINAL SECTION  
OF THE MITCHELL-CLARENCE VALLEY FROM PRETTY GULLY TO NYMBOI JUNCTION

Illustrating W. Archibalds Engineering Scheme

*Horizontal Distances given in miles measured both ways from the Mitchell-Clarence Junction*

*Vertical Elevation given in feet above the Level of the M-C Junction which is about 260 F' above High Water at Grafton*



(Sig. 3)

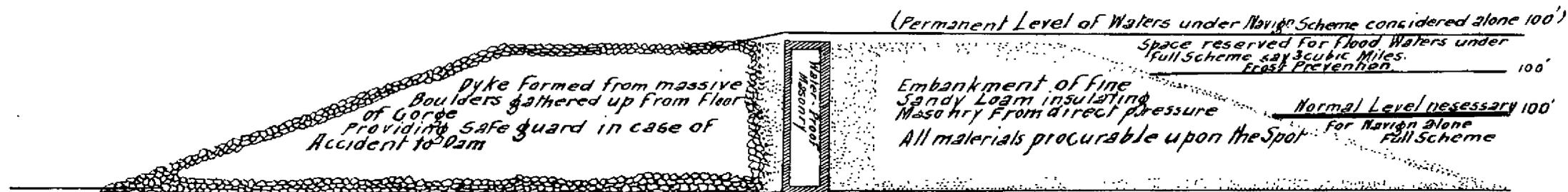
**CROSS SECTION**

showing elements of

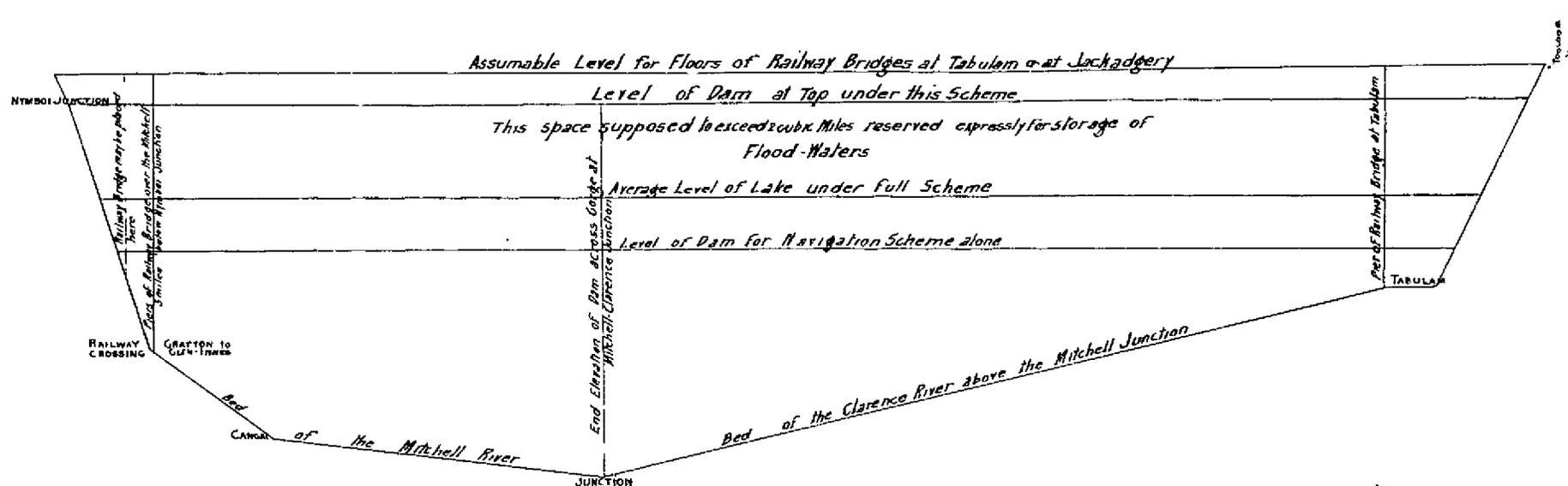
**PROPOSED DAM**

**SCALES**

Read 80 Ft to 1 inch for Navigation Scheme alone omitting Green & lower Blue line  
 Read 160 Ft to 1 inch for Full scheme; omitting highest blue line



(Sig 9.)



— APPROXIMATE LONGITUDINAL SECTION —

OF THE MITCHELL CLARENCE VALLEY FROM NYMBOI JUNCTION TO TOOLOOM JUNCTION (LOWEN)

The channels supposed to be straightened into a continuous North & South Line

— SCALES —

Horizontal distances. 6 miles - 1 inch

Vertical Heights : 50 feet - 1 inch

Submitted with supplement to W. Archibald's Scheme 19<sup>th</sup> September 1893

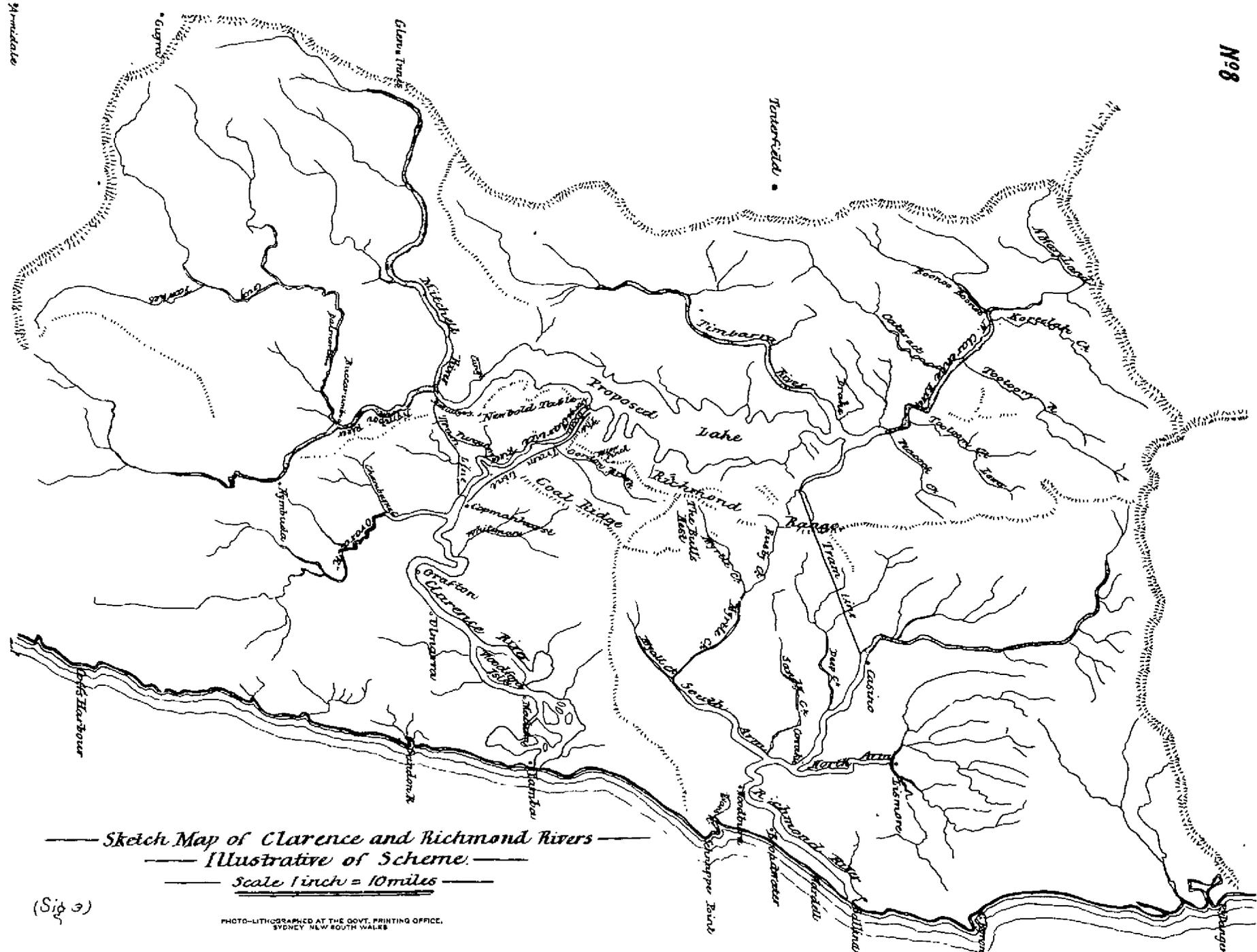
(sig<sup>d</sup>) W. Archibald  
18.9.93.

NOTES ON HEIGHTS AND DISTANCES BY CHANNEL

HEIGHTS NymbOI Junction 460'. Mitchell River Railway Crossing at Jackadgery 310'. Tabulam Rly. Crossing 358'. All reckoned from High Water at Grafton. No others accurately known. Clarence-Mitchell Junction probably about 260' above Grafton.

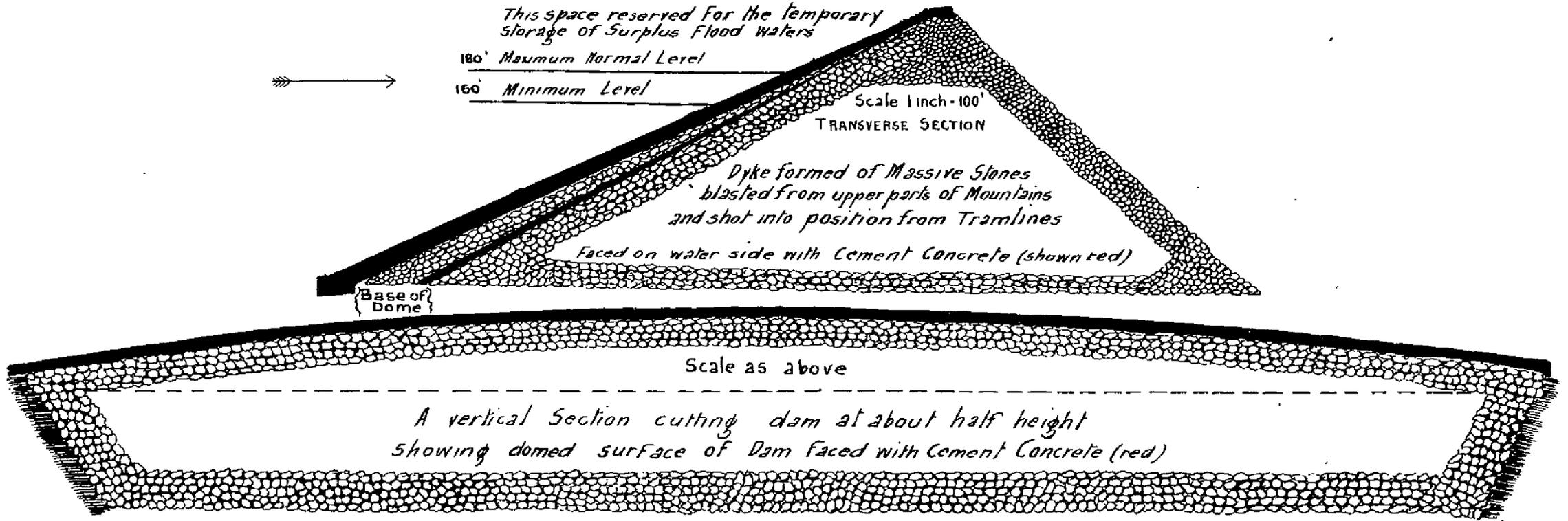
DISTANCES From Tabulam to Clarence-Mitchell Junction 48 miles; From Mitchell-Clarence Junction to NymbOI-Mitchell Junction 32 miles; From Mitchell-Clarence Junction to Copmanhurst 35 miles; Copmanhurst reputed to be 50' above Sea & 30' above Grafton. Total Length of Lake Reckoned by Channel Measurement at 120' on Dam 82 miles; at 180' 84 miles; at 200' 88 miles.

(Sig. 3)



— Sketch Map of Clarence and Richmond Rivers —  
 — Illustrative of Scheme. —  
 — Scale 1 inch = 10 miles —

(Sig 3)

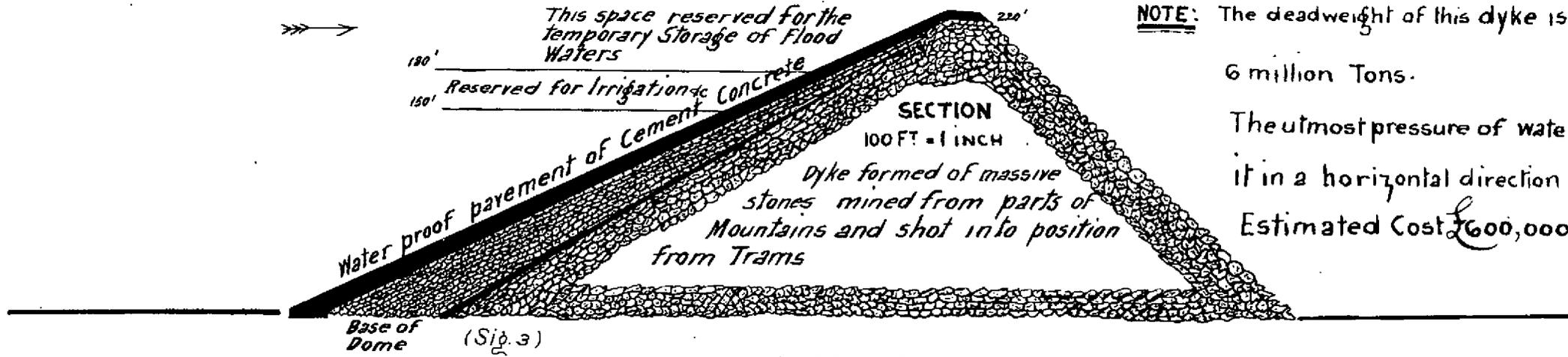


(Sig. 3.)

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

(signed) W. Archibald

9. 11. 93



**NOTE:** The deadweight of this dyke is about 6 million Tons.

The utmost pressure of water upon it in a horizontal direction is 285,000 tons

Estimated Cost £600,000 (Contractor's Estim)

Base of Dome

— GROUND PLAN —

Scale 100' to 1 inch

*Estimated Contents 3,400,000 Cubic yds stone*

*201,600 " " concrete*

*Dead weight about 6 million tons*

*Horizontal Thrust of Water in high Flood 285,000 tons*

(signed) W. Archibald

9. 11. 93

(Sig. 3.)

1895.

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LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

---

NEWCASTLE PASTURAGE ACTS AMENDMENT BILL.

(MESSAGE No. 9.)

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*Ordered by the Legislative Assembly to be printed, 17 September, 1895.*

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FREDK. M. DARLEY,  
*Lieutenant-Governor.*

*Message No. 9.*

In accordance with the provisions contained in the 54th section of the Constitution Act, the Lieutenant-Governor recommends, for the consideration of the Legislative Assembly, the expediency of making provision to meet the requisite expenses in connection with a Bill to amend the Newcastle Pasturage Reserve Act and the Newcastle Pasturage Reserve Act Amendment Act.

*Government House, Sydney,  
17th September, 1895.*

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1895.

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

---

TOBACCO FACTORIES IN THE COLONY.

(RETURN RESPECTING.)

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*Ordered by the Legislative Assembly to be printed, 27 August, 1895.*

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Question.

3. MR. H. H. BROWN ASKED THE COLONIAL TREASURER,—

- (1.) What number of tobacco factories are in existence in country districts; the names of such districts, and registered owners?
- (2.) The like information in the city of Sydney and suburbs?

Answer.

(1.)

There are six tobacco factories and one cigar-maker in the country districts of New South Wales:—The Standard Tobacco Factory—Bennett Zeller, Solomon Harris Levy, Andrew Dalton, Darby-street, Newcastle; William H. Kelly, Rose-street, West Maitland; Messrs. Wolfe, Prentice, & Co., Bulwer-street, West Maitland; Joseph Cunningham, King-street, East Maitland; Messrs. Lawrie & Sons, Halton, Allyn River; Jens J. Iverson, Tooloom; Bennett Zeller, Solomon H. Levy, Andrew Dalton, 129, Hunter-street, Newcastle.

(2.)

There are six tobacco factories and one cigarette factory in Sydney:—Messrs. H. Dixson & Sons, Conqueror Works, Park and Elizabeth Streets; Messrs. Cameron Bros., & Co., Virginia Factory, Cooper-street, Surry Hills; James Scroggie, The Eagle Tobacco Company, Clarence-street; Thomas Saywell, The Sun Factory, corner Devonshire and Elizabeth Streets; Marie Simmons, New York and Brooklyn Works, Cleveland-street, Redfern; John H. Meyer, Short-street, Leichhardt; Wilson D. Asten, The American Tobacco Co., Ltd., 196 and 198, Castlereagh-street.

There are nine persons working in private dwellings and shops, manufacturing cigars and cigarettes, but possessing no machinery:—Charles A. Bell, 146, Botany Road, Alexandria; Ferdinand Bussmann, 35, Lower Campbell-street, Surry Hills; Benjamin Bullen, 68, Macquarie-street South, Surry Hills; Jacob Curotta, 31, Gipps-street, Surry Hills; Edward Craig, 187, Oxford-street, Sydney; Herman Gorbracht, 64, Botany Road, Alexandria; Arthur Hirschmann, 473, Kent-street, Sydney; Marie Simmons, Alhambra Buildings, Haymarket, Sydney; Moss Moss, 226, Pitt-street, Sydney.



1895.

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

THE GORE, ARTARMON, AND NICHOLS ESTATES, NORTH SHORE.  
(RETURN RESPECTING.)

*Ordered by the Legislative Assembly to be printed, 23 October, 1895.*

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 5th September, 1895, That there be laid upon the Table of this House a Return showing,—

- “(1.) The names of applicants and the dates of application to place certain lands, known as the Gore, Artarmon, and Nichols Estates, North Shore, under the Real Property Act.
- “(2.) The various areas applied for, and the present position of each application.
- “(3.) The areas of any portions resumed or reserved for public use, and for what purpose.
- “(4.) The areas of any portions forming part of public reserves or Crown lands.”

(*Mr. E. M. Clark.*)

(1 and 2.)				
Application.	Applicants.	Date of Application.	Area.	Particulars.
<i>Gore Estate.</i>				
5,141	George R. Whiting ... ..	13 Dec., 1880	a. r. p. 110 0 0	Certificate issued.
<i>Artarmon Estate.</i>				
7,018	Thomas Broughton... ..	4 July, 1887	204 1 26 $\frac{1}{2}$	"
<i>Nichols Estate.</i>				
3,875	Henry Thompson ... ..	23 Feb., 1875	1 2 13	"
5,173	Henry Austin ... ..	17 Mar., 1881	36 2 26	"
5,190	Christine Shadler ... ..	31 " 1881	6 0 31	"
5,464	J. St. Vincent Welch ... ..	1 Feb., 1882	1 3 30 $\frac{1}{2}$	"
5,537	John Stevenson ... ..	18 May, 1882	4 3 33	"
5,798	E. W. French ... ..	13 April, 1883	4 0 0	"
6,473	P. F. Richardson ... ..	18 Aug., 1885	1 0 8	Under requisition.
6,933	Thomas Parker ... ..	6 April, 1887	1 3 19	"
6,985	F. H. Blaxland ... ..	3 June, 1887	1 3 32 $\frac{1}{2}$	Certificate issued.
7,468	Sir J. G. L. Innes, F. B. Suttor, and C. E. B. Maybury.	19 Sept., 1888	112 1 39 $\frac{1}{2}$	"
7,842	T. T. Forsyth and J. M. Hancock...	21 " 1889	0 0 39	"
7,867	S. B. Levick ... ..	19 Oct., 1889	0 3 36 $\frac{1}{2}$	"
8,135	R. G. M'Roberts ... ..	19 July, 1890	4 1 10	Withdrawn.
8,227	J. St. Vincent Welch ... ..	25 Oct., 1890	5 2 10 $\frac{1}{2}$	Certificate issued.
8,240	The Anglo-Australian Investment, Finance, and Land Co. (Ld.)	5 Nov., 1890	9 3 16 $\frac{1}{2}$	"
8,509	Leonard Winter ... ..	15 Aug., 1891	3 2 20	"
9,364	S. L. Bensusan and J. T. Davenport	23 May, 1894	10 0 5 $\frac{1}{2}$	Under requisition.
9,454	Maria Newton ... ..	30 Aug., 1894	4 2 10	Certificate issued.

(3.) Two acres were measured for resumption of a site for a lock-up on 18th August, 1882, out of S. Reddish's 25 acres, part of Nichols Estate. About 23 acres were resumed for the Milson's Point-Hornsby Railway out of the Nichols Estate, and 3 roods 20 perches out of the Artarmon Estate. Also land for several public roads has been resumed as follows:—About 68 acres out of the Nichols Estate, about 1 acre out of the Artarmon Estate, and about 5 acres out of the Gore Estate. Two acres in the parish of Willoughby, county of Cumberland, forming part of J. Nichols' 200 acres, having frontages of 285 feet to Gordon Road and 417 feet 9 $\frac{1}{2}$  inches to Centennial Avenue, purchased in June and July, 1895, as a site for a new public school as Chatswood.

(4.) There is 100 feet reservation above high-water mark in J. D. Nichols' 320 acres; also there is a strip of Crown land containing 1 acre 0 roods and 33 perches between William Walker's 25 acres and T. Whittle's 30 acres and O. Ikin's 30 acres, which are parts of the Nichols Estate.

1895.

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

**THE GORE, ARTARMON, & NICHOLS ESTATES, NORTH SHORE.**  
(APPLICATIONS FOR CERTIFICATES OF TITLE.)

*Ordered by the Legislative Assembly to be printed, 20 November, 1895.*

[Laid upon the Table of this House in answer to Question No. 14, of 20th November, 1895.]

**Question.**

14. MR. HOWARTH to ask THE COLONIAL SECRETARY,—

- (1.) What are the names of all applicants for Certificates of Title to lands contained in the Gore, Artarmon, and Nichols Estates, North Shore?  
(2.) What are the dates of the applications, the various areas applied for, and the present position of each application?

**Answer.**

Applica- tion.	Applicants	Date of Application.	Area.	Particulars.
<b>GORE ESTATE.</b>				
5141	George E. Whiting .....	13 Dec., 1880	a. r. p. 110 0 0	Certificate issued.
<b>ARTARMON ESTATE.</b>				
7018	Thomas Broughton .....	4 July, 1887	204 1 26½	Certificate issued.
<b>NICHOLS ESTATE (No. 1).</b>				
8875	Henry Thompson .....	23 Feb., 1875	1 2 13	Certificate issued.
5173	Henry Austin .....	17 Mar., 1881	36 2 26	"
5190	Christine Shadler .....	31 " 1881	6 0 31	"
5464	J. St. Vincent Welch .....	1 Feb., 1882	1 3 30½	"
5537	John Stevenson .....	18 May, 1882	4 3 33	"
5798	E. W. French .....	13 April, 1883	4 0 0	"
6473	P. F. Richardson .....	18 Aug., 1885	1 0 8	Under requisition.
6933	Thomas Parker .....	6 April, 1887	1 3 19	"
6985	F. H. Blaxland .....	3 June, 1887	1 3 32½	Certificate issued.
7468	Sir J. G. L. Innes, F. B. Sutor, and C. F. B. Maybury .....	19 Sept., 1888	112 1 39½	"
7842	T. T. Forsyth and J. M. Hancock .....	21 " 1889	0 0 39	"
7867	S. B. Levick .....	19 Oct., 1889	0 3 36½	"
8135	R. G. M'Roberts .....	19 July, 1890	4 1 10	Withdrawn.
8227	J. St. Vincent Welch .....	25 Oct., 1890	5 2 10½	Certificate issued.
8240	The Anglo-Australian Investment Finance and Land Co. (Ld.) .....	5 Nov., 1890	9 3 16½	"
8509	Leonard Winter .....	15 Aug., 1891	3 2 20	"
9364	S. L. Bensusan and J. T. Davenport .....	23 May, 1894	10 0 5½	Under requisition.
9454	Maria Newton .....	30 Aug., 1894	4 2 10	Certificate issued.
<b>NICHOLS ESTATE (No. 2).</b>				
501	Thomas Jackson .....	6 June, 1864	5 3 36	Certificate issued.
3146	George S. Leathes and others .....	29 April, 1872	25 1 0	"
5131	Henry Austin .....	20 Dec., 1880	41 1 8	"
5141	George R. Whiting .....	13 " 1880	110 0 0	"
5771	Richard H. Harnett and another .....	19 Mar., 1883	23 1 6	"
5815	" " .....	14 May, 1883	49 2 22	"
5874	" " .....	27 July, 1883	25 0 37½	"
5875	" " .....	28 " 1883	322 2 9	"
5901	J. C. Ludovici .....	25 Aug., 1883	18 2 30	"
6250	William J. Fathers .....	23 Nov., 1884	13 1 3	"
7018	Thomas Broughton .....	4 July, 1887	204 1 26½	"
7285	S. D. Johnston .....	22 Mar., 1888	0 3 38½	"
7332	Anglo-Australian Investment Finance and Land Co. (Ld.) ..	17 May, 1888	40 0 12	"
7373	J. F. Loxton and C. C. Bullock .....	20 June, 1888	0 2 17½	"
7750	Richard H. Harnett, senior .....	20 " 1889	21 2 0½	"
7887	John F. Landers .....	4 Nov., 1889	25 2 0	"
7974	Henry Russell .....	17 Jan., 1890	2 2 36½	"
8254	James Montgomery .....	24 Nov., 1890	2 1 19	"
8273	Bart. Higgins .....	11 Dec., 1890	5 1 10	"
8802	Alfred Cook .....	13 Oct., 1892	3 2 37½	"
8933	Charlotte Carvosso .....	1 Dec., 1892	1 0 23½	"
9071	David Wilkins .....	10 May, 1893	4 0 6	"
9364	S. L. Bensusan and another .....	23 " 1894	10 0 5½	"
9696	English, Scottish, and Australian Bank .....	9 July, 1895	1 2 9½	"
9720	T. R. Fuller and W. G. James .....	9 Aug., 1895	23 3 24½	Advertising.



1895.

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

---

LIQUOR TRAFFIC.

(PETITION FROM THE NEW SOUTH WALES LOCAL OPTION LEAGUE, IN FAVOUR OF FULL LOCAL OPTION WITHOUT COMPENSATION.)

---

*Received by the Legislative Assembly, 20 August, 1895.*

---

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

The humble Petition of the New South Wales Local Option League and the representatives of the organisations affiliated therewith,—

SHOWETH,—

That the evils through intoxicants are manifold in this Colony, and include drunkenness, lunacy, pauperism, immorality, and crime.

Your Petitioners respectfully desire to bring before your Honorable House the facts that your House, on the 27th September, 1887, passed a resolution in favour of conceding the people absolute power as to the sale of liquor. A general election came, and your Petitioners believe there was an equally large majority in the new House in favour of the same principle. A Local Option Bill was twice read a first time. The next House was elected in 1891. It by resolution unanimously agreed "that the enormous evils, economic, social, and moral, everywhere resulting from the traffic in intoxicants, and the widespread demand for the right of veto, render it necessary that the subject should be dealt with at the earliest possible moment." An addition to this in favour of Local Option was passed by a majority of 57 to 12, but no redress was granted. The important side issue of compensation prevented progress.

There was another general election on 17th July, 1894. A motion was passed in the new House in favour of a Local Option Bill without compensation by a majority of 30 to 27. Apart from the question of compensation your Petitioners believe that there were over one hundred members of that House in favour of the great principle of permitting the people themselves to control or veto the liquor traffic, yet no redress was granted.

Your Petitioners therefore respectfully claim that in four successive Parliaments the question of full Local Option has been agreed to. They believe that scarcely any other principle in recent years has received so emphatic an endorsement by the people of this country through their representatives, yet no Bill has been passed.

Your Petitioners believe the proposal to pay compensation to licensees whose licenses may be vetoed to be unjust to the people and impracticable, and should not be entertained, nor should such a demand longer block the way when the will of the people on the main issue has been so definitely expressed.

Your Petitioners therefore humbly pray for the immediate passing of a law which shall contain the principle of full Local Option and without compensation.

And your Petitioners humbly pray, therefore, that your Honorable House will take the premises into favourable consideration, and grant such relief as may seem best to your Honorable House.

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

[Here follow 8 signatures.]



1895.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

**THE UNEMPLOYED.**

(PETITION FROM THE CHAIRMAN AND SECRETARY OF A MEETING OF, PRAYING THE HOUSE TO AMELIORATE THEIR CONDITION BY CAUSING WORKS OF A REPRODUCTIVE NATURE TO BE AT ONCE COMMENCED.)

*Received by the Legislative Assembly, 19 September, 1895.*

Petition from the Unemployed Workers and Citizens of Sydney, assembled at the Queen's Statue, this day, Thursday, 19th September, 1895.

To the Honorable the Legislative Assembly of New South Wales in Parliament assembled.

The humble Petition of the unemployed.—

SH EWETH :—

1. That great distress and misery exists in the Colony of New South Wales at the present time on account of large numbers of our citizens being unable to find remunerative employment.

2. That a careful estimate reveals the fact that over 15,000 able-bodied men in the city alone are entirely destitute.

3. That, basing our calculations on reliable information supplied, between 15,000 and 20,000 men in the country districts are in a like deplorable condition.

And your Petitioners respectfully pray your Honorable House to pass such legislation as will immediately ameliorate their condition by causing works of a reproductive nature to be at once commenced.

As in duty bound, your Petitioners will ever pray.

Signed on behalf of this meeting of 3,000 unemployed men,—

E. D. BLACK, Chairman.

J. WHEELER, Secretary.



1895.

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

---

**EIGHT HOURS' LABOUR.**

(PETITION FROM JOSEPH STORER AND ADAM COOK ON BEHALF OF RESIDENTS OF WALLSEND AND PLATTSBURG, IN FAVOUR OF.)

---

*Received by the Legislative Assembly, 1 October, 1895.*

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

The Petition of the Residents of Wallsend and Plattsburg, in Public Meeting assembled,—

HUMBLY SHOWETH:—

That the under-mentioned resolution was carried unanimously, and that the Mayors of Wallsend and Plattsburg were instructed to sign it on behalf of the residents.

“Whereas it is desirable for the general welfare of the community that the hours of daily labour should be such that workmen may have a reasonable time at their own disposal for recreation, mental culture, and the performance of social and civil duties. And whereas it would be conducive to this end to declare by law the proper duration of a day's labour to be eight hours.”

And your Petitioners therefore pray that you will be pleased to take the foregoing resolution into your favourable consideration.

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

JOSEPH STORER,  
Mayor of Wallsend.  
ADAM COOK,  
Mayor of Plattsburg.

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1895.

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

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**BIRDS' PROTECTION ACT.**

(PETITION FROM CERTAIN RESIDENTS OF ALBURY, PRAYING FOR AN AMENDMENT OF.)

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*Received by the Legislative Assembly, 30 October, 1895.*

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

The Petition of the undersigned Residents of Albury,—

We, the undersigned, respectfully ask that Act 54 Vic. may be amended so as to provide better protection to the "Game Birds," especially water-fowl, of this Colony, by limiting the weight of guns allowed to be used to 9 lb. for a double-barrelled gun, and 7 lb. for a single-barrelled gun, to be raised at arms length and fired from the shoulder, for the following reasons:—

1. That the gun allowed by the present Act is 6 ft. in length of barrel and 1 in. in bore, and is used up to 16 lb. in weight for a single-barrelled gun by duck shooters, who cripple and destroy countless numbers of ducks they fail to gather, as can be proved in a case of shooters on Henty Swamp last season, who, by using guns of the above description, wounded and left as many as fifty ducks after a few hours shooting.

2. That the present Act, providing protection and close season for game, is useless, if heavy guns of the above description are allowed to destroy the birds during the open season.

3. That, as the game of the Colony is fast diminishing, only the ordinary sporting guns should be permitted to be used.

And your Petitioners, therefore, pray that your Honorable House may be pleased to amend the Act so as to prevent a recurrence of the evils complained of.

[Here follow 180 Signatures.]

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1895.

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

DESTRUCTION BY FIRE OF THE STEAMER "RODNEY."

(CLAIM OF MESSRS. PERMEWAN, WRIGHT, & CO.)

*Ordered by the Legislative Assembly to be printed, 22 October, 1895.*

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 19th September, 1895, that there be laid upon the Table of this House,—

"Copies of all letters and other documents relating to the claim made by Messrs. Permewan, Wright, & Co. against the Government for compensation for the destruction of their steamer 'Rodney.'"

(*Mr. Chanter.*)

Messrs. Jones and Jones to The Chief Secretary.

Sir,

Sydney, 18 October, 1894.

We have the honor to address you, on behalf of Messrs. Permewan, Wright, & Co. (Limited), our clients, the owners of the late s.s. "Rodney," which was destroyed by fire by a body of riotous subjects of Her Majesty in this Colony, on the 26th day of August last.

The following is a copy of the log of the said steamer, as kept by Captain J. Dickson, her master; and we need not say regarding it that Captain Dickson is prepared to vouch for all the statements it contains, as well as to procure ample corroborative evidence, if required:—

Pooncarie, 27 August, 1894.

LOG OF STEAMER "RODNEY," CAPTAIN JAS. DICKSON.

HAVING telegraphed to you the facts *re* the burning and sinking of the "Rodney," I now furnish you with the particulars.

At Wentworth I met Cantwell, and from him I learned that the unionists would stop the "Rodney," and not allow us to land the free labourers at Tolarno if they possibly could; that the unionists at Polia woolshed had decided to place a barge across the river and other obstacles that their villainous minds might think of, so that they might get on board the steamers and take the men that we had on board for Tolarno. Pooncarie was also mentioned as a place that would give us a warm time as we passed, as they had done the "Trafalgar" and several other boats. Upon hearing this I decided to make everything as secure as I possibly could. After leaving Wentworth I started and boarded up all the windows all round the wheel-house, and the tarpaulins over the fore-hold were tied out tight and close to the deck, so that missiles of any kind could not be thrown on the chaff.

On Saturday morning I passed Pooncarie without any noise, the men on the bank merely giving us a "groan." Six o'clock at night we passed Moorara station, stopped at a wood-pile one mile above Moorara. While there taking in the wood I received a letter from Mr. Leitchfield, the man in charge of the shearing at Polia, warning me to be cautious, as the unionists were placing some obstruction to prevent our passing Polia woolshed until they got the men we had on board, and he thought I had better not attempt to pass the shed at night. He also mentioned that the manager of Cuthero had sent a messenger to Tolarno saying that we were close to, and that they had better send some police protection. Upon receiving this note I hurried the wood on board, and under cover of the dark night I steamed into a bend of the river that was surrounded by water, tying up on the opposite side of the river to Polia woolshed, which was distant from us four miles by land and about ten miles by water. Had all lights covered up, set a watch of four men. The two men who were in charge of the men being two of the four that kept watch. I instructed the engineer to have steam all night, so that we would be ready at a moment's notice. Had the steamer made fast with a slip line so that no delay would take place in letting go. One of the watchmen was stationed in the wheel-house, so that he could see all round. All went well until four o'clock on Sunday morning, when the man who happened to be on the fore-deck called out, "Here they are," and was about to let go the bow-line when one of the unionists (who had crept up close to the boat unobserved) said if he touched the rope he would knock his brains out. I at the same time had jumped into the wheel-house and sent the engines full speed astern, but, as the line was not let go the boat did not get away, and the unionists came over the bows like ants. At the same time they were coming on board over the stern out of two boats that they had drifted down to cross the men from the Polia side to where we lay. In all there seemed to be about eighty men, armed with firearms, clubs, and shear-blades. The first lot that came on board rushed up to the wheel-house. I first got a blow from

a waddy in front, then I got one or two from behind, then rushed upon by a lot and held secure, others securing the crew. A second gang at the same time was pitching the free labourers on to the bank, which was covered by water about knee-deep. Their things they threw into the water after them. While this was going on, a third gang was busy pillaging the steamer of everything movable, and getting everything ready to set the boat on fire, strewing kerosene, and any other inflammable matter that they could lay their hands upon over the chaff in the fore and after holds. When the free labourers were got off the boat, they counted them to make sure they had forty-five, which was the number on board. Then they called out for everyone to get off the boats, as they were going to set her on fire, and a moment or two after this the flames burst out in all directions, one of the deck hands having to jump into the river and swim ashore. I jumped into our boat which had just returned from the barge, where they had put one boat-load of the crew, including the stewardess, as the unionists prevented access to all implements, and the flames rose so quickly it was impossible to scuttle her. I got the barge away as quickly as possible, in case the unionists would attempt to set her on fire, or that she would be set on fire by the "Rodney" drifting down. We got the barge safely to Moorara Station with all the Wilcannia cargo on board, also flour, potatoes, and part of the chaff.

The "Rodney" burnt down to the waters edge, from stem to stern, then sank, being totally destroyed. She only drifted down one reach from where she was set on fire.

The men who committed the outrage were more or less disfigured with black and red raddle, so that they could not be recognised. I have learned from the police that the two barges were put across the river, and lashed together with wire, to prevent our getting past. After the steamer had burnt for some time, and just as the daylight began to dawn, the unionists cleared off towards Polia wool-shed, leaving the men that they had taken from the boat on a bit of an island partially under water. Two of our young men having been missed in the affray, we found them some hours afterwards in a swamp. Soon after all the men had arrived at the barge (then lying at Moorara) the Moorara union shearers came to them and got them to go into the union camp at Pooncarie, where they are at present waiting police protection to take them to Tolarno. To-day five policemen arrived from Tolarno, and I heard that there are twenty more on their way from Sydney. This will make about sixty policemen in this district, which is not more than is required, as it is estimated that there are between four and five hundred unionists in and around the Polia wool-shed.

We are now desired by our clients to bring under your notice the fact that, whilst in great Britain there are statutory provisions by which the owners of the vessel so riotously destroyed, could, as a matter of right, recover compensation from public funds: in this Colony no such statutory provision exist.

The Act George I, 2, sec. 5, provides that where persons riotously demolish any church, dwelling-house, factory, &c., the parties injured may recover the amount of their losses by action against the inhabitants of the hundred. This Act was repealed, and its provisions re-enacted by 7 and 8. George IV, c. 31, which substituted the High Constable and County Treasurer for the inhabitants of the hundred. (Note.—This Act, though prior to 9 George IV, could not be applied in New South Wales, as there is no such division as the hundred, and no such person as the High Constable; but it forms a useful precedent to show the recognition of a right by the British Parliament). So late as 1886, The Riot (Damages) Act (49 and 50 Vict., c. 38) was passed, providing for compensation to be paid (for losses sustained to buildings, machinery, &c., through riots) from the Police Rate.

We may remind you also that the Merchant Shipping Act (17 and 18 Vict., c. 104, sec. 477) provides that where a ship is stranded or in distress, on or near the shore of any "sea or tidal water, and such ship or cargo is plundered or damaged, compensation is to be made to the owners by the hundred (now the Police Rate) in England, and by the county or nearest town in Scotland or Ireland. These Acts, the one dating so far back as George I, and the other being so late as 1886, are, our clients venture to submit, grounded on one broad principle, viz., the recognition by the State of the right of a subject to have his property saved from harm, so far as his fellow subjects are concerned; to enjoy an immunity from injury to his possessions so far as it may be due to the riotous or illegal action (of a concerted nature) of other subjects under the same governing power. This right, we submit, goes to the very root of the State's existence, inasmuch as the immunity of a subject from injury to his lawfully acquired and lawfully enjoyed property is one of the primary justifications for State taxation.

The Parliament of Great Britain has, we submit, in the above Acts, clearly recognised this principle, and in throwing upon the general public or on a section of the general public, where the riotous conduct takes place, the obligation to compensate every British subject for such loss as may have occurred by reason of a concerted breach of the existing laws, it has recognised its justice.

We venture to conclude from these facts that the principle referred to is a just and equitable one, and seeing that by reason of the long continued good order and good conduct of the people of this community no such statutory provisions have become necessary, our clients have instructed us to appeal to the Government direct to do on behalf of the public, and as a matter of just concession that which in Great Britain our clients would be entitled as a matter of legal right.

Our clients readily admit that no such legal right is provided for in this Colony, but they rely upon the recognition by the Government of New South Wales of the broad principle adopted by the people of Great Britain as a ground for applying to you to grant them compensation for the loss of their property as hereinbefore described.

We may add that our clients will be prepared to submit the assessment of their damage to any tribunal which the Government may think fit to appoint.

Requesting that this matter may, if necessary, be brought under the notice of the Cabinet without delay,

We have, &c.,  
JONES AND JONES.

Submitted, 22/10/94. The Crown Solicitor to be asked whether Messrs. Permewan, Wright, & Co. have a legal claim.—J.N.B., 22/10/94. The Crown Solicitor.—C.W., P.U.S., B.C., 23/10/94.

### The Crown Solicitor to The Principal Under Secretary.

Sir,

Crown Solicitor's Office, Sydney, 29 October, 1894.

I have the honor to return your B.C., as per margin, covering Messrs. Jones and Jones letter to you of the 18th October, in which they bring under your notice the burning of the steamer "Rodney," by a body of riotous subjects of Her Majesty in this Colony on the 26th day of August last, and seek compensation at the hands of the Government for the damage their clients, Messrs. Permewan, Wright, & Co., had sustained by the action of such rioters.

I quite agree with Messrs. Jones and Jones in their admission that their clients have no legal right to such compensation, but I cannot coincide with their views as to the right to a claim against the Government based upon the ground that the general revenue of the Colony should be resorted to for compensation

compensation in a case of this kind. The reason why the "hundred" in England was held liable to pay compensation was upon the principle that the inhabitants of the "hundred" were mutually liable for the good behaviour of each of its members—they were co-sureties for one another, and were each answerable for the crimes committed in the district.

In the Act 7 and 8 George IV, c. 31, to which reference is made it is still the "hundred" that have to make compensation, the words are, after defining the offences, "that in every case the inhabitants of the hundred wapentake ward or other district in the nature of a hundred, by whatever name it shall be denominated, shall be liable to yield full compensation to the person damnified, &c."

The High Constable is merely a person against whom the process is to issue, and both he and the County Treasurer are to be reimbursed and indemnified "out of the moneys to be raised on the hundred."

And the same liability is imposed upon the hundred by the 17 and 18 Vic., c. 104, section 477, as mentioned in Messrs. Jones and Jones' letter.

Further, the Riot Damages Act, 49 and 50 Vic., chapter 38, to which Messrs. Jones and Jones refer, provides that the damage done is to be paid out of the Police Rate of the district in which the damage occurred, thus perpetuating the principle originally applied to the "hundred."

Instead of the "hundred" being proceeded against generally recourse has to be had to the Police Rates, the local Police Rates which are levied in different counties under the local police supervision, and by the authority of various Acts of the Imperial Parliament.

It is in this way that the Imperial Government has retained the right of persons suffering damage by riot to recover against the inhabitants of the localities in which the damage was done. There is nothing that I am aware of to substantiate the proposition that persons injured by riotous acts can claim compensation out of the Consolidated Revenue of the United Kingdom; on the contrary, the object and intention of the State in throwing the responsibility upon the "hundred" now superseded by the local Police Rates, appears to be to make the inhabitants alive to the necessity of uniting to preserve the peace in the various police districts, and if their sympathy with crime results in damage to property then the district has to pay for it.

It is true that the liability of the "hundred" has not been, and cannot be, incorporated with, adopted by, or engrafted upon our laws, but I venture very respectfully to remark that so long as our Government does its best to prevent crime, and prosecute offenders when crime has been committed, it fulfils its duty, and that to recognise any such right as the claim contended for by the owners of the "Rodney" would be to establish a principle of which no one could foretell the end, or calculate the cost.

I have, &c.,

GEO. COLQUHOUN,  
Crown Solicitor.

Submitted, 29/11/94.

#### Messrs. Jones and Jones to The Chief Secretary.

Sir,

Lincoln's Inn Chambers, 38, Elizabeth-street, Sydney, 8 November, 1894.

Referring to our letter of the 18th ultimo, addressed to you on behalf of our clients, Messrs. Permewan, Wright, & Co., owners of the late s.s. "Rodney," in which we did ourselves the honor to bring under your notice the facts of that vessel's destruction, as also the state of the English law, by which the owners of property injured or destroyed by persons riotously and tumultuously assembled together are fully compensated for such injury out of the Police funds, we now beg leave to supplement that communication by bringing under your notice the finding of the inquisition with reference to the destruction of that vessel.

That finding was to the effect that "The said steamer at the place aforesaid (Moorara) was on the said morning (26th August, 1894) feloniously and wilfully set on fire by some persons unknown."

We desire to draw your attention to this finding as confirming the statements contained in the log of the master of the steamer, and set forth in our former letter.

In view of this further confirmation of our statements, we shall be glad if you will give our representations your early consideration.

We have, &c.,

JONES AND JONES.

Submitted, 15/11/94.

#### The Principal Under Secretary to Messrs. Jones and Jones.

Gentlemen,

Chief Secretary's Office, Sydney, 19 November, 1894.

In reference to your letters of the 18th ultimo and 8th instant, applying on behalf of your clients, Messrs. Permewan, Wright, & Co., for compensation from the Government on account of the destruction by fire by a body of riotous subjects of the s.s. "Rodney," on the 26th August last, I am directed by the Chief Secretary to transmit herewith for your information a copy of an opinion obtained from the Crown Solicitor on the subject.

I have, &c.,

CRITCHETT WALKER,  
Principal Under Secretary.

Dated 29th  
October, 1894.

#### The Principal Under Secretary to J. M. Chanter, Esq., M.P.

Sir,

Chief Secretary's Office, Sydney, 16 November, 1894.

Adverting to your personal inquiries relative to a claim of Messrs. Permewan, Wright, & Co., for compensation on account of the burning of the steamer "Rodney" by a number of rioters on the 26th August last, I am directed by the Chief Secretary to transmit herewith for your information a copy of an opinion obtained from the Crown Solicitor on the subject.

I have, &c.,

CRITCHETT WALKER,  
Principal Under Secretary.

Dated, 29th  
Oct., 1894.

Messrs.

## Messrs. Jones and Jones to The Chief Secretary.

Sir,

38, Elizabeth-street, Sydney, 9 January, 1895.

We have the honor to acknowledge your letter of November 19, accompanying the opinion of the Crown Solicitor on the case laid before you by our firm in reference to the destruction of the s.s. "Rodney," the property of our clients, Messrs. Permewan, Wright, & Co. (Limited).

You have in your own letter, to which that opinion is attached, given expression to no views concerning the merits of our clients' claim, and we therefore take the liberty of drawing your attention to the fact that the opinion of the Crown Solicitor freely admits the correctness of the whole of our representations as to the state of the law in England and as to the principles which underlie that law as applied in similar cases in that part of the British dominions.

The only proposition in our letter to which the Crown Solicitor withholds his assent is that in which we contend that the principle of compensation applied in England should in all fairness be applied in this Colony.

The Crown Solicitor himself says, in reference to the Statute Law of England bearing upon the question, "The reason why the hundred in England was held liable to pay compensation was upon the principle that the inhabitants of the hundred were mutually liable for the good behaviour of each of its members—they were co-sureties for one another, and were answerable for the crimes committed in the district."

Referring to the later English Acts, to which we drew attention in our original letter, the Crown Solicitor recognises the substitution of the Police Rates as the fund out of which the citizen is entitled to be compensated, and points out that such rates are levied in the different counties, but by the authority of various Acts of Parliament.

We cannot refrain from drawing your attention to the Crown Solicitor's further statement that "It is in this way that the Imperial Government has retained the right of persons suffering damages by riot to recover against the inhabitants of the locality in which the damage was done." We are too glad to adopt the reasoning of the Crown Solicitor when he says that "the object and intention of the State in throwing the responsibility upon the local Police Rates appear to be to make the inhabitants alive to the necessity of uniting to preserve the peace in the various police districts, and if their sympathy with crime results in damage to property then the district has to pay for it."

In New South Wales, partly on account of the long-delayed introduction of a system of local government and partly on account of the immense area and sparse population of the outlying portions of the Colony, the pioneering spirits among our fellow colonists have had to look to the central Government for the securities of their persons and their property. Although far removed from the areas in which the bulk of the State expenditure for such purpose is concentrated, they have contributed, and continue to contribute, equally to the national taxation, out of which police protection is provided.

We venture to submit to you that if, as the Crown Solicitor admits, the tax-payers of an English county are liable to pay compensation on the principle that the inhabitants "were mutually liable for the good behaviour of each of its members," and that they are "co-sureties for one another," and are "answerable for the crimes committed in the district" if, as the Crown Solicitor further admits, "the Imperial Government has thus retained the right of persons suffering damage by riot to recover against the inhabitants of the locality in which the damage was done," there is no just reason why Messrs. Permewan, Wright, & Co., whose property has been destroyed in this Colony, should have different treatment meted out to them merely because, for the convenience of the community as a whole, the administration of the police is dealt with by the central executive instead of, as in thickly populated communities, from different local centres.

The Crown Solicitor expresses the opinion that "so long as Government does its best to prevent crime and prosecute offenders it fulfils its duty," but we venture to say that if the Government recognises a duty in those who locally undertake matters of police to compensate those whose property has been destroyed, and yet, in the exercise of its judgment, thinks fit to assume sole and complete jurisdiction in such matters over the whole community, it cannot escape the obligation that is thus admitted to be coupled with the administration.

The Crown Solicitor expresses the further opinion that "to recognise any such right as the claim contended for would be to establish a principle of which no one could foretell the end or calculate the cost." In answer to this, we would point out that the principle of compensation continues to be recognised in Great Britain, notwithstanding the applicability of such reasoning.

In view of these considerations, we have again to urge upon you the justice of our clients' claim to be reasonably compensated for the destruction of their property in this Colony.

We have, &amp;c.,

JONES AND JONES.

The Inspector-General of Police.—C.W., B.C., 14/1/95.

There appears to me to be nothing more to be said on this subject. If such a claim were to be admitted—as the Crown Solicitor observes—a principle would be established of which no one could foretell the end or calculate the cost.—EDM. FOSBERY, I.-G.P., B.C., 14/1/95. The Principal Under Secretary. Inform.—18/1/95.

## The Principal Under Secretary to Messrs. Jones and Jones.

Gentlemen.

Chief Secretary's Office, Sydney, 21 January, 1895.

With reference to your letter of the 9th instant, on the subject of the application of Messrs. Permewan, Wright, & Co. (Limited), for compensation from the Government on account of the destruction of the steamer "Rodney" by a body of riotous subjects, I am directed by the Chief Secretary to inform you that the recognition of this claim would establish a principle of which no one could foretell the end, or calculate the cost.

I have, &amp;c.,

CRITCHETT WALKER,

Principal Under Secretary.

The

The Police Magistrate, Wentworth, to The Under Secretary of Justice.

Sir,

Court-house, Wentworth, 8 July, 1895.

I enclose herewith a letter received by me from Permewan, Wright, & Co. (Limited), in reference to burning of steamer "Rodney." The facts are correctly stated by Captain Dickson. I did not communicate direct with the Police at Pooncarie, but saw the local Sergeant of Police, and instructed him to do so, and to take all necessary steps to prevent contemplated attack on boat.

As I understand that claim against the Government for compensation is being made by Permewan, Wright, & Co., I have deemed it advisable to forward letter to you for instructions before communicating with Permewan, Wright, & Co. Please advise me by wire, so that I may reply to their letter.

I have, &c.,

F. H. WILKINSON,

Police Magistrate.

Urgent.—The Principal Under Secretary in connection with previous papers.—T.E.M'N. (for U.S.), B.C., 12/7/95. Refer to Police.—C.W., B.C., 19/7/95. The Inspector-General of Police. I can see no reason why Mr. Wilkinson should not reply.—EDM. FOSBERY, 20/7/95. The Principal Under Secretary. Return to Department of Justice.—C.W., B.C., 2/8/95. The Under Secretary of Justice. Submitted.—T.E.M'N. (for U.S.), 6/8/95. So inform.—A.J.G., 6/8/95. P.M., Wentworth, 7/8/95. Papers returned herewith to the Principal Under Secretary.—T.E.M'N. (for U.S.), B.C., 7/8/95.

[Enclosure.]

Head Office, 541, Bourke-street, Melbourne, 2 July, 1895.

Dear Sir,

With reference to the destruction of the Company's steamer "Rodney," on 26th August last year, the Captain (Dickson) states that: "I met the Police Magistrate in Wentworth, also the officer of Police, and told them the treatment received by Captain Cantwell, of the steamer 'Trafalgar' at the hands of mobs of men assembled on the river banks, and that you promised him (Dickson) to communicate with the Police Officer at Pooncarie, and tell him to keep a look out for the steamer 'Rodney.'"

I would be glad to hear from you if such was the case, to bear out Captain Dickson's statement.

Yours, &c.,

PERMEWAN, WRIGHT & CO. (LIMITED),

H. E. SMITH,

Secretary.

The Police Magistrate, Wentworth, N.S.W.

[6d.]

Sydney: Charles Potter, Government Printer.—1895.



1895.

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

DESTRUCTION BY FIRE OF THE STEAMER "RODNEY."  
(FURTHER PAPERS RESPECTING)

*Ordered by the Legislative Assembly to be printed, 13 November, 1895.*

FURTHER RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 19th September, 1895, That there be laid upon the Table of this House,—

“Copies of all letters and other documents relating to the claim made by Messrs. Permewan, Wright, & Co. against the Government for compensation for the destruction of their steamer ‘Rodney.’”

(*Mr. Chanter.*)

The Manager of the Union Bank of Australia (Limited), to The Principal Under Secretary.

Burning of the “Rodney.”

Sir,

The Union Bank of Australia (Limited), Sydney, 15 November, 1894.

I beg to enclose for your perusal copy of a letter received from Mr. S. H. Carse, the Manager of Tolarno Station, to which I would ask your attention.

It is unnecessary to point out to you that should this outrage remain unpunished, great encouragement will be given to the many bad characters in the district, and general lawlessness may prevail which will cost the Government more money to suppress than the measures recommended by Mr. Carse.

I have, &c.,

WILLIAM LEES,  
Manager.

Copy of the opinion of the Crown Solicitor may be sent to Mr. Chanter, M.P., and the Manager of the Union Bank.—J.N.B., 16/11/94.

[*Enclosure.*]

The Manager, Union Bank of Australia (Limited).

The burning of the “Rodney.”

Dear Sir,

Mundi Mundi, 2 November, 1894.

I beg to draw your attention to the scandalous miscarriage of justice that has occurred in this matter, with a view to your using influence to rouse the Sydney authorities to renewed vigour in endeavouring to bring the perpetrators of the outrage to justice, and to this end offer a much larger reward to educe evidence that will not otherwise be obtainable. The reward at present offered is £100 by the N.S.W. Government, supplemented by £100 from Permewan, Wright, & Co., the owners of the “Rodney.” You are aware of the deliberate and barefaced nature of the outrage. An organised defiance of the law, and of the measures taken by the law to vindicate itself, viz., the offer of a paltry reward and the sending down of a body of city police (foot constables) and two city detectives. A fine body of men, no doubt, and efficient at their special work, the detectives being particularly good men, but utterly unsuited to the work required, not being bushmen or horsemen, and unfamiliar with the ways of the men they had to deal with. The Darling whalers and the loafers and vagabonds on the river, a class becoming of late more

numerous

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numerous and dangerous, through being joined by larrikins and criminals from the large towns, and who if unpunished for the "Rodney" offence will become much more aggressive and dangerous. They are now crowing over their success and immunity from punishment. It appears to me that—

1. The reward offered is too small.
2. That the evidence required for conviction is available in abundance, if properly sought for and educed.
3. The men first entrusted with the case were unsuitable, and the local—now commissioned—police officers (Sergeant Bear and Senior-constable Nolan) with the assistance of a few more mounted constables, would have been at first and still would be more likely to bring the case to a successful issue especially with a large reward to offer for incriminating evidence.

The boat when attacked contained forty-seven shearers, &c., for Tolarno (including Beattie sent in charge from Melbourne by the P.U., and Jenkins sent down from Tolarno), besides the captain and crew. The men who attacked the boat numbered twenty-eight, and there were a number of others on the bank of the river. The whole of the attacking party were not disguised (probably not more than six, if so many, had their faces raddled or blackened). When kerosene was poured in quantity over the vessel from stern to stern and set alight there was abundant light for identification, and plenty of men now working at Tolarno could recognise men concerned in the attack, but are restrained by various considerations, as, for instance, the loss of the wages during shearing time for no adequate compensation (the off chance of a share in £200 is very little among so many). Then there is a personal risk that would be incurred by any one giving evidence.

The whole attack was planned long before execution. Threats were freely used to any one impeding them by an organised committee. Captain Grundy, of Tolarno, with a large iron barge, was lying at Polia. It was proposed to swing this barge across the River when the "Rodney" came up, and pull up a wire rope behind her so as to have her in a trap. Grundy heard of this, and purposed getting up steam and towing his barge away. He was threatened that if he attempted to move they would sink his boat. Various threats were levelled at Litchfield, the Polia shed owner, for taking a message to the "Rodney," also against many others. All these things are common talk, and it should be possible to elicit something from so many; anyway, up to date no intelligent attempt has been made to do so. The police and detectives were directed to make immediate arrests, and a wild rush was made and several men arrested, and though it is certain that most of them were concerned, the evidence brought forward was too meagre, especially for a Broken Hill jury, and throughout there was too much hurry and bluster and carelessness. Since their acquittal two of the men, fancying themselves secure, admitted their participation and gloried in it. The detectives were aware that they were proceeding too precipitately, but said their instructions allowed them no option. The best man on the river to follow up this case (this without derogation to any of his superior officers) is Sergeant Bear, of Menindie, a capable police officer, but whose special fitness in this matter is that he so well knows the men concerned and all the floating river population, and is besides so well liked that he would probably get more information where another would fail. I believe it is intended to move him to Wentworth. It is particularly desirable that he should be left in the Menindie neighbourhood, including Pooncarie, until at least all has been done that can be done in this "Rodney" case.

The reward offered should be £1,000, and in such a glaring case the New South Wales Government should make no difficulty in offering it themselves; but in case of refusal, Permewan, Wright, & Co. might be induced to increase their offer to £250, and get the Government to do likewise; or if Permewan, Wright, and Co. won't spring any, the Pastoral Association should get them to do so by guaranteeing the extra £150 if required. And, as a last resort, if these suggestions fail, the money (£150) can be raised on the river, but I should think be offered as a reward through Permewan, Wright, & Co. Action should be promptly taken, as shortly a number of shearers, whose evidence is now available, will be spread all over the country.

I am, &c.,

SAML. H. CARSE.

### The Principal Under Secretary to The Manager of the Union Bank of Australia (Limited).

Sir,

Chief Secretary's Office, Sydney, 17 November, 1894.

In acknowledging the receipt of your letter of the 15th instant, covering a copy of a communication from Mr. Samuel H. Carse, of Mundi Mundi, relative to the burning of the steamer "Rodney," by a number of rioters on the 26th August last, I am directed by the Chief Secretary to forward herewith for your information, a copy of an opinion that has been obtained from the Crown Solicitor on the subject.

Dated 20th  
October, 1894.

I have, &c.,

CRITCHETT WALKER,

Principal Under Secretary.

### The Manager, Union Bank of Australia (Limited), to The Principal Under Secretary.

Sir,

The Union Bank of Australia (Limited), Sydney, 19 November, 1894.

While thanking you for your letter of the 17th instant, covering copy of opinion from the Crown Solicitor, I beg to say that the purport of my communication appears to have been misunderstood.

Mr. Carse in no way wished to support the claim of the owners of the "Rodney" for compensation. He is not connected with them in any way, and I doubt if he knew that any such claim had been made. His sole object was to point out to the Government that a great crime remained unpunished, and that thereby encouragement was given to lawless characters to repeat such offences. As a resident in the district, and manager of Tolarno Station, he was afraid that more crime would be the result of such a failure of justice, and he pointed out how in his opinion the measures taken by the Government were not effective, and suggested remedies.

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The Crown Solicitor concludes his remarks by saying that the Government fulfils its duty when it does its best to prevent crime and prosecute offenders, and the question raised by Mr. Carse is whether the best has been done.

I hope the Government will see fit to take this matter into their careful consideration, and if possible, devise such measures to reach the offenders as will prevent a repetition of the offence.

I have, &c.,

WILLIAM LEES,

Manager.

Submitted, 26/11/94. Refer to the Inspector-General of Police, and ask whether, in view of what has been already done, he can suggest further action.—J.N.B., 28/11/94. The Inspector-General of Police.—C.W., P.U.S., B.C., 28/11/94.

### Memorandum by The Inspector-General of Police to The Principal Under Secretary.

Police Department, Inspector-General's Office, Sydney, 7 December, 1894.

MR. CARSE'S statements are unreasonable, and it will be seen by the police reports enclosed they are not in accordance with facts. The Chief Secretary is aware that no effort was spared by the police to bring the "Rodney" offenders to justice. Although I was in favour of a higher reward being offered, I fear a large increase in the amount at the present time would be injudicious, as it would weaken the value of any evidence which might be tendered. The question is one for the Chief Secretary to decide.

EDMUND FOSBERY,

Inspector-General of Police.

Submitted, 10/12/94. The matter may be left in the hands of the Inspector-General of Police.—J.N.B., 12/12/94. The Inspector-General of Police.—C.W., P.U.S., B.C., 12/12/94. Noted and returned.—EDM. FOSBERY, 13/12/94. The Principal Under Secretary.

#### [Enclosures.]

Re Mr. Carse's attached communication *re* scandalous miscarriage of justice *re* "Rodney" case, paltry reward offered for arrest of offenders, sending body city police and two detectives who were unsuitable for work of detection, &c.

Police Department, Superintendent's Office, South Western District,

Deniliquin, 3 December, 1894.

Sir,

With reference to the above matter, I do myself the honor to report for your information, that I am inclined to think Mr. Carse did not give the matter due consideration, or he would not have made such broad assertions regarding the action of the police in trying to secure a conviction against the offenders who committed such a daring outrage.

I agree with him that it would have been better if a more substantial reward was offered in first instance, but even if there had, I doubt very much if the result would have been different, and I also agree with him that Sergeant Bear and Senior-constable Nolan are two excellent officers for bush work. Sergeant Bear has been stationed at Menindie for some years, where he gave entire satisfaction, and I am sure his knowledge of that part of the country and its residents was most useful to him in obtaining information in connection with the "Rodney" outrage.

When the circumstances in connection with "Rodney" were first wired to me from Pooncarie I immediately communicated all particulars to Wentworth, Tolarno, Menindie, and Wilcannia, with strict instructions to the officer-in-charge at each place to use every effort to have the offenders, or some of them, arrested as soon as possible.

Shortly after Sub-Inspector Johnson, an old, trained bush officer, was despatched to Pooncarie, where he was assisted by Detectives Roche and Brown, with the local and some of the Sydney police; and Inspector Cotter, with a long experience of bush and city work, was at Tolarno with a body of Sydney police.

When this outrage occurred Sergeant Bear was in charge of a body of men at Weinteriga, and, knowing how useful his services would be in the vicinity of Pooncarie, I directed that he should be relieved at once by Senior-sergeant Broderick, and despatched to Pooncarie to assist in the detection of the "Rodney" offenders.

On 26th August the steamer was burned, and on 4th September the first offender for being concerned in the outrage was arrested by Detective Roche; consequently I fail to see on what ground Mr. Carse bases his assumption that a wild rush was made by the police to make an arrest on the directions or orders received from an incompetent officer, if he only happened to be aware that the officer who was directing at Deniliquin was as conversant and as capable to handle matters in connection with the detection of crime as any station manager in Riverina was to look after the wants of his sheep, he would doubtless have arrived at a different conclusion.

Every person who has any acquaintance with cases of arson and murder will know how difficult it is to obtain evidence that the offender was seen to lay a train of fire or strike the fatal blow, consequently evidence of a circumstantial character has in almost every instance to be relied on.

Sub-Inspector Johnson, Detectives Roche and Brown, Sergeant Bear, and others, arrested ten men on a charge of setting fire to the "Rodney," and I think they adduced a chain of circumstances against them that would satisfy any unbiassed mind that they were abettors in the outrage, and since then another man has been arrested and committed on somewhat similar evidence.

It is said there were over 100 men in all engaged in boarding the "Rodney" on the night in question, and it was very evident from their language and threats, that they were all there for one common object, that being the case, they would all as a matter of course be principals. Therefore, I think a very strong case was made out against the persons who were arrested, and instead of the police being condemned for scandalous mismanagement, they should, in my opinion, be commended for their prompt action under such great difficulties.

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There is no one regrets more than I do that such a glaring outrage should go unpunished, but I think no reasonable person would expect the police to do impossibilities. I have not very much hope now that a large reward would assist us at this stage; however, the matter is too important to be allowed to rest without exhausting every possible means. In the meantime the police at Menindie and Pooncarie are directed to keep the matter under strict observation.

Sergeant Bear is now stationed at Wentworth, and Pooncarie is one of the stations in his sub-district, therefore he has every opportunity of eliciting any information on the subject, and Senior-constable Nolan is at Menindie, where he will have similar facilities.

I have, &c.,  
N. LARKINS,  
Superintendent.

The Inspector-General of Police.

Letter from Mr. Carse *re* Burning of steamer "Rodney."

6 December, 1894.

DETECTIVES Roche and Brown report for the information of the Inspector-General of Police, that they are of opinion that the reward of £200 offered in this case was too small to induce any person living in the Darling River district to give evidence against the perpetrators of this outrage.

The detectives made every possible inquiry and interviewed numerous persons residing near the scene of the outrage, who the detectives believed could give material evidence against the offenders. Some of these persons gave important information, but declined on any account to give evidence against the accused, and if put in the witness-box would deny on oath what they told the detectives and local police.

The detectives interviewed Captain Dixon, Mr. Beattie, Mr. Jenkins, the crew and all the free labourers who were on board the "Rodney" at the time of the outrage, and each of these persons, who stated they could identify any of the offenders, were taken through the Union Camp at Tolarno, the various shearing sheds on the river, and also to the Police Court to see the men in custody, as the detectives had reliable information that the perpetrators of this outrage had come from Tolarno Camp and Palio woolshed.

Mr. Carse told the detectives to inform the free labourers employed at Tolarno that if any of them could give evidence, they would suffer no loss of pay during their absence from the shed at Court, as their tallies would be made good by him at the conclusion of the shearing. The detectives accordingly informed all the free labourers what Mr. Carse had said.

All the available evidence that could possibly be obtained was adduced at the trial, and the detectives are of opinion had the trial taken place in Sydney most of the offenders arrested would have been convicted.

The detectives and local police made every effort to arrest Edward Flamin, *alias* the Flamer, and a man called Gent, who were no doubt the leaders in this outrage, and who left the district previous to the arrival of the detectives.

Detective Roche, accompanied by Sergeant Bear and three local mounted constables, traced Gent towards Mossgiel, and rode over 400 miles endeavouring to effect his arrest. If these two men could be arrested, even now, a strong case could be made out against them, as they would be identified by Litchfield, Jenkins, Constable White, and some of the free labourers.

The detectives never told Mr. Carse on any occasion that they had instructions to make immediate arrests, as it is needless to state they would not arrest any person on such a serious charge without having sufficient evidence available to justify their action.

The detectives on leaving Broken Hill at the conclusion of the trial saw Mr. Carse, who thanked them for their exertions, and said, "You have done your best, worked very hard, had bad luck, and I think you ought to have obtained a conviction against the majority of the men acquitted."

With reference to Mr. Carse's statement that ample evidence can still be obtained about Tolarno to lead to the arrest and conviction of the offenders, the detectives are of opinion that it is very doubtful if such is the case, even should a reward of a £1,000 be offered, as the persons who circulate reports concerning the outrage deny when questioned all they had previously said on the subject.

JOHN ROCHE,  
GEORGE BROWN,  
Detectives.