

(No. 37.)



1887.

PARLIAMENT OF TASMANIA.

OVERFLOW OF SEWAGE UPON MR. CASTRAY'S
PROPERTY IN BYRON-STREET, HOBART :

INSPECTOR'S REPORT.

Presented to both Houses of Parliament by His Excellency's Command.



*REPORT upon the Overflow of Sewage upon MR. CASTRAY'S Property in
Byron-street, Hobart.*

To the President and Members of the Central Board of Health.

MR. PRESIDENT AND GENTLEMEN :

IN accordance with your instructions I have visited the property of Mr. L. R. Castray, in Byron-street, Hobart, for the purpose of examining into the nature and causes of the nuisance he complains of in his letter to you of the 19th instant; and of suggesting the best way of removing it and preventing its recurrence; and I have the honour to report to you the result of my inspection.

2. Mr. Castray's house is situated in a garden on the south-west side of Byron-street. A little valley, opening laterally from that of the Wellington Rivulet, runs up as far as Fitzroy Place and Molle-street, and forms a small natural drainage basin. Byron-street has been taken on an embankment down the centre of this valley, and the embankment has divided the natural drainage-basin into two parts—a smaller one on the north-east, or cemetery side, which has only one dwelling-house on it; and a larger one on the south-west, or Mr. Castray's side, which has many. It is probable that the lowest part of the valley was occupied by boulders and gravel, forming a natural rubble drain that took off all the water, even in wet weather, without much being shown on the surface. When the Byron-street embankment was formed, no special provision seems to have been made for this natural drainage, which, no doubt, continued to flow along the lowest part of the ground, close to the retaining wall of the south-west side of the embankment, through Mr. Castray's and Mr. M'Ardell's properties. This would naturally take it upon the low-lying properties abutting upon Montpellier Road, unless means were taken to divert it. Such means seem to have been taken, for there are traces yet in existence of a catch-water drain along the line above Mr. Farmilo's, through Mr. Reynolds', and above Mrs. Degraives', properties. But this was not altogether effectual. All this will be better understood by a reference to the accompanying plan and to the contour lines of levels upon it.

3. This was the condition of things until recently; and Mr. Castray seems to have got rid of his drainage by these natural means to his satisfaction. But on a portion of the natural drainage basin lying above his property and sloping towards it, a "pudding-bag" street called Turner-street was made, and the houses abutting upon it turned their sewage into its gutters, until they became so offensive that the Corporation of Hobart had to take some remedial measures. Unfortunately these remedial measures seem by their character to have had for their main object the removal of the nuisance from Turner-street as cheaply as possible, without much thought in regard to anything else—a very false economy. A drain of four-inch iron pipes was accordingly laid from Turner-street, at the point marked A., to the low part of the valley marked B., close to Mr. Simson's house, but in Mr. Castray's garden; whence it was expected that the natural rubble drain before mentioned would take charge of the sewage and deliver it, no one knew and nobody seemed to care, where.

4. As long as the natural rubble drain remained open it seems to have taken off the more liquid portion of the sewage from Turner-street, but the more solid part quickly filled up the interstices of the stones at the end of the pipes, and then choked the pipes themselves. They had to be taken up and cleaned, and, to prevent a recurrence of the choking, a catch-pit cesspool was made, where shown on the plan, at the top of Mr. Bird's garden. As long as this cesspool is properly looked after it may serve its immediate purpose of preventing the choking of the pipes; but it is itself a great nuisance.

5. Up to this point the effect of the Corporation work is this: the stagnation of all the sewage of Turner-street at the end of it has been prevented; but there is a gutter all along it, and two cross ones that are partly ill-paved and partly not paved at all, and that are a continual nuisance to the residents. The sewage of Turner-street, after running and stinking along these gutters, enters the pipe to deposit its more solid part in the cesspool made in Mr. Bird's garden. This cesspool is simply covered with a few boards. Mr. Bird, who has nothing to do with producing this sewage, has thus to have part of his garden spoiled, for the stench from the cesspool is always bad and sometimes unbearable; and has to endure the horrible nuisance of the periodical cleansing of it and the carrying of its contents by his house to the street. From the cesspool the liquid portion of the sewage runs to the open outfall near Mr. Simson's and Mr. Castray's houses, and thus injures others who have nothing to do with it.

6. All this is bad enough as an example of a shiftless attempt to get rid of a nuisance by trying to cheaply transfer it from its producers to their unoffending neighbours. But it has lately been aggravated by further thoughtlessness. Forgetting that the escape of sewage from the point B., at which it is delivered by the pipe, was conditional upon the keeping open of the natural drain, which, as explained in Sect. 2, runs along the low-lying parts of Mr. Castray's and Mr. M'Ardell's properties, the Corporation, for the purpose of strengthening the retaining wall of the street embankment along Mr. M'Ardell's frontage, have, with earth from the Harrington-street deviation, filled up his garden to about the level of the street, and thus effectually closed the natural outlet and dammed up the sewage. It accordingly lies in the only place it can get to—the lower part of Mr. Castray's garden at the point marked C. on the plan, and has there made a little pestilential pool. The alteration made in Mr. M'Ardell's garden by this filling in will be seen by noticing the contour lines passing through it as marked on the plan, the original levels being shown by the broken lines, and the change made by the dotted ones.

7. The only proper and effectual remedy for this is to construct a sufficient sewer from Turner-street to the natural outfall in the Wellington Rivulet, in such wise as that when the sewerage of the whole city is undertaken, the main sewer for this part, which must run along the valley of the rivulet, will intercept this drain, and carry off its contents to be dealt with as may be determined, and so prevent the pollution of the stream. Consequently the construction of this sewer will not be a merely temporary expedient, the money expended upon which will hereafter be found to have been wasted, but it will form part of any general system that may hereafter be decided upon. For, as before described in section 2, the conformation of the ground is such, that this little valley is a natural basin that may be completely drained by itself. As part of it must be drained to get rid of the nuisance upon Mr. Castray's property, the whole of it may as well be, to get rid of the equally dangerous, if not so palpable, nuisances that exist at Mr. Reynolds', Mr. Ansell's, and other houses on the Montpellier Road, and at all the houses in Frances and Turner-streets.

8. The accompanying plan shows how this may be done. A 15-inch barrel sewer should be constructed along Montpellier Road, with an outfall into the Wellington Rivulet about three chains below the bridge, and with a small double tank to keep the solid part of the sewage out of the stream. This tank would be inoffensive if it were properly constructed and treated in emptying—certainly not so offensive as the one now in Mr. Bird's garden. The 15-inch sewer would receive a 9-inch one coming from Frances-street, various drains from the houses in Montpellier Road, and a 12-inch sewer from Byron-street. This 12-inch sewer would run to opposite Mr. M'Ardell's property, where it would receive a 9-inch sewer coming from Turner-street through Mr. Bird's garden and down Byron-street, and another 9-inch sewer across Mr. M'Ardell's garden from Brina Place. The whole of these sewers would have good falls, and would be amply large enough to take the drainage from the houses. Unfortunately, they have to run through some private property, but that cannot now be avoided without entailing a great outlay. But in laying out the house drains every property has been kept separate, so that if stoppages occur through negligence or improper use, the inconveniences arising therefrom shall only be felt by the originators of the nuisance. The existing street gullies and drains therefrom would be reserved for street surface drainage.

9. The cost of the public sewers described above, and shewn by full black lines on the plan, will be £503 7s., as set forth in detail in the Appendix to this Report. The house drains are partly shewn by dotted black lines, and, if it be thought desirable, they might be done by the Corporation in order to secure the important matter of having them truly laid and well constructed. It will be seen by the Appendix that they will cost a further sum of £170 9s. Then, if due advantage were taken of the drains thus laid, and all the houses fitted with water-closets, an additional outlay, as shewn by the Appendix, of £123 4s., would have to be made; and thus all the nuisance and expense of emptying, cleansing, and providing earth for pail-closets would be avoided. The water-closets referred to above would be wholesome, plainly fitted ones, with waste-preventing cisterns, but proprietors might spend any further amount beyond the estimate that they saw fit to do.

10. If thought desirable, this little drainage basin might be extended, at no greater proportional cost, so as to include, temporarily at least, Fitzroy Place and the small part of Davey and Molle-

streets that at present are sewered into the surface drain in Byron-street. Eventually this additional district should be drained by Albuera-street, as shewn on my general plan of Hobart. But immediate relief might be given by works, the whole of which, except about 100 yards of 9-inch drain, would be permanent, and thus the nuisance of the above-mentioned surface-drain would be done away with, and the sanitation of the whole Byron-street District completed.

11. That these recommendations are not only the best from the point of view of sanitation and domestic comfort, but also from that of economy, is very easily shewn. The whole of the above works included in the plan would cost:—

	£	s.	d.
Public sewers.....	503	7	0
House-drains	170	9	0
Water-closets.....	123	4	0
TOTAL.....	£797	0	0

If done altogether by the Corporation, and recovered by a Rate, a five per cent. rate, producing £40 a year, would pay four per cent. interest on this outlay, and form a sinking fund that would repay the capital sum in 40 years. But, however done, it is evident that the eventual incidence of the outlay will rest upon the property of the district, and that this incidence may be taken to represent a burden of £40 a year. This burden, for the complete sanitation of the district, is less than it would have to bear for a very incomplete one by the pail system: for there are 36 houses in the district; and for the inefficient way in which pails are now emptied without cleansing, these houses would, for a weekly service, have to pay £46 16s. a year, and it is hardly likely that for an efficient service with cleansing, a less outlay would be incurred, even under a contract. Furthermore, no one pretends that underground drainage to take away house-slops will not have to be eventually adopted. This will involve the expending of £640 of the above £797, meaning an additional yearly burden of £32; making with the above £46 16s., a yearly charge of £78 16s. for an imperfect system, as compared with £40 for a perfect one.

12. This is a fair comparison of relative cost; for the treatment of the tank refuse would certainly not exceed that of the matter removed in the pails, especially as the refuse would probably be at once used in the gardens in which the tank is placed. Therefore, not only in the interest of the Public Health, though that should be the paramount consideration, but also in that of the ratepayers' money, I strongly recommend the carrying out of the proposed works as a whole, rather than the wasting of more money, and the incurring of more danger, by having recourse to some temporary expedient for getting rid of the nuisance so justly complained of by Mr. Castray.

I have the honour to remain,
Mr. President and Gentlemen,
Your faithful Servant,

A. MAULT.

Central Board of Health, Hobart, 28th February, 1887.

APPENDIX.

COST OF PROPOSED DRAINAGE WORKS.

I.—PUBLIC SEWERS.

1.—PUBLIC SEWERS.							£	s.	d.	£	s.	d.
1305 cubic yards excavation, refilling, and making good	@	0	1	10	119	12	6					
150 „ carting away		0	0	8½	5	6	3					
275 lineal yards making good through private property.....		0	2	0	27	10	0					
5·1 rods brickwork in cement in sewer, manholes, &c.		17	8	0	88	15	0					
Iron and woodwork to six manholes		3	8	0	20	8	0					
94 lineal yards 12" glazed socket stoneware pipes		0	6	9	31	14	6					
94 „ laying and jointing		0	0	9	3	10	6					
6 junction and special pipes (extra).....		0	6	0	1	16	0					
454 lineal yards 9" glazed socket stoneware pipes.....		0	3	8	83	4	8					
454 „ laying and jointing		0	0	8	15	2	8					
17 junction and special pipes (extra)		0	3	6	2	19	6					
224 lineal yards 6" glazed socket stoneware pipes		0	1	9	19	12	0					
224 „ laying and jointing		0	0	4	3	14	8					
4 junction and special pipes (extra).....		0	2	0	0	8	0					
20 lineal yards 4" ventilating pipes laid and jointed		0	1	6	1	10	0					
70 lineal feet 2" galvanised ditto		0	0	4	1	3	4					
Tank : 20 cubic yards excavation		0	1	10	1	16	8					
1 rod brickwork in cement .....		...			17	8	0					
Woodwork, &c. in sluices and covering.....		...			12	0	0					
Ten per cent. for contingencies.....		...			45	14	9					
Total.....		...			£503	7	0					

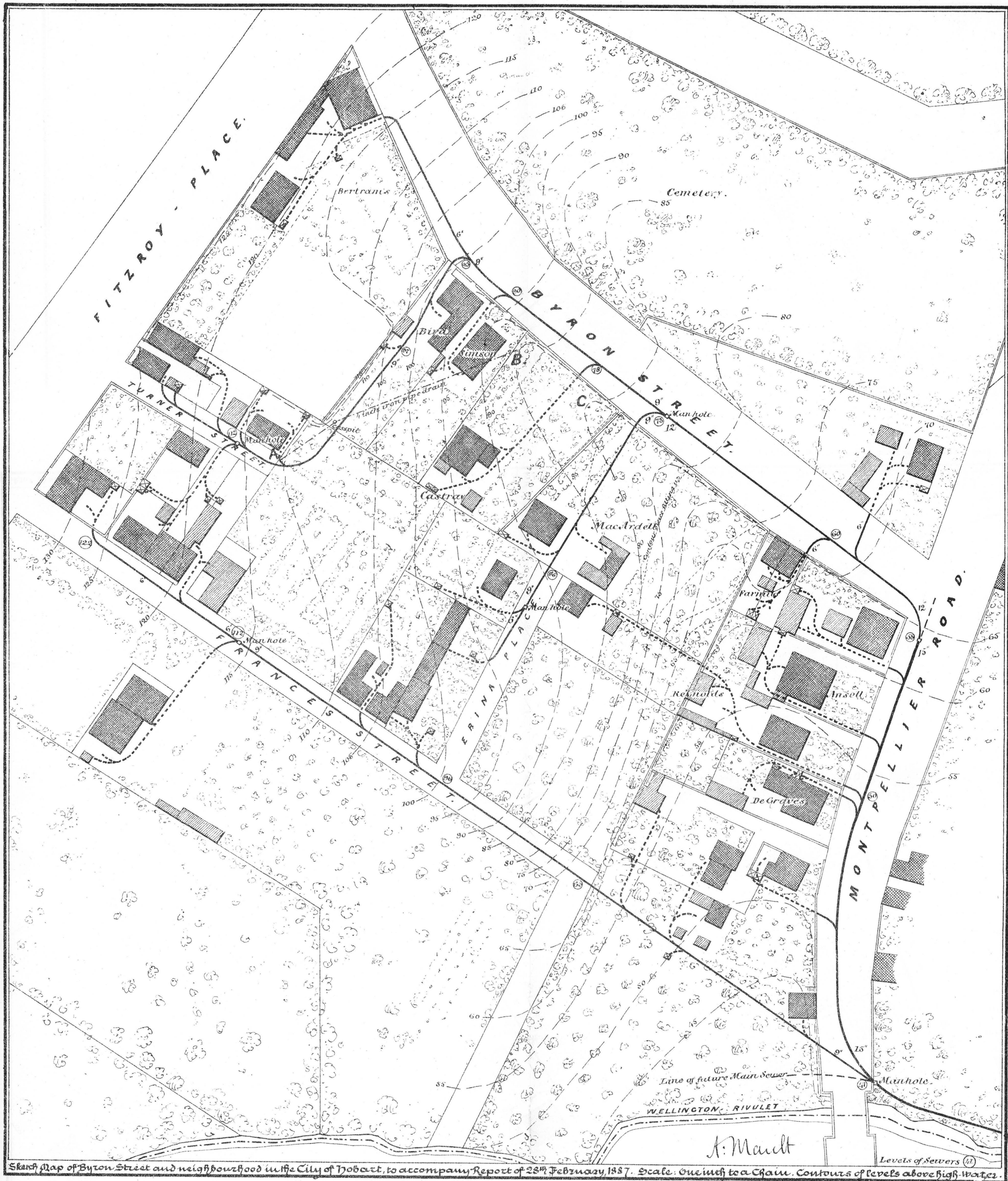
II.—PRIVATE DRAINS.

583 lineal yards 6" glazed socket stoneware pipes complete	0	3	0	87	9	0
540 " 4" " " " " "	0	2	6	67	10	0
Ten per cent. for contingencies .....	...			15	10	0
<i>Total</i> .....	...			<u>£170</u>	<u>9</u>	<u>0</u>

III.—WATER-CLOSETS.

34 water-closets, as detailed below	3	0	0	102	0	0
1 double flushing tank closet for two cottages .....	...			10	0	0
Ten per cent. for contingencies .....	...			11	4	0
<i>Total</i> .....	...			<u>£123</u>	<u>4</u>	<u>0</u>
Detail of Closet—Earthenware pan, and ϕ pipe .....	...			0	14	6
Altering seat where necessary .....	...			0	10	0
Waste-preventing cistern and water-pipe .....	...			1	10	0
15 feet of 2" ventilating pipe	0	0	4	0	5	0
<i>Total</i> .....	...			<u>£2</u>	<u>19</u>	<u>6</u>

NOTE.—In this Appendix all work for which prices are given in the "Schedule of Contract for General Repairs" issued by the Public Works Department are estimated at the prices of the contract for 1886. The prices for brickwork appear low, but they are compensated for by other prices.



Sketch Map of Byron Street and neighbourhood in the City of Hobart, to accompany Report of 28th February, 1887. Scale: One inch to a Chain. Contours of levels above high water.

Photo-lithographed at the Crown Lands Department Hobart