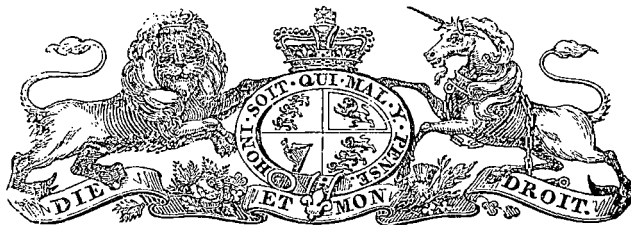


(No. 117.)



1891.

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PARLIAMENT OF TASMANIA.

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PROPOSED WATER SUPPLY FOR GLENORCHY :

REPORT OF ENGINEER-IN-CHIEF.

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



*Tasmanian Government Railways,  
Engineer-in-Chief's Office, Hobart, 4th September, 1891.*

PROPOSED WATER SUPPLY FOR GLENORCHY.

SIR,

I HAVE the honor to report as follows on the proposed scheme of Water Supply at Glenorchy, after duly examining plans and specification, and inspecting the site of works.

The growing population and importance of this suburb makes some provision for water supply a necessity, as, independently of any conservation of rain-water in ordinary house tanks, the Humphrey's Rivulet affords but a scanty and contaminated supply in the summer months.

The site selected is a good one, on a small tributary of the Humphrey's Rivulet, at about  $1\frac{3}{4}$  miles from the main road, and close behind the house occupied by Mr. A. Sawyer, with plenty of elevation for the requisite head of water. The area shown on plans as to be acquired is 26a. 3r. 31 $\frac{1}{2}$ p. The water surface, with reservoir full, covers 6a. 2r. 18 $\frac{1}{2}$ p., and the estimated capacity is about 12,000,000 gallons.

The head of water above the main road is 250 feet, and the calculated discharge from the main upwards of 300,000 gallons per day.

The works consist of an embankment 660 feet long, with a maximum depth of 30 feet; and a top width of 12 feet, with slopes of 1 to 1 and 3 to 1; a diversion, to the outside of the reservoir, of the stream intercepted; provision of a bye-wash; and earthenware inlet pipes from the Humphrey's Rivulet.

The plans and specifications generally are sufficient; but, in order to allow a larger margin for security, I should recommend provision for carrying the puddle wall deeper down into the rock, and that the water tower should be somewhat altered for convenience and access for repairs, and extra inlet valves added, as concurred in by the Promoter's engineer after discussion of the matter with him.

I do not know if it is proposed to provide any dwelling for a caretaker; but, exclusive of such, I estimate that the work can be carried out for a sum of £11,500.

I have the honor to be,

Sir,

Your obedient Servant,

J. FINCHAM, *Engineer-in-Chief.*

*The Honorable the Minister.*

I NOTE that the Act of Parliament does not provide for any check on works during construction, *i.e.*, as to compliance with plans, &c. after approval.

J. F.

*Collins-street, Hobart, 31st July, 1891.*

DEAR SIR,

IN compliance with your instructions to devise a suitable water supply for the township of Glenorchy, I have the honor to state that I have carefully examined the neighbourhood of Glenorchy and the Humphrey's Rivulet with the view of selecting the most suitable site, and one upon which a storage reservoir could be constructed for conserving a sufficient quantity of water during the rainy

season without any way interfering with the riparian rights of the landholders along the course of the rivulet; and, after careful consideration of several sites, I have selected the best, which is situated on land belonging to Mr. Sawyer, and has an elevation of about 300 feet above the sea-level, or 250 feet above the Main Road of Glenorchy, from which it is distant about one mile fifty-three chains.

On this site I recommend the construction of a reservoir to contain 12,000,000 gallons of water.

The surface of the water in the reservoir when full will be 280 feet above the level of the township at the Main Road, along which the pressure would be 125 lbs. to the square inch, which will be ample for all purposes.

We must now consider the sufficiency of the supply of water to be stored to afford a continuous and permanent supply. I am informed that the district which it is intended to provide for contains about 150 houses, and, allowing the ample quantity of 150 gallons per day for each house, the total quantity of water required would be 22,500 gallons per day, or 2,047,500 for a period of three months; so that the storage of 12,000,000 gallons of water will give an ample supply for all domestic purposes for more than six months if the population were to increase threefold (*i.e.*, 450 houses), thus making sufficient provision against a possible dry summer or very considerable increase of population. I have laid out the main track, commencing at the reservoir with  $2\frac{1}{2}$  chains of 9-inch cast-iron pipe, and from thence to the main road at Glenorchy with 1 mile 51 chains of 6-inch cast-iron pipes. The discharge from this main will be 363,800 gallons per day.

The track for the intake pipe from the rivulet to reservoir commences at the rivulet with  $3\frac{1}{2}$  chains of 18-inch earthenware pipes to shut-off valve, and thence to the reservoir with 39 chains of 12-inch earthenware pipes. The discharge from this pipe into reservoir will be about 2,328,000 gallons per day (when running full). This would fill the reservoir in a trifle over five days.

The water from the existing gullies will be diverted round the site of the proposed reservoir, and then returned to the original channel a short distance from the dam, and a proper provision has been made to carry off any unusual flood storm water. My estimate for the whole of the works is £8964 9s., thereby providing an ample supply of water for more than ten times the number of the present inhabitants of Glenorchy.

I beg to forward the necessary plans, &c. herewith.

I remain, dear Sir,

R. HUCKSON, (*per H.H.*),  
*Engineer of the Glenorchy Water Trust.*

HAROLD S. R. WRIGHT, *Esq.*,  
*Chairman for the Glenorchy Water Trust.*