

(No. 126.)



1885.

PARLIAMENT OF TASMANIA.

ESTIMATES FOR RAILWAYS :

MEMORANDUM FROM THE ENGINEER-IN-CHIEF.

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



RAILWAY ESTIMATES.

Public Works Office, Hobart, 21st September, 1885.

SIR,

IN accordance with instructions conveyed in your Memorandum of 15th August ultimo, I have the honor to furnish the following Statement as to Estimates for completion of the Mersey Extension, the Fingal and the Derwent Valley Railways, and for the Railways proposed this year :—

MERSEY AND DELORAINE RAILWAY.

The original estimate of £120,000 was made in 1880, when prices of all labour and material were very much lower than when works were let, and averaged £3234 per mile. The estimate was based—

Vote,
£120,000.

First. Upon the engineering survey made for the Government in 1875, by the late Mr. Human, between Deloraine and Latrobe, and upon the quantities furnished by him in his report, but checked as far as the information supplied would allow.

Secondly. Upon a trial survey from Frogmore to Formby.

Thirteen miles of this (Deloraine to Coiler's Creek) might be termed "Contract survey," but from Coiler's Creek to Latrobe (along old Tramway), where, owing to the broken, unfinished works, the most elaborate detail was necessary to arrive at a proper estimate, the information given was less than afforded by our usual Parliamentary surveys, and generally so vague as to be quite useless. I accordingly adopted the quantities for this section which were furnished to the Government by Mr. Human with his Report in 1875 (House of Assembly, No. 73.)

The excess of Messrs. Fergus and Blair's contract for construction over original estimate (due to increased cost of all work in the Colony and greater elaboration in measurements afforded by contract surveys), accounted for a large portion of the vote of £40,000 sanctioned by Parliament during Session of 1884; while the balance was practically absorbed in constructing the costly loop-line through the Town of Latrobe, decided upon by Parliament, but for which no plan, estimate, or provision was ever made at the time, and for various minor matters, among them the excess of invoiced weight of rails over calculated weight ordered, and the substitution of cattle-guards for gates at road crossings wherever they could be erected, by which the permanent employment of gatekeepers is saved to the Colony.

Vote,
£40,000.

Further, the original estimates were entirely for timber bridges over the rivers, but for these I have substituted first-class work, with wrought iron girders and concrete abutments in every case.

Proposed vote,
£25,000.

The sum of £25,000 now required is for items as follows:—

	£
* Additional rolling stock.....	11,500
Additional cost of land and accommodation works.....	4000
Additional number and cost of sleepers since original estimate	2900
Additional work on Fergus and Blair's contract.....	3700
Additional stations, sidings, and accommodation not contemplated when original estimate was made.....	2900
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	£25,000
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Total final cost will be rather less than £5000 per mile.

FINGAL RAILWAY.

Vote,
£150,000.

I have every confidence, after going through the fuller information afforded by the Resident Engineer, that the total cost of this undertaking, with equipment, will be from £150,000 to £156,000 (under £3500 per mile, including extra cost of taking line through Avoca); but this amount will be reduced by £1000 for duplicate parts of rolling stock purchased under Construction Vote for repairs, but transferable hereafter to working expenses.

Whenever the coal mines near Fingal are worked, locomotives and mineral wagons will be required, and, probably, discharging apparatus and sidings alongside vessels at Launceston. An output of 1000 tons per week has been suggested, and this would require an outlay of some £15,000 for stock alone, exclusive of any discharging apparatus on wharf at Launceston.

DERWENT VALLEY RAILWAY.

Vote,
£140,000.

I estimate the total final cost of this work at from £155,000 to £160,000, but am sanguine of being able to finish for the lower amount.

Some of this probable excess is due to extra length of the line since estimate was made, and a loss of some 15 per cent. incurred in construction of iron bridgework, owing to the decision of the Government in favour of local manufacture. The small balance left to be accounted for is due to the difficult and complicated character of many portions of the works, the uncertainty of foundations, and the heavy land compensation, including larger cost in accommodation works than could reasonably have been anticipated as being required.

Credit must also be given to the extent of £1000 for duplicate parts of rolling stock purchased out of Construction Vote, but which are properly a charge (to be transferred hereafter) against working expenses.

PROPOSED RAILWAYS, 1885.

The estimates for the Formby and Ulverstone and Brighton and Apsley Lines are based upon actual contract surveys—those of the Chudleigh and the Sorell Lines upon the Parliamentary survey, as contract work is not yet completed.

The one first-class line proposed (Formby to Ulverstone) has only two important bridges on it, with a light average of earthwork, and my revised estimate for this is equal to £6000 per mile.

The other lines are of a "light" character, intended for speeds of 12 miles per hour, and to be worked at present as agricultural and omnibus lines. The engines and carriages will be of a light description, and train loads will be limited, but the wagon stock will be of the standard Government type, and be interchangeable with the Government stock or that of the Main Line Company in order to avoid any transshipment charges in freight of goods.

My estimates for the light lines provide an average cost per mile of £3650, and if the owners of properties who will benefit so largely by these lines refrain from demanding excessive sums (in the way of accommodation works, compensation, and fencing) in consideration of the unusual facilities that will be afforded them, I believe the estimates will be fully sufficient. But the character of the lines should be made thoroughly clear, and the work of first-class lines should not inconsiderately be demanded from them by the public, neither should they be saddled with costly working expenses.

* The late Manager always considered the estimate should allow for at least £20,000 worth of stock, but his estimate was reduced to £12,000.

In designing and laying out the works, their ultimate conversion into first-class lines will be borne in view.

RAILWAY ESTIMATES GENERALLY.

I desire to point out that Parliamentary Surveys can only afford approximate data for estimates of cost, and that the time at disposal generally does not allow of full detailed contract particulars and quantities, marking line completely on ground, arrangements for purchase of land, &c., before submitting proposals to Parliament.

In preparing both the Parliamentary Surveys and Estimates I have followed the practice which obtains universally in England in connection with Railway proposals submitted for sanction of Parliament there.

I have the honor to be,

Sir,

Your obedient Servant,

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

The Hon. the Minister of Lands and Works.

*Public Works Office, Hobart,
21st September, 1885.*

PUBLIC WORKS SCHEME, 1885.

RAILWAYS.

ESTIMATED approximate Cost.

	Works.	Stock.	Land.
	£	£	£
Formby to Ulverstone (12 miles)	58,000	8000	6000
A. Brighton to Apsley (27 miles)	84,500	18,000	5500
B. Chudleigh to Mole Creek (12 $\frac{1}{2}$ miles).....	25,500	6000	2500
C. Bellerive to Sorell (14 $\frac{1}{2}$ miles)	45,000	8000	3000
	£213,000	£40,000	£17,000

Particular attention is drawn to the fact that items A. B. C. are estimated for light lines, cap able of an average speed of about 12 miles an hour, and that they are designed to partake of the character of Steam Tramways, and will be inferior in speed and carrying capabilities to the Mersey, Fingal, and other lines.

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

The Hon. the Minister of Lands and Works.