

The country which the line traverses is volcanic formation, and probably it will be found that the materials in the cuttings will be tufa and trachytic boulders, grit, and cement. The earthworks generally are light, and present no particular difficulty, but owing to the numerous streams which cross the line, and which mostly have their origin in Mount Egmont, and to the heavy rain-falls which frequently occur on and around it, extraordinary provision for waterways is necessary. Hence the construction of bridges and culverts is a very large item of the cost.

Herewith is estimate of cost of constructing the railway. In regard to this estimate the quantities sent from Wellington have been revised carefully.

Provision is made for the purchase of land at the junction and Opunake ends of the reserve, also for the contingency of land being required outside the reserve for creek-diversions, roads, &c.

The fencing has been reduced in quantity, as one side of the reserve is fenced, and a sum has been put down to put it in good order.

The earthwork quantities sent here have been taken out on the section of the traverse-lines instead of on the red or location line, but the difference has been adjusted. In the rough estimate sent the cuttings only were put down, whereas the quantity should be the number of yards required to form the embankments, with allowance for shrinkage and loss through washing away, &c., which would be from 8 to 10 per cent. This has also been adjusted.

Provision has been made for earthworks in station grounds and service tracks, and for grubbing, stumping, &c., which was not included in quantities supplied.

Another station, making seven in all, has been estimated for, as one will be required at about 19 m. 55 ch. when the Waiteika Road is formed.

Culverts and bridges are put down as per quantities supplied, an item for protection of toe of slopes at bridges being added.

In quantities supplied for ballasting and metalling no provision was made for the work at station sidings, grounds, and approaches. This item has been increased accordingly. The quantity of ballast for the main line makes no allowance for extra required through subsidence of earthworks, &c., but the price put on would probably cover this.

Provision is made for carriage of permanent-way materials, and for a telegraph-line.

Provision is not made for a station at the junction with main line, as, the distance to Eltham being about a mile and a half only, and the construction generally light, it would probably be best to duplicate the main line, and work the branch from Eltham. The item put down for contingencies would cover the cost.

Te Roti Route.—Trial Survey (Length of Line, about 22 miles).—Estimate of Cost.

	Item.	Quantity.	Rate.					
			£	s.	d.	£	s.	d.
Purchase of land (total)	..	..	..	..	..	7,275	0	0
Credit by sale Eltham Railway Reserve	..	..	..	..	..	7,000	0	0
							275	0 0
Fences, gates, cattle-stops, &c.,—								
Erecting new fencing	Chains	2,500	1	5	0	3,125	0	0
Repairing present fence	..	960	0	5	0	240	0	0
Station gates	Each	12	20	0	0	240	0	0
Private-crossing gates	..	24	12	0	0	288	0	0
Cattle-stops	..	32	22	0	0	704	0	0
							4,597	0 0
Grading,—								
Felling, clearing, and grubbing ..	Chains	1,720	0	12	6	1,075	0	0
Cutting	Cubic yards	211,000	0	1	4	14,066	13	4
Forming line 1 ft. deep and under	Chains	561	1	5	0	701	5	0
Guard-rails, notice-boards	Sets	16	10	0	0	160	0	0
Trimming line	Chains	1,760	1	0	0	1,760	0	0
Stream-diversions	Cubic yards	10,300	0	1	4	686	13	4
Earthworks in station - yards (seven)	..	13,000	0	1	4	866	13	4
Service roads and tracks	..	..	..	..	..	350	0	0
							19,666	5 0
Culverts (from Head Office estimate)	..	..	..	..	..	..	6,730	0 0
Bridges	..	..	..	..	..	..	23,188	0 0
Bridge-approaches: Pitching and protecting foot of banks	..	..	..	..	..	..	200	0 0
Ballasting and platelaying, main line and seven stations	..	..	..	..	..	..	23,998	0 0
Station buildings (seven stations)	..	..	..	..	..	..	12,250	0 0
Permanent-way (rails, sleepers, &c.)	..	..	..	..	..	..	32,976	0 0
Carriage on permanent-way	..	..	..	..	..	..	3,150	0 0
Equipment	..	..	..	..	..	..	1,100	0 0
Telegraph-line	..	..	..	..	..	..	1,100	0 0
							129,230	5 0
Contingencies, 3 per cent. (approximately)	..	..	..	..	..	..	3,769	15 0
							£133,000	0 0

Average cost per mile, £6,045.