

FURTHER PAPERS RELATING TO CONSTRUCTION OF RAILWAYS.

I.—WAIKATO RAILWAY.

No. 1.

Mr. WRIGG to Mr. BLACKETT.

Waikato Railway—Diversion to Mercer.

SIR,—

Auckland, 28th August, 1871.

I have the honor to forward, per steamer "Wellington," a general plan of the Waikato Railway lying between Auckland and the river Waikato, showing the termini at Tuakau and Mercer, and the alternative lines from Newmarket to Auckland, as well as one at the saddle of the watersheds of Tuakau and Pokeno.

Besides the parliamentary section of the diversion to Mercer from the point A to B on the plan, I have thought it desirable to show a reduction of the detailed section of the other portions of the line in order to afford you complete information as to the plan and sections from one end of the line to the other. The horizontal scales are the same throughout, and the vertical ones also. The datum line is the same for all the sections.

Regarding the heavy cutting on the diversion to Mercer, at about 35½ miles, there is every reason to believe that the bottom portion of the excavation will be sandstone rock, fit for ballasting, and if so, the cutting would of course be much reduced in quantity, while the material would pay for getting for the purpose of ballast. I can avoid this heavy cutting, if it were considered desirable, by the detour line I have surveyed and shown on the plan, securing somewhat easier gradients and a less costly line, but at the expense of 46½ chains added to the length of the line, and cutting up Young's farm somewhat injuriously. Nothing, however, will determine whether the line should pass over the saddle by the shorter route or by the detour line except a detailed survey and levels, upon which point I await your instructions, and without which a reliable estimate of the whole line, from terminus to terminus, cannot be made.

In the meantime, I am of opinion that the following estimates may be taken as fair approximations :—

ESTIMATES.	DISTANCE.	RATE.	AMOUNT.
<i>Via Domain Line.</i>	M. F. CH.		£
Newmarket to Auckland	2 3 1	...	14, 409
Newmarket to point of diversion at Pukekohe	29 5 0	4, 000	118, 500
Thence to Mercer	11 1 6	4, 300	47, 838
Maungatawhiri Bridge, say	1, 000
Onehunga Branch	2 4 9	4, 000	10, 450
Totals	45 6 6	...	192, 197
<i>Via Tunnel Line.</i>			
Newmarket to Auckland	2 0 1	...	21, 394
Newmarket to point of diversion at Pukekohe	29 5 0	4, 000	118, 500
Thence to Mercer	11 1 6	4, 300	47, 838
Maungatawhiri Bridge, say	1, 000
Onehunga Branch	2 4 9	4, 000	10, 450
Totals	45 3 6	...	199, 182
<i>Via Coast Line.</i>			
Newmarket to Auckland	3 3 1	...	21, 509
Newmarket to point of diversion at Pukekohe	29 5 0	4, 000	118, 500
Thence to Mercer	11 1 6	4, 300	47, 838
Maungatawhiri Bridge, say	1, 000
Onehunga Branch	2 4 9	4, 000	10, 450
Totals	46 6 6	...	199, 297
<i>Tuakau Line, via Domain.</i>			
Newmarket to Auckland	2 3 1	...	14, 409
Newmarket to Tuakau, with Branch to Onehunga	38 2 5	4, 000	153, 250
Totals	40 5 6	...	167, 609