

## REPORT ON PROJECTED LINE OF RAILWAY BETWEEN WAITARA AND NEW PLYMOUTH.

SIR,—

Public Works Office, Wellington, 10th August, 1872.

I have the honor to forward the following report on the projected line of railway from Waitara to New Plymouth.

Two lines have been surveyed: one which may be called the seaward line, the other the inland line, a length of 230 chains at the New Plymouth end being common to both.

The seaward line is 10 miles long, and passes over generally very favourable ground; the inland line is 11 miles 14 chains long, and, besides offering more numerous curves and steeper gradients for working, rises to an extreme elevation of 166 feet as compared with 126 feet on the other line. The inland line will, at the point of greatest divergence, be about  $1\frac{1}{4}$  miles from the seaward line, the course of which averages about 1 mile from the coast.

The works on the inland line will be more costly, seeing that they comprise a large amount of additional earthwork, three extra road-crossings, thirteen extra culverts, and permanent way to the extent of 94 chains, altogether making an estimated difference in cost of £4,350. This line will also, on account of its unfavourable features, cost at least £300 a year more for working expenses and maintenance.

On behalf of the inland line, it may be said that, although it may be longer, more costly, and that it will involve heavier working expenses, its inland position (being near the bush at one point) will command more traffic in the way of sawn timber, fencing, and firewood, besides other produce, as the country inland becomes peopled, and that it will be more advantageously situated for connecting with a main inland line of railway to proceed southward behind Mount Egmont, and northward to Waikato, being nearer to it by  $1\frac{1}{2}$  miles than the seaward line.

Supposing that only this piece of railway were made, namely, between Waitara and New Plymouth, it is clear that much of the expected traffic from inland, which might come on to the inland line, would never reach the seaward line; and, generally speaking, the traffic on either line must be of a through character, from the shortness of the distance.

Below is an estimate of traffic based on Customs returns:—

<i>Estimate.</i>	£	s.	d.
The cargo shipped from Waitara for fifteen months ending 30th June, 1872, was about 149 tons, of which $39\frac{1}{2}$ tons went from New Plymouth. This would give, for twelve months, for New Plymouth, about 32 tons, and allowing for increase of business and population, say 50 tons at 4s. ... ..	10	0	0
The cargo landed at Waitara in the same time amounted to about 524 tons, of which we may assume one-half went to New Plymouth, say 262 tons, or allowing $\frac{1}{3}$ increase, as above, 350 tons at 4s. ... ..	70	0	0
The cargo landed at New Plymouth may be estimated at 2,500 tons per year, mostly from large vessels, and costing, on an average, 10s. per ton for landing; but a portion of this we may assume will, when the railway is opened, be landed at Waitara from small vessels and deposited in New Plymouth by rail at a cheaper rate, say 4s. against 10s. per ton, say one-half, or 1,250 tons at 4s. ... ..	250	0	0
The cargo shipped at New Plymouth may be estimated at 300 tons per year, at the same rate, 10s., and applying the same rule here, 150 tons would be sent to the Waitara, at 4s. ... ..	30	0	0
The inland line, running near the bush, may be expected to receive traffic in sawn timber, fencing, and firewood, say, sawn timber, 100,000 feet, or 200 tons at 4s. ...	40	0	0
Fencing, say ten miles, or 800 tons at 4s. ... ..	160	0	0
Firewood, say 300 cords, or 450 tons at 4s. ... ..	90	0	0
Passengers, say twelve each way per day, or $24 \times 213$ days = 7,512 at 2s. 6d. ... ..	939	0	0
Parcels, say 300 at 1s. ... ..	15	0	0
Total receipts per annum ... ..	£1,604	0	0

The working expenses, including maintenance of line but not of bridges, for running two trains each way, or forty miles per day, will be about £3,000 per year; but to this must be added, if the inland line be adopted, extra working and maintenance expenses to the amount of £300, as before described, making a total of £3,300 per annum, or more than double the estimated receipts.

On this calculation, therefore, it is clear that the New Plymouth and Waitara Railway, as a detached line, will not pay working expenses, and that its construction would be justified only on the assumption that it will, at some future period, form what may be called a double terminus to the main line above described.

The Hon. J. D. Ormond,  
Minister for Public Works.

I have, &c.,  
JOHN BLACKETT,  
Assistant Engineer-in-Chief.