

three miles for the sake of the four or five remaining. At all events, it is hopeless to expect that freight would be put on the railway for such a short distance.

The disadvantages are, a slight increase of length, three miles of flooded land, and a bad crossing of the new bed of the Ngararoro, where it has not yet got into train.

If the railway were kept high enough to be out of floods, a large increase in the cost of construction would be entailed; and I think constant litigation would arise with owners of property in the banks of the Meanee, who would complain of the railway works preventing floods from getting away into the lagoons and thence into the Ngararoro River. Half a mile of bridging would also be required across the lagoons between the Meanee River and the beach.

If the rails were kept low, so that floods would pass over them, the cost might be reduced to within £1,000 of the cost of the Coast line, but the maintenance would be largely increased.

In 1867, the road to Meanee, alongside of which the line is located, was covered with 3 feet of silt, and the present road has been metalled over the silt; and there are still visible, at other parts of the line, the tops of fences which have been buried. The effect on the working expenses of the line may be imagined, if rails, sleepers, and ballast had to be dug up. Floods like this do not often occur; but every year the rails would be under water, the traffic stopped, and the ballast spoilt by the silt and the mud mixed with it.

#### *Purimu Creek Line.*

This line leaves the coast at Scinde Island, and crosses the mouth of the Meanee River; then runs for four miles over land more or less subject to floods; then crosses the Meanee River again, and two miles further on, joins the Meanee line.

There would be a mile of bridging on this line more than on the Coast line, half of which would be in salt water, liable to the ravages of the Seredo. It would pass within one mile of Taradale, two miles of Redcliff, and a mile and a half off Meanee, and would probably secure the passenger and parcel traffic of the former townships, which would, however, be very trifling, and certainly not worth the extra expenditure of £20,000, which this line would cost more than the Coast line.

This line might safely be kept above flood level, but would, of course, be more expensive than if kept down on the ground.

#### *Revenue Estimate.*

|                                                   | £      | s. | d. |
|---------------------------------------------------|--------|----|----|
| Passengers, 30 per diem, 9,000, at 6s. 8d. ... .. | 3,000  | 0  | 0  |
| Goods, 5 tons per diem, 1,500, at 10s. ... ..     | 750    | 0  | 0  |
| Wool, 100 tons, at 10s. ... ..                    | 50     | 0  | 0  |
| Timber and firewood ... ..                        | 250    | 0  | 0  |
| Coal ... ..                                       | 125    | 0  | 0  |
| Parcels and miscellaneous ... ..                  | 125    | 0  | 0  |
|                                                   | <hr/>  |    |    |
|                                                   | £4,300 | 0  | 0  |

With care and economy the working expenses will not exceed this sum, but the renewal fund will have to be provided for by increased traffic.

I have, &c.,

JOHN CARRUTHERS,  
Engineer-in-Chief.

The Hon. the Minister for Public Works.

P.S.—12th July, 1872.—On the extension of the railway to Waipawa, or even to a point not so far, it would secure the whole of the wool, merchandise, and timber traffic for the up-country, which would be sufficient to pay the extra working expenses due to the extension of the line.

The principal traffic would be timber, and, since my report was written, a new timber trade has sprung up which will bring twenty tons a day, or £3,000 annually to the line. The timber is brought to Paki Paki in waggons, and there transferred to large drays; when the railway is completed, it will be transferred to the railway waggons, thus increasing the revenue of the Paki Paki Section to £7,300.

The working expenses will amount to £6,200, calculating for this increase in the traffic, leaving £1,100 a year for sinking fund for renewal of bridges, which will be ample.

The Paki Paki Section will thus pay its working expenses, independently of its extension to Ruataniwha.

J. C.

## No. 8.

### REPORT ON INVERCARGILL AND MATAURA RAILWAY.

Mr. CARRUTHERS to the Hon. J. D. ORMOND.

SIR,—

Public Works Office, Wellington, 7th June, 1872.

The Invercargill and Mataura Railway forms the western section of the proposed Otago Trunk Line, of which the Dunedin and Clutha Railway forms the eastern section. Both of these lines have been sanctioned by the Legislature, and will be carried on simultaneously. It is not at present proposed to construct the middle section from Clutha to Mataura; but it is necessary, in estimating the probable revenue of the Invercargill and Mataura Railway, to take into consideration its probable future construction, and the large extension of traffic which would follow.

At present, the traffic between Invercargill and Dunedin is done almost entirely by sea, but on the completion of the Invercargill and Mataura, Dunedin and Clutha Railways, a great part will go by land. There is, also, a large traffic between Dunedin and Lake Wakatipu, a part of which will be diverted from its present channel, on the completion of the Dunedin and Clutha, Invercargill and