

Coast route, in the event of the adoption of that route, the other £40,000 being required to complete the line from Hurunui to the point near the Red Post. Thus altogether I have assumed £180,000 plus £80,000, total £260,000, as being available under Loan Act for southern portion of Tarndale route, if that is adopted; while I have only assumed £180,000 less £40,000, viz., £140,000, as available under Loan Act for the East Coast route, in the event of the choice falling upon it. While the total estimated costs, therefore, of the lines from Christchurch to Picton *via* the East Coast route, and *via* Tarndale route, inclusive of the portions already constructed, and further portions provided for by Loan Act of 1882, are stated in tables as being practically the same, viz., £1,840,000 and £1,850,000 respectively, it has to be borne in mind that the total expenditure on construction of railways northwards from Waipara will be, not £10,000 less if the coast route is adopted than it would be if the Tarndale route is adopted, but on the contrary £180,000 more, consisting of the following items:—

1. Expenditure—Waipara to Waikari	...	...	£70,000
2. Liabilities on same	...	£5,000	
3. Completion same, and construction of line Waikari to Hurunui, with Hurunui Bridge	...	75,000	
		<hr/>	80,000
4. Construction Hurunui to near the Red Post	...	...	40,000
		<hr/>	
Total	...	...	190,000
Deduct amount which coast line is less	...	...	10,000
		<hr/>	
Balance as above	...	...	£180,000

As it would appear, however, from the results shown on Table No. 1, that the line from Waipara to Waikari and northwards even as far as the Lottery River (a point considerably beyond the Red Post) would more than pay interest on its cost, there would be nothing to regret in this investment of an extra £180,000.

Reverting then again to the items headed "Further Portions provided for by Loan Act of 1882," it should also be mentioned, as regards the several amounts quoted in the Public Works Statement, as provided for the extension of the northern lines southwards, that the £40,000 set down for "Nelson to Roundell—Extension from Belgrove" has been assumed as being available only for the Tarndale or Maruia routes, while the £90,000 set down for "Main Trunk Line through South Island—Extension southwards from Blenheim," has been assumed as being available for either the East Coast, Tarndale, or Maruia route, but only to the southward of Blenheim, and not between Blenheim and Nelson *via* Rai Valley; and in this connection it should also be stated that the fact of the sum set down in tables as provided for towards East Coast route being £95,000, while for the Tarndale and Maruia routes it is quoted as £90,000, is due to the existence of works to the extent of about £5,000 already completed along the East Coast route to the southward of Blenheim.

As regards the estimated cost of the various lines, it is believed that the amounts set down are in all cases liberal, and they provide for all equipment and rolling-stock estimated to be requisite up to a period seven years after the lines are opened for traffic, so as to correspond with the period at which the revenues are estimated for. Thus the cost of the lines at the date of their being first opened for traffic would probably be from one to two thousand per mile less than the sums set down in the tables; but by the time that considerable traffic had grown up and that accommodation was provided to meet it, in the shape of additions to stations and rolling-stock, &c., it is anticipated that the cost would reach the amounts set down.

In the case of the estimate for branch line from Rolleston to Brunnerton *via* Lake Lyndon and Arthur's Pass, it should be explained, in view of some previous estimates for the same line, that the previous ones being less than the sum now set down is due to the fact that they were based on exceptionally steep grades, while the one now given in the tables is based on grades of 1-in-50, to correspond with the other lines, thus of course involving considerable additional cost in grading, especially in the summit tunnel; and as regards the distance as now stated along this route, from Rolleston to Brunnerton, as compared with same as given in tables accompanying my report on the Ada Saddle route, it should further be explained that the route there contemplated was from the main line of the Malvern Hills Railway *via* the Waimakariri Gorge to the Cass, whereas the route now estimated for is from the Whitecliffs Branch *via* Lake Lyndon and Craigieburn to the same point, involving an additional length of twenty miles to travel, but being much cheaper to construct, and affording access to a larger area of agricultural lands not already accommodated by railways constructed or in progress.

As it does not come within the scope of the tables, it may also be well to mention here the fact that £100,000 is already provided by the Loan Act towards the railway from Brunnerton to Reefton, which would form portion of the branch line shewn from Maruia to Brunnerton.

The revenues have been calculated on the basis of the last tariff, which came into operation on the 11th December, 1882. There are only one or two points with regard to them which call for any special comment, namely, as to the through passenger traffic and the traffic in coal and timber, and in both instances these only affect the branch lines, and those portions of the main lines described under the headings "Through Connections."

As regards the through passenger traffic, I have found a great deal of difficulty in getting any trustworthy data to calculate from, as the Union Company, when applied to on behalf of the Commissioners, did not consider it expedient to afford me any information as to the existing passenger traffic between Lyttelton and the northern ports. From such data as I could get, however, I have estimated that the through passenger traffic by rail from Christchurch to whatever port is adopted as the northern terminus of the railway would possibly reach, say, seven years after the line is finished, a total of ten first- and ten second-class passengers each way daily.

As regards the coal trade, on the other hand, I have been supplied in every case with the most copious information as to the trade at present done, and the anticipated increase in the same, by the