

to skirt the shore line as near as possible with regard to suitable curves; and where the exterior side of line is exposed to the wash of the waves, the earthwork is protected by substantial stone pitching, founded upon shingle and broken stone.

Two hundred and forty-one chains of the line are ballasted with good bluestone ballast: the work of ballasting the remainder is being vigorously proceeded with.

The sleepers are of black pine, totara, and jarrah, spaced 2 feet 6 inches between centres except at joints of rails, where they are 1 foot 3 inches.

The rails are of the Vignoles type, 55 lbs. to the yard, and secured to the sleepers with dog spikes. They are generally well laid upon the ballasted part, but of course are not permanently placed upon the remaining portion.

The station buildings at Dunedin consist of passenger station, goods shed, engine shed, and offices; and at Port Chalmers, of passenger station, carriage shed, and store. They are substantially built of timber and covered with iron roof. In the event of a general station for this line and the Southern Trunk being provided at Dunedin, some alterations in the position of the buildings would be necessary; but so far as the traffic of this line alone is concerned, they are in every way suitable. An intermediate station between Dunedin and Port Chalmers will be required.

The whole of the works, so far as executed, are done with the best material of the several kinds, and the workmanship well performed.

There are 540 chains of fencing executed, leaving little more fencing to be done.

As I understand the Government has already been furnished with a list of the rolling stock, I need not repeat that enumeration, but will remark generally that it is all of superior class, being built with due regard to lightness and strength. The engines are of the Fairlie type, which appears to have been successfully tried in other countries. The chief features of these engines, as now well known, consist of the utilization of the whole of the weight for traction purposes, and the mounting of the engine body upon bogie frames for the purpose of facilitating their passage round curves; and seeing these two principles of construction, when tried separately, successful in every way, we may anticipate satisfactory results from their combination.

The engines have been provided of weights equal to 28 tons when in working order, which is more than sufficient for the weight of trains which will require to pass over the gradients for some time.

The carriages are first and second class, fitted with central buffers and radial drawbars, but not with bogie frames, which I think would have been better and more in keeping with the character of the engines.

As the proper valuation of the works would involve a careful calculation of the quantities of earthwork, and as to do so would probably delay this report longer than the Government would desire, I shall not attempt such at present unless I receive further instructions. I have, however, formed an approximate estimate of the probable cost to complete the line, stations, &c., and would place that at £5,900.

I have, &c.,

G. M. BARR,

Provincial Engineer.

His Honor the Superintendent, Otago.

### No. 3.

His Honor the DEPUTY SUPERINTENDENT of OTAGO to the Hon. the MINISTER for PUBLIC WORKS.

(No. 13,105-48.)

SIR,—

Superintendent's Office, Dunedin, 16th January, 1873.

I do myself the honor to inform you that the Provincial Government, with a view to giving effect to the arrangement entered into with the Hon. the Colonial Treasurer, has agreed to recommend the General Government to offer the promoters of the Port Chalmers Railway to take over the undertaking completed, for the sum of £150,000. The promoters have been informed accordingly, and that the Government is not prepared to recommend any augmentation of those terms.

I have, &c.,

H. A. TOLMIE,

(in absence of Superintendent).

The Hon. the Minister for Public Works,  
Wellington.

### No. 4.

The Hon. the COLONIAL SECRETARY to his Honor the SUPERINTENDENT of OTAGO.

SIR,—

Colonial Secretary's Office, Wellington, 20th January, 1873.

I have the honor to acknowledge the receipt of your letter No. 13105-48, 16th January, 1873, addressed to the Minister of Public Works, in which you state that the Provincial Government of Otago has agreed to recommend the General Government to offer the promoters