

DESCRIPTION OF TRAMWAY.

The company's tramway is a single-track line laid to a gauge of 3 ft. 6 in. (the standard railway gauge in New Zealand), commencing at the company's private siding at the Putaruru Station of the Government railway from Morrinsville to Rotorua, and extending thence to the company's sawmills at Mokai, a total distance of fifty-one miles. As already mentioned, the first section of the line—from Putaruru to Lichfield, five miles—is laid on the old formation of the Lichfield Branch Railway, which formation is similar in character to the average New Zealand Government branch railways. The formation of the remainder of the line to Mokai was carried out for the company by contract. There are also several miles of bush trams in addition to the main line between Putaruru and Mokai. The curves on parts of the line are both numerous and sharp, and the gradients in places are severe. Between Lichfield and Oruanui 1-in-35 grades are frequent, and also $1\frac{1}{2}$ -chain-radius curves. The combination of these in places results in a virtual gradient very much steeper than the actual, while between Oruanui and Mokai there are in places grades as steep as 1 in 30. There are no less than nine miles of curves on the line that are under 5 chains radius, and six and a quarter miles under 3 chains radius. To such an extent is the line lengthened by curvature and indirectness of location that the distance between Putaruru and Mokai—thirty-three miles in an air-line—is no less than fifty-one miles by the tramway. This feature is repeated in the routes of the proposed and authorized extensions to Oruanui and Taupo, which are thirty-eight and forty-six miles respectively in an air-line from Putaruru, and fifty-five miles and seventy miles respectively by the route of the tramway.

The total rises and falls on the whole line from Putaruru to Mokai amount to 3,574 ft., which means that every train run between these points has to be raised and lowered to that extent, constituting a heavy strain on the locomotive-power required to work the line.

The line is laid with 30 lb. steel rails, which are in very good order considering that they have been in use on a line such as this for over fifteen years; and the sleepers are unusually close together (17 to the rail instead of 15, the usual Government standard) and are of mixed timbers, totara predominating. They are in fair order, but some of them need renewal.

Stopping-places on the line for the convenience of settlers are numerous, but sidings are very few, and station-buildings are almost non-existent.

The bridges between Putaruru and Kopokorahi are a good deal decayed and will require to be practically rebuilt, and the bridge over the Waikato River also needs considerable overhaul, if not entire reconstruction. The remainder of the bridges on the line are in fair order. We think it desirable that the attention of the company be called to the evidence of the Chief Engineer of Working Railways regarding the state of the bridges.

The line generally is well maintained, but all the cuttings are narrow, and most of the embankments also.

The tramway is what is known as a "light line," with the character and general features of a good sawmill steam tramway, and it is well suited for the work it was designed for. It is quite different, however, from the New Zealand Government standard railway construction.

The tramway is equipped with the following rolling-stock: One small locomotive (Class A), one Mallet compound locomotive, one Barclay locomotive, two Heisler (geared) locomotives, two composite passenger and goods vans, one goods-van, twenty-five platform wagons for timber, &c., one platform wagon for bush work; and further rolling-stock as under is on order to meet the growing traffic on the tramway: two Heisler locomotives of larger size, ten platform wagons.

COMPANY'S PETITIONS AND NATURE OF THEIR APPEAL.

The company petitioned Parliament in 1911 for authority to extend its tramway to Taupo, but, as such extension would greatly enhance the value of