

## PAEROA—WAIHI.

Instructions have been given for a survey to be made for the above line, and the Engineer has been at work upon the ground for some time. He has been instructed to make alternative surveys for a 3 ft. 6 in. gauge railway, with gradients not steeper than 1 in 50 and curves of not less radius than 6 chains, and for a 2 ft. gauge line with gradients not steeper than 1 in 40 and curves not sharper than 100 ft. In each case the ruling gradients to be reduced on curves, so as to compensate for the resistance to traction due to curvature. The instructions state that the line is to be so laid out as to keep the cost as low as possible, due care being taken that the increased working-expenses due to steep gradients and sharp curves will not exceed the interest on saving in the cost of construction thus attained. The survey for the 3 ft. 6 in. gauge line is to be made first, and modified where possible to fulfil the conditions for the 2 ft. gauge line, and where not possible to combine the two surveys, an independent one is afterwards to be made for the narrow-gauge line. Before finally locating the terminus of the line near Waihi, the Engineer has been directed to make a reconnaissance survey of the country between Waihi and Katikati Harbour, so as to determine the best route for a possible extension of the line to Tauranga, so that if the line is extended at any time no work will have to be abandoned.

As far as the work has progressed no great difficulties have been encountered, except near the Township of Karangahake, where there is a very abrupt angle in the gorge. It will probably be necessary to provide for a considerable tunnel on a 1 in 50 grade on the 3 ft. 6 in. gauge line here. With this exception, although the ground is very broken, a good line will probably be got, with curves not sharper than 6 chains radius, and with comparatively easy gradients, varying from 1 in 110 to 1 in 600. Beyond completing the survey the Government considers that further expenditure in connection with this proposed railway should be held over for the present.

## NORTH ISLAND MAIN TRUNK.

The Mokau and Poro-o-tarao Tunnel sections, at the northern end of this railway, together making a length of 12 miles 43 chains, were completed and opened for traffic on the 21st December last. The traffic on the line being at present practically confined to the carrying of plant and supplies for the construction-works beyond, it has not been deemed advisable to hand these sections over to the Railway Department, but, by arrangement with the Public Works Department, a weekly train is run as far as the south side of the Poro-o-tarao Tunnel. Work has been begun on the Ohinemoa Section, leading down towards Kawakawa, where the Stratford—Ongarue Road connects with the railway. The works on this section are proceeding fairly well, and will be pushed on vigorously until the line reaches Kawakawa.

At the southern end of the line a great deal of work has been done between the end of the opened line at Mangaonoho and Kaikoura, and the felling of the bush between Kaikoura and Taihape has recently been authorised. The Makohine Viaduct, the non-erection of which has for so long barred further rail-laying on this railway, is now well in hand. The extensive excavations for the foundations of the main pier on the eastern side of the Makohine Creek have been completed, and the two large concrete blocks which comprise the base are being built, the work being well advanced. The excavations for the other main pier on the western or Marton side of the creek would also have been completed before this if it had not been for exceptionally wet weather causing the ground to slip, and reducing it to so soft a condition that it became unsafe for men to work there. With the improvements which took place in the weather as spring advanced the excavations were resumed, and are now proceeding actively. Nearly the whole of the cement required to complete the structure has already been delivered on the site, and the balance is under order; and a large part of the iron and steel materials has already arrived from England. An engineering workshop is about to be erected, so that the shaping, planing, drilling, &c., of the ironwork preparatory to its being erected in position may be taken in hand, and I hope to be able to announce in my next year's Statement that substantial progress with the work has been made.