

Formation-work is in hand up to the point where the railway will cross the Wanganui River, two miles and a quarter beyond Taumarunui, and a service road has been constructed for some distance on the south side of the river, so as to facilitate the construction of the railway.

At the southern end of the line the most notable event to record is the practical completion of the Makohine Viaduct, which I had the pleasure of formally opening on the 17th June last. I take this opportunity of complimenting the officers of the Department who designed and superintended the erection of the work on the result of their labours.

As this viaduct is a structure of unusual magnitude, it would probably be desirable to give some detailed information regarding it. A viaduct at this point could only have been avoided by a line following the Makohine and joining the present line near Mangaweka, but the country was so rough that this route was at once condemned. It could only have been much diminished in magnitude by adopting a line located along the steep slopes adjacent to the coach-road. The formation-works involved in this alternative were too costly and the ground was considered to be too treacherous to justify its adoption; besides, steeper grades and sharper curves than those allowed on the North Island Main Trunk Railway would have been necessary, and this would have reduced the carrying-capacity of the line. After very careful consideration the location of the railway across the gorge was decided upon, involving a viaduct 765 ft. long and 238 ft. from the bed of the stream to the rail-level. The height from the bottom of the foundations to the top of the hand-rail is 254 ft.

There are 7,430 cubic yards of concrete, about 1,252 tons of steel and iron, and 26,560 superficial feet of timber in the structure.

The viaduct is designed to carry locomotives weighing up to 85 tons, followed by heavy trains.

The Government decided that the Public Works Department should carry out the erection of the structure by its own staff in May, 1896. The order for the machinery was sent in November following, but unfortunately the great engineers' strike occurred shortly after it reached England, and the execution of the order was consequently greatly delayed, the last shipment not coming to hand until June, 1898. The machinery was all erected and the manufacture of the steelwork begun by September, 1898, and the erection of the piers was commenced in April, 1900, so that the erection of the structure has occupied about two years. The first train crossed the viaduct on the 6th June last.

The cost of the structure, including a due proportion of the cost of the plant and machinery, has been about £71,500, but, as the painting has been left over for a time, and a few small finishing works have yet to be done, the total cost will probably reach £72,000. This includes a large amount of work in the foundations and superstructure over and above what was provided for when tenders were invited.

Beyond the viaduct good progress has been made with the formation of the line and in connection with the other bridges and viaducts. The present position of the work at the southern end of the railway is as follows: The line to Mangaweka is practically finished, and will probably be handed over to the Railway Department for regular traffic during the present month. It has been in daily use for goods traffic since the 1st instant. Between Mangaweka Station and the site of the viaduct over the Mangaweka Stream the formation is complete, and the rails are being laid, and will reach the viaduct site by the end of the present month, when the transporting of the iron and steel work for the structure will be begun and the building-up proceeded with. The abutments, piers, and foundations are already built. Between Mangaweka and Taihape the formation is nearly complete, except three unfinished tunnels, which are actively in progress. Beyond Taihape the formation is well advanced for about five miles, and ground has been broken for another eleven miles, or as far as sixty miles from Marton Junction.

The total expenditure on the line last year was £155,979, or £184,561 allowing for the value of the permanent-way materials issued. This constitutes