

Ballasting in yards has not yet been commenced.

Two platelayers' cottages have been transported from Tutira and erected on old concrete foundations at Mohaka. The two concrete-block cottages were dismantled and walls and partitions rebuilt in wood, using old floors and roofs. These cottages were completely renovated and occupied by staff.

Sites of two old concrete-block cottages were cleared and a cottage dismantled at Putorino for re-erection at Kotemaori. One completely new wooden cottage is to be built on the old foundations.

In general, drains were in a bad state, and have been almost entirely reopened. Culverts have been cleared throughout.

Kotemaori Tunnel was completely regraded and plates laid throughout. Drainage was bad, and 6 in. field tiles have been laid throughout.

Chimney Creek tunnels were trimmed throughout, and 6 in. field tiles were laid.

Mohaka Tunnel was distorted by earthquake pressure, but not sufficient to foul railway clearances, and nothing has been done. Field tiles have been laid throughout, and drainage work on north portal has yet to be done.

During the year the Mohaka Viaduct was completed. This viaduct is 908 ft. long and 312 ft. above creek-bed. By means of overhead cables 1,796 tons of steel were erected in seven months, breaking all previous New Zealand records. Foundations had been put in prior to 1931, and during the current year head and tail towers were re-erected and main cableways replaced. Steelwork was all erected and temporary works dismantled.

Sleepers and permanent way has been laid, windscreen erected and painted, and the first coat of red-lead paint is two-thirds completed. Platelayers' refuges have been put in.

Accommodation in tents for approximately sixty single and twenty married men was provided at Raupunga for workmen employed on the viaduct and in the vicinity, the balance of numbers being local residents and those housed in old standard accommodation. A cookhouse, staff bach, and recreation-hall were also provided at Raupunga.

The number of men throughout this period on the Putorino-Wairoa section has varied from 140 to 200, averaging 170 men.

It is anticipated that this length will be completed early in the New Year, and handed over to the working railways.

*Wairoa-Waikokopu Section* (Length, 24 m. 39 ch.).—Work on this section has been mainly confined to clearing up, reballasting and preparatory work in connection with the construction of station yards and buildings.

*Kopuawhara Section* (Length, 10 m. 72 ch.).—Work is in full swing practically throughout the whole length of this section, and good progress is being made.

Considerable cleaning-out of the cuttings commenced in 1930 was done, and several new cuttings were opened up. A total of 182,000 cubic yards was excavated. Almost all of this was done by co-operative contract, although the clearing of old cuttings was in general done by newly arrived men as the man-strength of the work was being built up.

Work on the Waikokopu Bluffs between 23 m. 24 ch. and 23 m. 73 ch. progressed satisfactorily, the highest section between 23 m. 32.50 ch. and 23 m. 35.25 ch. being taken down in a series of steps from elevation 181 ft. above formation-level. In this short distance the excavation entailed amounts to 23,600 cubic yards.

Substantial sea-walls were built at various places between 23 m. 36 ch. and 23 m. 73 ch., the total length amounting to 338 lineal yards, requiring 1,050 cubic yards of concrete and stone. Work is at present in progress on a section between 23 m. 73 ch. and 24 m. 3 ch. These walls are found to afford complete protection to the embankments concerned.

The cutting at 29 m. 20 ch. was worked by a Diesel shovel, motor-lorries disposing of the spoil into the adjacent filling. Very extensive slipping took place in this cutting, the present estimated total excavation required being 27,000 cubic yards as against an original figure of 19,000 cubic yards.

Tests for foundations were completed for the viaduct at 30 m. 15 ch. and bridge at 32 m. 1 ch. Site plans were prepared for bridges at 33 m. 27 ch. and 33 m. 33 ch.

Lengths of 24 ft. of 2 ft. diameter, 71 ft. of 2 ft. 6 in. diameter, 23 ft. of 3 ft. arch, and 40 ft. of 4 ft. arch culverts were constructed. Owing to the relative difficulty of access to the majority of culverts remaining to be constructed, temporary measures are being adopted until the formation is further advanced and access is thereby improved.

The 7 ft. by 5 ft. water-drives at 28 m. 69 ch. and 31 m. 6 ch. which had been under construction in 1931 were completed, lengths of 96 ft. and 325 ft. respectively being excavated and lined, and stepped outfall channels constructed.

The 9 ft. by 8 ft. 7 in. water-drive at 29 m. 22 ch. under construction in 1931 was completed by the addition of 25 lineal feet of concrete lining and the construction of a stepped outfall.

A 6 ft. by 5 ft. water-drive at 33 m. 6 ch. was partly completed during the year, a length of 125 ft. being driven and invert only set in over 112 ft.

Maintenance of the service road from the Kopuawhara River Bridge to the south end of Tikiwhata Tunnel, a distance of 9½ m., has been carried out and the access road to the East Coast Road trimmed and metalled. Two and a half miles of the later road have been surfaced and metalled to the junction with No. 4 Road leading to the north end of the Tikiwhata Tunnel. Metal for this work has been supplied by a departmental crusher in the vicinity of 33 m.

In the tunnel at 30 m. 9.50 ch. a top heading has been driven 109 lineal feet. The length of this tunnel is 2.35 ch.

Approach cuttings are being cleared for the tunnels at 30 m. 47 ch. and 31 m. 40 ch.

At 32 m. 6 ch. the excavation of the approach cutting was completed at the southern end.

At the tunnel from 33 m. 6.90 ch. to 33 m. 12.80 ch. approach cuttings were excavated for both ends, and a bottom heading driven for a length of 5 ch.