

## CONCENTRATION.

Supplies of rails, steel, and hardwoods for bridges have been difficult to obtain, and essential machinery, except to a very limited extent, has been and is still almost unprocurable. Labour has been difficult to obtain, and the ability to earn high wages has not attracted sufficient men of a satisfactory class. Carrying on a number of works with insufficient employees increases overhead expenses, and renders satisfactory progress impossible. It is far better to fully man and vigorously prosecute a smaller number of works. With the idea of concentrating available resources in men, plant, and money certain proposals for the temporary postponement of works which are now being carried on in a small way will be read below.

## PLANT.

To cope with the shortage of efficient labour increasing use is being made of machinery, and such improved results have already been demonstrated that, in spite of the exorbitant prices now demanded, arrangements are being made to greatly increase the mechanical plant. The Department now has eleven steam-shovels, with ten locomotives attending on them, engaged on earthwork, and, if promised deliveries are fulfilled, will have thirty-four steam-shovels and thirty-four locomotives within the next few months. Increasing use is being made of mechanical traction not only for transport, but for operating grading machinery, &c. Stone-crushing and concrete-mixing machinery is being installed whenever work of any magnitude is in hand.

The cement shortage has been also a continual source of anxiety. Many works cannot be commenced, and others cannot be carried out in proper sequence. Such important works as the Arthur's Pass and other tunnels have been held up owing to the impossibility of obtaining regular supplies.

The progress at all works under the difficult circumstances, however, has been satisfactory, as will be seen from the following summary and appendices.

## KAIHU RAILWAY EXTENSION.

(19 miles 17 chains to 23 miles 71 chains = 4 miles 54 chains.)

The formation of the whole of this line has been completed, with the exception of five small cuttings totalling about 15,000 cubic yards. None of the bridges have been commenced, owing to shortage of material, but three temporary structures have been erected. Rails have been laid from 19 miles 40 chains to 21 miles, and all the permanent-way material is on the works. Formation as well as platelaying should be completed this spring. A stone-crushing plant has been installed, and ballasting operations are proceeding satisfactorily. The stone is of excellent quality; it is suitable for road-metalling and also is the very best possible ballast for railway purposes. Sixty-six men are at present engaged on the work. It is hoped that, though there will still be some finishing-work to do, the line will be ready for traffic by the end of the present financial year.

## NORTH AUCKLAND MAIN TRUNK.

*Ngapuhi Northwards.*

*Okaihau Section* (16 miles 25 chains to 24 miles 45 chains = 8 miles 20 chains).—The whole of the formation is practically completed. Little difficulty was experienced except in the large cutting at 19 miles 68 chains, the bank at 19 miles 53 chains, and the Okaihau station-yard at 24 miles 47 chains. A steam-navvy was utilized at the cutting, but the material removed was unsuitable for the filling at 19 miles 68 chains, and other and drier filling had to be procured. This bank still continues to slip, making it very difficult to keep the temporary line in good order. Some very bad slips have also occurred at the Okaihau station-yard, but these will be removed in the summer. With these exceptions the formation is in a fairly stable condition, and should be ready for the rails to Okaihau by the time the platelaying reaches that point early next year.

Ballast will be obtained from a quarry about a mile from the main line, and a commencement has been made to lay the rails on this branch. A steam-driven crushing and screening plant of suitable capacity is being installed at the quarry. Investigations are being made to ascertain if this can later be driven by hydro-electric power.