

from the dam. After full investigation it was ascertained that, on account of the long length of race required to supply a limited area of land, the scheme was not economically sound.

As mentioned in last year's Statement, full investigations were to be made into the scheme for irrigating the Maniototo Plain, in Central Otago, an area of 120,000 acres lying most favourably for irrigation. A thorough and fully detailed survey of this area has been completed, and a comprehensive scheme is now being designed.

This scheme presents many favourable aspects, not the least of which is the possibility of impounding 235,000 acre-feet of water with a dam only 45 ft. in height. There are many combinations in design, however, that require to be worked out before the most favourable and most economical scheme can be ascertained, and it will take some time yet to completely develop the proposals.

Surveys and investigations were made for the construction of dams in the Fraser River and Conroy's Gully.

At present no further surveys for irrigation in Central Otago are in hand, but I think it is well worth while that investigations for such work be carried on in a time of depression, so that information may be available when prosperity again demands, as it has in the past, that fuller development of the valuable resources of water-supply in this country be undertaken.

RAILWAY CONSTRUCTION.

The net expenditure as shown on graph was £952,388 being £2,053,423 less than that of the previous year, due to the fact that it was decided to stop construction work on practically all lines. The total length of all lines under construction over which goods and passenger traffic has been run during the year was 65 miles, and these services have been well maintained.

The work of the year on the several lines in course of construction is fully set out in the Engineer-in-Chief's report, and may be summarized as follows:—

North Auckland Main Trunk Railway.—The construction work on the Rangiahua Section of this railway was closed down in January, 1931, and since then the plant and materials have been collected and stored at the main depot at Okaihau. A gang of four men has been employed throughout the year in maintaining the Rangiahua Section. The Okaihau Quarry, which supplied the ballast, has also been closed.

Dargaville Branch Railway.—Operations on this railway for the year consisted chiefly of the maintenance of the permanent-way and the running of the goods and passenger services between Kirikopuni and Tangowahine, a distance of 10 miles 10 chains. The average number of men employed was eighteen.

Gisborne-Napier Railway.—The Putorino Section of this railway was considerably damaged by the earthquake of February, 1931, and was to a large extent restored by the Public Works Department to facilitate transport of ballast to the Wairoa Section. The Matahaura Viaduct was also repaired. This section had previous to the earthquake been handed over to the Railway Department, and, although train running was suspended for a period, traffic can now be operated between Eskdale and Putorino.

Wairoa Section.—The work on this section was proceeded with expeditiously until October, 1931, when, in accordance with the Railway Board's report, work was stopped. The formation was finished, and rails could have been laid over the whole section. The only large works which remained to be completed were Kotemaori Tunnel and the Mohaka Viaduct.

The Kotemaori Tunnel has since been completed, except the portal at south end, which is in good country and unlikely to slip.

The foundations for the Mohaka Viaduct were completed during the year. All iron and steel work were fabricated at the Department's workshops, Tauranga, transported to site, and stacked. The Maungaturanga Viaduct has been completed. The plant and machinery on this railway has been collected and suitably housed.

Stratford—Main Trunk Railway.—The construction work on both ends of this line has proceeded satisfactorily. The bulk of the work was concentrated on the