

During the year all temporary accommodation at Waiotira, workers' dwellings, &c., was dismantled and re-erected at Pukehuia, Kirikopuni, and the Devil's Elbow, on the Dargaville Branch Railway.

Special goods and passenger services were run over the section up to the time of handing over to the Railway Department.

DARGAVILLE BRANCH RAILWAY.

Tangowahine Section (0 m. to 10 m. ; length, 10 m.).—The permanent-line survey over this section was completed early in the year, and a considerable amount of work has been done on the section. As the Main Trunk line neared completion the necessary materials were transferred from time to time and a good start has been made with the work. The formation is of a much lighter character than on the Main Trunk, and every endeavour is being made, by means of fairly steep momentum grades, to keep the earthwork in the large cuttings to a minimum, in order to reduce the risk of slips, which are liable to occur in deep cuttings.

Where the line passes through the Tangowahine Swamp the Bucyrus drag-line is being used to carry forward canals from the Wairoa River and complete the light-railway formation. At the same time it is proposed to complete a certain length of road-formation for the Lands Department in connection with the Tangowahine Settlement. It is anticipated that several miles of line should shortly be ready for rails and ballasting, the object being to get the line to Tangowahine as soon as possible, so that temporary services may be run for the benefit of settlers in that part of the district and farther afield.

Four steam-shovels and one drag-line have been employed on the formation of the first seven miles, and scoops and co-operative hand gangs are employed on the same length in cuttings that are too light for steam-shovel operation.

The barrels of all minor culverts to 6 m. 23 ch. have been completed, and excavations are complete and pile-driving in hand for the foundations of a 4 ft. arch culvert at 3 m. 12 ch.

Fencing has been completed on both sides to 3 m. 66 ch., on the right from 6 m. 10 ch. to 6 m. 42 ch., and on the left from 6 m. 15 ch. to 6 m. 31 ch. and 6 m. 35 ch. to 6 m. 40 ch. Cattle-stops have been installed at 0 m. 40 ch.

Approximately half a mile of rails have been laid and ballasted with one lift.

Several single huts and a married man's cottage have been erected at the Devil's Elbow, and temporary accommodation at Tangowahine; but generally in the construction of the work to the Devil's Elbow, at Tangowahine Flats, men are transported to the work morning and evening by launches, as it is cheaper to keep the men camped at Pukehuia at present, and save the very great expense of transferring houses for the accommodation of workmen in a locality where they will only be required for a short time.

AUCKLAND-WESTFIELD DEVIATION.

Substantial progress has again been made this year with the construction of that portion (8 m. 70 ch. in length) of this deviation which is being constructed by the Public Works Department.

Formation.—The marked progress made has resulted in the formation work approaching completion, the portion still remaining to be done consisting mainly of trimming-work, the widening of cuttings, and the borrowing of some 30,000 cub. yd. required to complete the banks in the vicinity of Purewa and Westfield.

In the early part of the year, trouble was experienced with the embankment being made across the Orakei basin, where the bottom is soft mud of considerable depth. The difficulty was overcome, and the subsidence checked by the construction of banquettes, or low extensions of the bank, on either side. This has the effect of further distributing the weight of the bank and overcoming the tendency for the bottom to be pushed up at the sides of the fill. The embankment between Point Resolution and Orakei has stood fairly well, and a subsidence of 18 in. has been made good by top-filling and corresponding widening.

A service track now extends from Campbell's Point to Westfield, and during the next few weeks a connection will be made with the Westfield Freezing Co.'s siding in the vicinity of the existing main line. It is anticipated that the remaining earthwork between Purewa Tunnel and Westfield will be sufficiently far ahead during the next four or five weeks to allow of the systematic transportation of some 25,000 yards of stone being commenced for the stone pitching of banks in Hobson Bay and Orakei basin. Approximately 3,000 yards of this stone is located in the Sylvia Park station-yard, and arrangements have been made with the Railway Department for railage via Westfield over their main line to Campbell's Point, thus expediting the work and making a considerable saving in haulage.

During the year about 70 ch. of station approach roads and overbridge approach roads have been completed, with gravelling and footpaths.

The total earthwork done during the year under review amounts to 430,000 cub. yd., including hard lava rock, clay, and papa. This progress was only rendered possible by the efficient organization of the available excavating machinery, consisting of six steam-shovels, and of the associated earthwork-trains. The employment of this plant has been very effective in reducing direct and overhead costs, as well as being instrumental in speeding up the work. It is anticipated that the formation will be far enough advanced to enable platelaying of one complete through track to be commenced very shortly.

Purewa Tunnel.—This tunnel, of a total length of 1,954 ft., is now complete, with the exception of the portals, which are in hand, that at the north end being almost complete. The lining of the tunnel was completed on the 27th March, 1928, and the service track and its temporary foundation is being removed preparatory to the laying of the tile drain and the rock-spall foundation for the permanent track. The total quantities of excavation and concrete lining in the tunnel have amounted to—excavation in papa and tuff, 48,687 cub. yd.; concrete lining, 15,632 cub. yd.