

## WAIHOU AND OHINEMURI RIVERS IMPROVEMENT.

This work, in common with others, has been carried out as rapidly as possible, but until additional plant can be procured greater progress is impossible.

*Dredging.*—The dredge has been employed at pumping material to form a stop-bank between Te Puke Wharf and Ngahina, and then was moved to opposite 0 m. 0 ch., on the left bank of the Tirohia-Ngararahi Cut, where a second stop-bank was completed. The two works involved the pumping of 84,000 cubic yards of material.

*Paeroa—Thorp's Bend Stop-bank.*—12 chains of this bank have been completed this year.

*Puke-Ngahina Stop-bank.*—This has been completed. A five-roomed house formerly belonging to the Waihi Gold Extraction Company has been removed clear of the stop-bank site.

*Wright's Hill, Thorp's Stop-bank.*—This has been completed.

*Ngahina—Komato Creek (Right Bank).*—The preliminary excavation has been completed, and formation is in hand.

*Tirohia-Ngararahi (Left Bank).*—Between 2 m. 59 ch. and 4 m. 59 ch. this stop-bank has been completed and grassed, and further formation is in progress between 1 m. and 2 m. 59 ch.

*Ngahina Wharf and Goods-shed Extension.*—Owing to inability to secure timber work has been temporarily suspended.

*Tirohia-Rotokohu Drainage.*—Considerable work on this has been carried out, 2½ miles of drains having been completed. The road-bridge on the Paeroa—Te Aroha Road across the Rotokohu Drain has been erected.

*Tidal Records.*—Automatic tide-gauges are being installed at Tararu Point (Thames), Kopu, Kaimanawa Wharf (Hikutaia), and Ngahina. The precise levelling for connecting up the gauges has been completed.

*Surveys.*—A considerable amount of surveying and levelling has been carried out.

*General.*—Clearing of willows, &c., on the river-banks has been in hand. Several minor stream-diversions have been made.

## TRAMWAYS.

In accordance with the provisions of the Tramways and Public Works Acts the Department's Engineers have inspected portions of the various municipal tramways and their rolling-stock. Some of the matters dealt with by this Department are mentioned below.

*Auckland.*—Several inspections and reports have been made.

*Takapuna Steam Tramways.*—Sundry inspections and investigations have been called for.

*Christchurch (McCormack's Bay).*—The loop into the new quarry has been completed.

„ *(Woolston Loop).*—This loop, for the storage of trailers, has been finished.

Sixteen trailer cars have been inspected and certificates given.

## MARINE.

Numerous inspections and reports have been made on behalf of the Marine Department, mainly in connection with harbour-works, reclamations, wharves, foreshore leases, &c. Among the various works dealt with during the year the following are selected for brief mention:—

*Flat Rock Beacon.*—An automatic acetylene light has been erected on Flat Rock, off Kawau Island.

*Tiritiri Lighthouse.*—Two old keepers' cottages have been dismantled and new ones erected in their stead.

*Waitakaruru Landing.*—Leading-lights have been erected.

*Wanganui.*—A report has been prepared on the sea erosion at the mouth of the river, &c.

*Dog Island Lighthouse.*—The tower has been strengthened, and various alterations have been carried out.

*Puysegur Point Lighthouse.*—The three new cottages and outbuildings for the keepers which were in course of erection last year have been completed.

## DEFENCE WORKS.

*Invercargill Rifle Range.*—30 chains of the bank necessary to reclaim the land required have been completed, while the trestling used during construction has been extended another 14 chains.

I have, &c.,

R. W. HOLMES, Engineer-in-Chief.