

Cape Foulwind.—A new type of burner was provided at this light, and has resulted in a considerable and satisfactory increase in the optical range.

Cow Rock, Coromandel.—A small automatic light has been erected.

Dog Island.—Two new six-roomed dwellings were erected for the light-keepers. The old stone residences dated back to 1868, were inconvenient, and were falling into disrepair.

Waipapa Point Light.—Fairly extensive repairs were carried out to the residences here.

HARBOURS.

Westport Harbour.—The past year has been a fairly active one as far as construction and maintenance has been concerned. There has been a great deal of work carried out. The "Eileen Ward" has been kept steadily employed wherever conditions were favourable, and handled a total of 380,000 cub. yd. During the latter half of the period considerable shoaling took place, and opportunity was taken to push on with dredging on every possible day (including Sundays) when the state of the bar allowed. Arrangements have also been made to put the "Rubi Seddon" into commission to supplement the work of the "Eileen Ward." In addition to dredging on the bar, the bucket dredge "Maui" was hired from the Gisborne Harbour Board and utilized to deepen the berthages and increase the swinging-area. This dredge excavated 66,324 cub. yd. during the period. The breakwaters are in excellent order. No work has been found necessary on the eastern breakwater, but 2,400 tons of selected 15- to 20-ton stone was placed on the western breakwater and a further 600 tons has been reserved for use here if required. The erosion which was taking place immediately above the Railway Bridge has been arrested by the construction of a short stone training-wall, approximately 4 ch. long. This wall contains some 8,200 tons of stone and has already performed good work, the main current of the river having been forced further out into the channel. In addition to this, some 10 ch. of river-bank between the down-stream end of the erosion and the Railway Bridge, where previous stone facing was collapsing, has been rebuilt with some 5,000 tons of stone. In order to cope with the situation at what is termed Organ's Island, adjacent to the relief channel, extensive stonework has been carried out in facing the river-bank. Ten chains of work have been completed, and there is 40 ch. yet to do, which it is hoped to complete during the coming year. In order to carry out this work it has been necessary to construct one mile and a half of railway-track, including a bridge 450 ft. long across the old river-bed near the Orowaiti overflow-channel. Erosion has also been taking place on the right bank of the river some distance above the Buller Bridge, adjacent to properties owned by Messrs. Hannah, Organ, and Howey. This erosion covers a considerable length of the bank, but, as the stream has beached considerably at this point, it was decided to try and deal with the problem by planting willows. A strip of land 2 ch. wide and the whole length of the erosion was therefore acquired and extensive willow-planting carried out. In spite of the very dry summer, the majority of the trees seem to have taken well, and it is hoped that they will soon be successfully established. A great deal of snagging was carried out above the Cape Foulwind Railway Bridge, especially towards the end of the period. A large number of snags, some of very large proportions, were removed, and many others were loosened for removal by floods. The quarry at Cape Foulwind is now in good working-order, and an ample supply of good stone is in sight. The shifting of a 25-ton crane, compressor, boiler, and other plant from Tauranga Bay quarry was completed, and the railway-track thereto has been picked up and used on other parts of the work. One 25-ton and one 10-ton crane are in full operation, and the provision of a 5-ton crane is in hand. Two locomotives are in constant use transporting the stone to the various protective works, the output from the quarry to all works during the year being 22,000 tons. A great deal of survey-work was carried out during the year, including soundings in the roadstead, swinging-basin, and berthage area, traverses of various shingle beaches, lagoons, &c., and investigations at the Orowaiti overflow. All plant has been well maintained during the year, and all buildings were completely renovated and painted.

Karamea Harbour.—The erection of the new wharf-shed was completed early in the year. This is a substantially built building, 30 ft. by 20 ft., and its provision has considerably facilitated the work at the port. In connection with the development work which was necessary in order to enable the permanent stonework at the training-walls to proceed, 3 m. 50 ch. of tram-line from the training-wall to the quarry-site at the Oparara quarry has been completed and the track laid throughout. Two miles of ballasting has been completed, 300 lin. ft. of trestling erected, and a further length of 280 ft. from the end of the tram-line to the beginning of the training-wall is in hand. A considerable amount of work has been involved in the stripping and general opening-up of the quarry-site. Blacksmith's shop and benzine-store have been erected, together with one cottage and eight huts for workers' accommodation. Four end-tip and four side-tip stone-wagons have been delivered, whilst a petrol-locomotive, air-compressor, and 5-ton crane have been procured and are awaiting shipment.

Okoriti Harbour.—A thorough engineering survey of this locality was made, covering the harbour lagoon and roadstead, the final plans and report being in course of preparation.

Russell.—The new ferro-concrete wharf has been completed during the period and is now in use.

Whangaroa.—It is proposed to erect two new wharves here—one at Whangaroa in reinforced concrete, which is almost complete, and one at Totara North, for which a contract has been let for the erection in timber.

Waikopu Wharf.—An addition was made to the main wharf to strengthen it and enable a 30-ton crane to be mounted on it. This crane, which was designed by the Department and constructed in New Zealand, was provided to enable the transformers and other heavy lifts for the Waikaremoana power-station to be handled. The plans for a stone breakwater at this port were also prepared, and a contract has been let for its construction.