

The erection of the pumping-station for the three low-head pumping-units is progressing very well. The foundation work, including inlet and outlet culverts, draft-tubes, and machine-foundations, is of substantial character, in concrete, and this part of the work is complete. The placing of the pump units is proceeding with the concrete-work, and the erection of the timber-work for the housing of the plant has commenced. It is anticipated that this station should be complete and available for operation by the end of this year.

Work is in hand cutting the main drainage-canal from Maori Lake to the pumping-station, and in addition a main internal drain from Momona to connect with the Maori Lake canal is being excavated.

The contour-channel deviation to allow this channel to discharge direct into Waipori River instead of Maori Lake has been cut, and the deviation stop-banked to the same standard as the main defensive bank. On the Henley-Berwick Road, across the contour-channel deviation, a traffic-bridge, in hardwood timber, of eight 25 ft. spans is in hand to first-class standard and will shortly be complete. Provision for draining the area between the contour channel and Berwick was necessary, and this has been furnished by the construction of a 20 ft. bridge span with flap gates discharging into the Waipori River and by the construction of a 2 ft. steel-pipe culvert 290 ft. long, under the contour channel.

MARINE.

LIGHTHOUSES.

North Cape Lighthouse.—The apparatus for this lighthouse, which is to be of the automatic flashing type with an optical range of sixteen miles has come to hand, and the site has been prepared for its erection. Unfortunately, the weather was too rough to land the material on the last trip of the lighthouse tender, but it is anticipated that the light should be in operation by the end of the current year.

Kaipara Harbour (Sail Point).—A small automatic flashing light operated by compressed acetylene gas has been purchased and is at present being installed. It will have an average range of seven miles, and should be of great assistance to shipping in this locality, the definition of the main channel being very necessary on account of the large amount of shoaling taking place.

Piako Beacon.—The original oil-burning leading-lights have been replaced by single automatic flashing light fitted with sectors to define the channel at the entrance to the river.

Manakau South Head.—It was decided to convert this lighthouse to automatic operation; at present it is a third-order watched light, and the necessary flasher and automatic controlling-mechanism has been procured for installation in the existing lens and tower.

Tiritiri Lighthouse.—Painting and repairs carried out.

Cape Brett Lighthouse.—The keepers' residences were repaired and renovated.

Godley Head Fog-signal.—The complete apparatus for a large diaphone fog-signal similar in every respect to that recently installed at Pencarrow was procured and erected, with the necessary building. The signal has been in operation for some time and is giving satisfactory service. In addition to the assembly proper, it was necessary to construct an incline and track to enable the materials to be lowered to the site of the fog-signal.

Godley Head Access Road.—A road four miles in length giving access to the lighthouse was also formed from Evans Pass to the lighthouse.

Kaikoura Lighthouse.—This is a new light, which has been erected to fill the comparatively long gap between Cape Campbell and Godley Head. The light itself, which consists of an open-flame automatically-operated flasher in a 500 m.m. catadioptric lens, was procured and erected during the past year. The lens is mounted on a small iron tower containing the gas-holders.

Kahau Rocks.—The proposals to install a light at this point were investigated carefully last year, and following that investigation a final survey was made and plans prepared for an automatic light with an optical range of sixteen miles. This light will be of the new automatic Dalen type, and, as the cost of placing it on the rock itself would be very high, it has been arranged to place it on the foreshore immediately adjacent, and cover the rock itself with a red sector. To have placed the light on the actual rocks, which are very low and difficult of approach, would have involved an expense running probably into many thousands. The prominent position selected will compensate for the fact that the light is inshore of the danger. The order for the apparatus has been placed and the erection will be proceeded with as soon as it arrives.

Cape Egmont.—The existing watched light on this point is a fixed light and has been in use for many years, being one of the earliest provided. Owing to the multiplication of powerful electric lights in the locality and the confusion caused by the headlights of motor-cars on the main road between New Plymouth and Opunake, it has been decided to provide a new and up-to-date light with a definite characteristic. An order has therefore been placed for a powerful new revolving light. This light will be the most modern yet installed on the New Zealand coast. It will be fitted with triple lenses, giving, when revolved, three flashes at definite intervals. The whole of the apparatus, both the lighting and revolving parts, will be automatically operated and governed by the pressure of the gas, the whole process in turn being controlled by a daylight valve which automatically starts the mechanism as the daylight fades and stops it again at daybreak. Thus, in addition to increased efficiency, there will be decreased expense.