The result of all these experiments is to convince the Department's expert advisers that the interests of shipping will best be served by the erection of a modern radio beacon suitably placed in an accessible locality, and thus remove the menace of Three Kings more effectively than could be done by means of lights and fog-signal.

Tiritiri.—The apparatus has been ordered, and is now to hand, for the conversion of this light from a watched light to an automatic. The work of conversion will be put in hand shortly.

Ohena Island.—The erection of an automatic flashing light on a concrete base has been completed, and the light is now in operation.

Matakaoa Point.—Plans and estimates have been prepared and apparatus ordered for an automatic flashing light at this point. This light will be erected at a height of approximately 100 ft., and will have a range of fourteen miles, and an arc of visibility of 199° 30′. It will serve a twofold purpose. Owing to the shifting of the East Coast lighthouse from the island to the mainland, there is a small dark sector to the northward. The new light on Matakaoa Point will be of great assistance to ship-masters coming from the north for turning the Matakaoa Point before they come actually within the range of East Cape light. Secondly, it will act as a port light in connection with the new wharf now being constructed at Hicks Bay by the Hicks Bay Harbour Board.

Kaipara South Head Beacon.—A small automatic acetylene flashing light was installed at this beacon in place of the oil-burning lamps, which required an attendant. The new light is giving satisfactory service.

Somes Island.—This light was converted from a watched oil-burning to an unwatched automatic acetone-acetylene light, with a very considerable amount of saving, and handed over to the Wellington Harbour Board.

Stephen Island.—The installation of two oil-engine hauling-winches to take the place of the original horse-operated whims has been completed.

Cape Foulwind.—Surveys have been made and plans prepared for the erection of a new lighthouse at this spot. The existing light-tower, which is of wood, is commencing to deteriorate, and a new concrete tower will be required. The new lighthouse will be an automatic one of the Dalen type, utilizing an incandescent acetylene burner with automatic mantle exchanger. This is the latest development in the design of automatic lights for the higher-powered stations.

Chatham Islands.—It is proposed to erect a small electrically operated light on the wireless mast at the Chatham Islands. Details are being prepared, and arrangements have been made with the Post and Telegraph Department to allow the use of their mast and electric supply. It is anticipated that this light will be of great assistance to vessels wishing to make Waitangi after nightfall. At present the shipmasters do not care to approach these islands in darkness, owing to the dangerous outlying reefs.

Kahurangi.—This is at present a second-order watched oil-burning light; it is proposed to convert it to an automatic acetylene light. Plans and estimates have been made, and it is hoped to make a start with the conversion very shortly.

Anglem Point.—The necessary apparatus for the conversion of this light to an automatic flashing type has been obtained and installed, and is operating satisfactorily.

The Brothers.—New rollers and roller-paths have been fitted to the revolving portion of this light, to take the place of the original ones, which had become badly worn.

General repairs and maintenance works were carried out at the various light-stations, cottages, &c.

Harbour-works.

Gisborne.—A great deal of controversy has arisen concerning the proper solution of the Gisborne Harbour problem, and, with the idea of endeavouring to come to a settlement, the whole question was discussed with the Board and its officers in Gisborne. It was finally decided that certain definite questions concerning a scheme put forward by Mr. G. H. Lysnar should be answered by the Marine Engineer, and after a great deal of investigation the questions were answered, and the Board definitely decided to adhere generally to the scheme of harbour improvement devised by Mr. Leslie Reynolds, and approved some years ago by the Department. The Harbour Engineer is now working up the detail plans, which will be forwarded for formal approval in due course.

Waikokopu.—The Waikokopu Harbour Board having amalgamated with the Wairoa Harbour Board, the combined Board decided to do nothing further in the way of improvement to the Wairoa Harbour, but to concentrate on Waikokopu. However, after spending a considerable amount of money in an unsuccessful attempt to dredge out the inner basin, the Board found itself unable to proceed further for want of finance and public confidence. Eventually the Minister of Public Works agreed that his Department would erect a wharf in such a position and of such extent and depth of water as would cater for all coastal and lighter traffic, and would yet fit in without loss with the major breakwater scheme, should that be put in hand at a later date. The wharf will be ready for use very shortly. Being connected with the railway to Wairoa, and the freezing-works and other industries, it will be of great assistance to the district generally.

Westport.—Weather conditions were such that a sufficient depth of water was maintained on the bar to adequately serve any vessels visiting the port at that time.

No additional work was carried out on the breakwater, the work which had previously been carried out proving very satisfactory and maintaining its position well.

While the dredge was idle during the cessation of coal export, the work of painting and repairing all buildings in connection with the harbour-works was put in hand, and these buildings are now in first-class order. The fleet and all plant necessary for the prosecution of the works has been carefully attended to and kept in first-class repair throughout the year.