

the beach for a distance of 2 chains were blown off and levelled down. A small breakwater of rock and concrete blocks was also built. This work, as far as it has gone, has proved very satisfactory, the breakwater having the effect of keeping the landing covered with sand almost continuously, besides affording a measure of protection to boats immediately they come under its lee. It will want extending at some future date.

Anglem Point Lighthouse.—A sixth-order fixed light in wooden tower was erected at Anglem Point, Stewart Island. An oil-store was also erected.

Channel-buoys.—During the year a contract was let for three mark-buoys for various places and a bell-buoy for Tauranga entrance, which was satisfactorily completed.

ELECTRIC TRAMWAYS, ETC.

Auckland City Electric Tramways.—During the year three additional cars, bringing the number up to ninety, have been examined and passed as safe for traffic. Work on the Mount Eden and Mount Roskill extensions has been finished and passed for traffic on 15th May, 1908, and 24th August, 1909, respectively. The duplication of the line at Eden Terrace has also been carried out and finally inspected and approved. An inquiry as to the efficiency of brakes in use on the Auckland tram-cars was held by Mr. Stuart Richardson and myself as a Royal Commission in July, 1908. The finding being unfavourable to the brakes then in use, the Tramway Company have been required to submit proposals for an improved system of brakes. This matter is now in hand.

Takapuna Tramways (Steam-driven).—The various works in connection with the construction of this tramway are in a well forward state, and are subject to inspection from time to time. The company expect to be in a position to run the cars by about the end of this year, but it is doubtful if the work can be completed so soon.

Wanganui Electric Tramways.—During the year the authorised tracks, totalling 5 miles 10 chains, were constructed in Wanganui, a power-house erected, and the trams started running on the 10th December, 1908.

City of Wellington Electric Tramways.—Alterations to the track in Broadway, Miramar, were completed, and traffic authorised on the 29th September, 1908.

Christchurch.—A double line of rails giving a more direct run through Cathedral Square has been laid down. Inspection of this work and of cars has been made as occasion required.

Dunedin.—Extension of the track to Carisbrook Cricket-ground, a distance of about 10 chains, was completed, and authorised for traffic on the 24th July, 1908.

UTILISATION OF WATER-POWER.

Kaituna Water-power Scheme.—Gauge-readings of the varying levels of the water of Lake Rotoiti have been, and are still, being taken. The flow of the lake has been taken a number of times to ascertain the discharge under varying conditions. The gauges have been referred to permanent bench-marks.

Huka Falls Power Scheme.—Records are being kept of the rainfall at Lake Taupo, and gauge-readings, which show the altering levels of the lake and of the Waikato River, have been continuously observed. The gauges have been referred to permanent bench-marks.

Similar gauge-readings of other rivers in Wellington and Canterbury are being made.

DEFENCES.

Some works in the direction of strengthening the existing harbour defences have been carried out during the past year, and also various maintenance works.

Some repairs and additions have been carried out in connection with the Trentham Rifle Range, also the Drill Hall at Westport.

CONTRACTS.

A complete schedule of the contracts entered into during the year for constructing railways, bridges; supplying hardwood timber, ironwork, and other bridge-material; erecting station buildings, public buildings; executing repairs to public buildings; constructing lighthouses, wharves, and other marine work; as well as contracts for the supplying of all stores and other materials connected with public works, is given in Appendix C.

I have, &c.,
R. W. HOLMES,
Engineer-in-Chief.