

Palmerston North.—Artillery stables were completed during the year.

Levin.—A drill-shed has been erected.

Reefton.—A drill-hall was erected under contract.

Christchurch.—Artillery stables and quarters have been completed, and additions made to the district store.

St. Kilda.—The erection of artillery depot and drill-hall has been carried to completion.

Invercargill.—Artillery stables have been completed under contract.

The foregoing report mentions only new works of some importance, and additions and alterations of a more or less extensive character. A large number of minor works consisting of small buildings, additions, improvements, installation of water, lighting and drainage services have been carried out, principally under petty contracts. Maintenance works, repairs, repainting, and renovations to buildings owned by the Government throughout the Dominion have been attended to as usual, and fittings and furniture required have been supplied mostly from the Department's workshops.

I have, &c.,

JOHN CAMPBELL,
Government Architect.

The Hon. the Minister of Public Works, Wellington.

APPENDIX G.

ANNUAL REPORT ON ELECTRICAL WORK AND POWER-SUPPLY UNDERTAKINGS BY THE CHIEF ELECTRICAL ENGINEER.

The CHIEF ELECTRICAL ENGINEER to the Hon. MINISTER OF PUBLIC WORKS.

SIR,—

Public Works Department, Wellington, 31st July, 1914.

I have the honour to submit the following report on the various works entrusted to me during the past year:—

LAKE COLERIDGE WORKS.

The works which have been designed to develop the available power at Lake Coleridge and to utilize the same for transmission and distribution throughout the Canterbury District have made good progress, and it is anticipated that the formal opening will take place in October. The works now approaching completion provide for headworks and buildings for supplying 10,000 h.p., whilst the generating plant consists of three units each capable of supplying 2,000 h.p.; two of these units yielding 4,000 h.p. are available for supply purposes, leaving the third unit as a spare. Transmission-lines have been erected in duplicate between Lake Coleridge and Christchurch, and a transformer station has been erected at Addington for the purpose of reducing the pressure to a value suitable for distribution to Christchurch, and within a radius of twenty miles therefrom.

Contracts have been entered into with the Christchurch City Council, the Christchurch Tramway Board, and other power-users, and negotiations are proceeding with a view to supplying surrounding local authorities and power-users outside the limits of Christchurch, including the Lyttelton Harbour Board.

Arrangements are being made for giving a supply to the factories, creameries, and homesteads in the Tai Tapu district, and it is confidently anticipated that the application of electricity to the purposes mentioned will prove a success, and that there will be a considerable development in this respect.

Another application of electricity which shows considerable promise is the manufacture of artificial fertilizers, and it is hoped to combine the manufacture of these products with the freezing-works and utilize that part of the plant which is under present conditions idle during the greater part of the year. By combining the two industries in this way the cost of production will be considerably reduced, with the result that fertilizers should be manufactured at an exceedingly cheap rate.

Owing to the growing demand for power, the limits of the plant now installed will be exceeded in about two years' time, and it is necessary to place an order for a fourth unit forthwith, and further arrangements must be made very shortly for providing a fifth unit, together with an additional pipe-line.

As regards the cost of the works now in hand, the expenditure to date amounts to £218,633, and the commitments to £34,805, making a total indebtedness of £253,438. A further expenditure of about £10,000 will be required in order to complete the works, and I am glad to be able to state that the works will be completed substantially in accordance with the original estimate.

It is generally recognized that a local standby plant is desirable in case of water-power plants with long transmission-lines, and the Department, acting in accordance with what is now common practice, have entered into an arrangement with the Christchurch Tramway Board for the use of part of their steam plant for standby purposes. Inasmuch as their plant is rendered idle in consequence of a supply