

*Expenditure.*—The maintenance expenditure charged to revenue amounts to £133,997, or £195 per mile, a slight increase over the rate for last year. This amount is higher than for any previous year, and is in excess of the expenditure per mile on any railway in the Australasian Colonies.

I would strongly urge the more vigorous prosecution of relaying, bridge renewals, signal-work, interlocking, and block-working; and I hope that funds will be found to enable these works to be pushed on during this financial year.

*Mileage.*—The total mileage open for traffic on the 31st March, 1902, was 2,234 miles 66 chains, being an addition of 23 miles 52 chains opened during the year.

*Private Sidings.*—On the 31st March last there were 280 private-siding rights in existence, with a total annual rental of £4,572. Ten new grants were made during the year.

*Leases.*—One thousand eight hundred and eighty-five leases were current at the end of the year, with an aggregate annual rental of £19,127. New leases issued since the 31st March, 1901, totalled 354.

*Staff.*—The working staff numbered 2,632; office staff, 90: making a total of 2,722 persons.

I append the usual returns.

I have, &c.,

JORN COOM, M.Inst.C.E., Chief Engineer.

The General Manager, New Zealand Railways.

#### ANNUAL SIGNAL AND ELECTRICAL REPORT.

SIR,—

Wellington, 1st April, 1902.

I have the honour to submit the following report on the signals, interlocking, and block-working, also the telegraph and telephone facilities, of the New Zealand Government railways for the year ending 31st March, 1902:—

##### *Fixed Signals.*

During the past year twenty-one stations have been fitted with fixed signals.

The whole of the fixed signals, with the exception of about twenty stations, have now been fitted with locking-plates. The work in connection with the remaining twenty stations is well in hand.

The expenditure for the year on new work was £1,486, and for maintenance £804 6s. 8d.

##### *Interlocking of Points and Signals.*

The signalling and interlocking of Wellington yard, which was the first complete installation in New Zealand, has now been in operation for more than twelve months, and has worked without a hitch of any kind.

The following stations have been fully equipped with signalling and interlocking and brought into operation during the year: Westport, Burnside, Abbotsford, Wingatui, and Hornby. The work has been commenced and is well in hand at Cattle-yards, Rolleston, and Studholme.

The expenditure for the year on new work was £11,314 2s. 9d., and for maintenance £114.

##### *Block-working.*

During the year satisfactory progress has been made with the equipment of the electric train-tablet system of block-working; 104 tablet-instruments and 140 miles of line have been fitted up and brought into operation, embracing the following sections: Hawera to Turakina, Featherston to Te Aro, and Waitati to Mosgiel.

The equipment of the sections between Longburn and Turakina is in progress.

The staff-and-ticket system of block-working has been adopted on the Napier-Spit Section.

##### *Telegraph and Telephone Facilities.*

During the year a Morse wire has been erected and brought into use between Wanganui and Hawera, and the erection of a Morse wire between Dunedin and Invercargill has been commenced, besides which various alterations and additions have been made to improve existing lines.

Thirty additional Morse instruments and fifty-eight telephones have been fixed and brought into operation, and sixty additional connections have been made with telephone exchanges.

A few single-needle telegraph-instruments, which are so extensively used for railway-work in Great Britain, have been imported, with the view of testing their adaptability for railway-work on the New Zealand lines. They are at present being tried, and, if found suitable, should be adopted on all new lines, as they are in many ways far more economical than the Morse for railway-work.

The expenditure on electric block-working, telegraph and telephone facilities for the year was: New work, £18,656 12s. 8d.; and maintenance, £6,218 10s. 11d.

##### *Electric Light.*

Eight of the signals at Wellington were fitted with the electric light as an experiment. This has proved in every way to be very satisfactory and economical.

Four arc lights have been erected at Wellington to light the interlocked portion of the north end of the yard; the lights are switched in and out by the signalman as required, and they have proved most convenient, and in every way the most suitable light for the purpose which could have been adopted.

I have, &c.,

H. J. WYNNE, A.M.Inst.C.E.,

Signal and Electrical Engineer.

The Chief Engineer, Wellington.

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