

## APPENDIX D.

## ANNUAL REPORT ON MAINTENANCE OF NEW ZEALAND RAILWAYS.

Sir,—

Chief Engineer's Office, Wellington, 21st May, 1895.

I have the honour to report on the maintenance of the New Zealand Railways for the year ending 31st March, 1895.

*Extensions.*—The following new lines were opened for traffic during the year:—

	M.	ch.
Whangarei Railway, Hikurangi Extension.	8	06
Tarukenga to Rotorua, on the Thames Valley-Rotorua Railway	8	56
Middlemarch to Hyde, on Otago Central Railway	16	20
Glenomaru Tunnel, on Catlin's River Branch	0	33
Mokotua to Gorge Road, Seaward Bush Branch	6	62
Mokihinui Coal Company's line taken over	3	69
Total	44	06

*Mileage.*—This brings the total mileage of railways opened for traffic up to 1,994 miles 76 chains, with an additional 10 miles of Forest Hill Branch under lease.

*Permanent-way.*—The lines generally have been maintained in good running order. Renewals of rails have been effected to the extent of 33 miles 5 chains.

*Sleepers.*—There has been a continued increase of rate of renewal of sleepers, the number used being 194,971. Of this number 170,932 were for ordinary renewals, and 24,039 were for increasing the number per rail-length. About fifty-four miles of railway were thus treated. The number of sleepers used in ordinary repairs represent an average of eighty-seven per mile of railway.

*Ballasting.*—Very considerable additions to the ballasting of the lines have been made during the year. Land has been acquired from which to obtain supplies of ballast, and several new ballast-pits have been opened. It is essential to economical maintenance of the lines to keep them well supplied with ballast. Full ballasting saves wear-and-tear, greatly facilitates weeding, and enables a good running-surface to be kept with a minimum of labour, and it preserves both rails and sleepers.

*Slips and Floods.*—There have been several somewhat severe storms, causing floods and slips in various parts. The principal damages done were

Napier-Taranaki Line. At Swainson's grade and north approach to Aorangi Bridge. In the Manawatu Gorge there were several heavy slips.

Wellington Section. Several very heavy slips occurred near Mauriceville, stopping traffic twice, for six days and three days respectively.

Dunedin Section. Some large slips near Seacliff have been cleared, and drainage works done to check further movement.

Nelson Section suffered considerable damage from an unusually heavy flood in the Wai-iti River.

Greymouth Section. A large old slip in the Gorge, near Greymouth, started to move again.

Protective works, erected in former years, have been standing well, as a rule, and have greatly diminished the effects of floods on the railways generally. New protective groins have been formed during the year on the Pohangina River, near Ashurst, on the Waipawa River (Napier Section), and on the Waipa, near Otorohanga.

*Bridges.*—Repairs, renewals, and reconstruction of bridges have been carried on steadily.

A number of bridges have been strengthened to meet the requirements of heavier engines. Repairs and renewals of decayed timber have been systematically carried on, having regard to safety of the structures, and taking care to utilise the old material as far as prudent.

Auckland Section. Thirty-six bridges were under repairs and renewal.

Napier-Taranaki Sections. Aorangi Bridge repaired after damage by flood. Turakina, Patea, Mangawhero, Tepopo, Manganui, Waipuku, Mangamawhiti, Maketawa, Ngatoronui, Ngatoro, Waitotara, all repaired and strengthened, also five of the large viaducts on the Napier line overhauled and repaired.

Wellington Section. All bridges north of Featherston have been strengthened, besides renewal of timbers as required. There has been a quantity of Native timber removed on account of early decay.

Christchurch Section. On the north line repairs and renewals have been carried out to the large bridges over the Pahau, Hurunui, Weka Pass, Waikari, Kowai, and Ashley, also on south lines, the Selwyn, Rakaia, Hinds, North and South Rangitata, Orari, Temuka, Opihi, Saltwater Creek, Pareora, and Waihao.

Dunedin Section. The Island Stream Bridge has had new superstructure, Kakanui, Waitakouaiti, Balclutha, Waitapeka, Waiwera, and Upper Waitaki Bridges have undergone extensive repairs and renewals are in progress at the Glenore Bridge and Pomahaka.

Invercargill Section. The Waicola and Garston Bridges have been rebuilt, also a small bridge on the Mossburn Branch.

Nelson Section. All the bridges have now been renewed save two. During the year four were rebuilt.

Picton Section. The large viaduct and Wairau Bridge received extensive repairs.

General. Minor bridge-repairs have been carried out as required on all the sections.

*Fences.*—The fences are, generally speaking, fairly maintained, and the expenditure upon them was somewhat higher than in the previous years.

There are 2,857 miles of fencing along the railways.