

APPENDIX B.

ANNUAL REPORT ON MAINTENANCE OF NEW ZEALAND RAILWAYS.

GENTLEMEN,—

Chief Engineer's Office, Wellington, 20th June, 1893.

I have the honour to report on the maintenance of the New Zealand railways for the year ending the 31st March, 1893.

Extensions.—The Te Aro extension of the Wellington line was opened during the year, having a length of 1 mile 10 chains.

Mileage.—The total mileage of the New Zealand railways open for traffic at the close of the financial year was 1,890 miles 40 chains.

Kaihu Valley Railway.—This line was taken over on the 1st January, 1893—16 miles 47 chains. In the following month a very severe flood occurred, which greatly damaged the line, washing out ballast and formation, and rising up to 4ft. above the rails. The approach to the bridge at 14m. 9ch. was washed away, and entailed the lengthening of this bridging. The Kaihu river-bed is much blocked with timber and snags, the accumulation of several years, consequently floods rise higher than they otherwise would, and steps are being taken to clear the course in places to remedy this. The repairing of these damages has added considerably to the expenditure on this line during the few months it has been in charge of this department.

Permanent-way.—Renewals of the lighter classes of permanent-way with heavier, and renewals of some of the heaviest classes with 53lb. steel, have been effected to the length of 36 miles 77 chains in all; and new rails have been laid instead of old in general repairs to the aggregate of 1 mile 64 chains more.

Included in the above there has been a mileage of about 28 miles 57 chains new rails laid in the lines.

Sleepers.—The total number of new sleepers put into the road was 145,045. About 133,000 of these were due to the ordinary course of renewal. The balance of about 12,000 have been put in to increase the standard number of sleepers per mile in relaying track, so as to give a greater stability to meet the steadily-increasing traffic, and consequent necessity for the use of heavier classes of engines.

The rate per mile of sleeper renewals for the year was—ordinary renewals, 70·4 per mile; extra sleepers due to respacing, 6·3 per mile: total, 76·7 per mile.

Ballasting.—A new ballast-pit has been acquired and opened on the Wanganui line, and other pits will be required to facilitate ballasting and minimise haulage.

Flood-damage.—Damages from storms have been comparatively heavy. A very large slip occurred at Kamo, on the Whangarei line. A heavy flood in the Waikato River caused a breach at Rangiriri and other damages. Heavy slips occurred in the Manawatu Gorge. At the Summit, Wellington Section, a large slip took place, choking the tunnel-mouth. There has been almost entire immunity from damage through floods in the large southern rivers. The protective works which have been established on all the large rivers are standing well. New protective works were completed at the Pahau and Waihao Rivers, in Canterbury. At Deep Creek, near Seacliff, subsidence occurred through underground soakage, requiring about 9,000 cubic yards of stone and other material to fill up the bank which had sunk.

Structures.—A great deal of reconstruction of bridges has been done. The growth of traffic is demanding an increase in weight of locomotives. To meet this a greater ratio of strength is required in the bridges. By a gradual introduction of an increased standard of strength during the past sixteen years a great deal has already been done in this direction, but on sections where the traffic has specially expanded it has been found necessary to strengthen the bridges throughout. This was completed last year between Wanganui and the Rangitikei River. Similar work will be taken in hand this year between Rangitikei River and Palmerston, and will next be continued north of Wanganui, so that the run of a heavier class of engine may be extended throughout the Wanganui Section. The deviation of the line at Carrington Road, New Plymouth, has been completed, and a new girder bridge built over the road. A cart overbridge for the road diversion has been constructed at Sentry Hill. The Mangaoraka Bridge, near Sentry Hill, has been renewed at a higher level, to improve the grade. The Goat Valley Bridge, near Kai-iwi, has been reconstructed in iron girders, and raised 3ft. to improve grade. The Waitangi Bridge, near Farndon, has been reconstructed in simple 20ft. spans. The Hawkins Bridge, on the Whitecliffs Branch, was reconstructed in simple 20ft. spans. At Whales Creek, near Timaru, new abutments, with iron girders of one span, have been constructed, and the old timber viaduct filled in. The Waitaki girder bridge has been scraped and painted throughout. At Kaka Creek, near Hampden, a 16ft. concrete arched culvert has been built in place of the timber viaduct, which will be removed on completion of the embankment. The Gore Bridge has been redecked. The large viaduct at Picton has had an extensive overhaul, and the Opawa traffic-bridge has been redecked. In addition, a very large number of timbers and piles have been renewed throughout the various bridges. An addition to the Onehunga Wharf has been completed. Heavy repairs have been in hand at the Port Chalmers wharves. At Greymouth the timber breastwork has been renewed throughout. Further renewals of the decking are in progress. At Westport an extension of the staiths 600ft. in length was completed by the Harbour Board in August last, and has been working satisfactorily. The approaches have been improved, and the whole structure lighted. The old staiths were repaired and altered to a new gradient, to correspond with the new portion. The old portion of Picton Wharf has had a thorough overhaul.

New Works.—At Hastings the street approaching the station has been formed and metalled, with asphalt footpaths on each side. Napier platform has been renewed in earthwork with a concrete face. The Railway Reserve at Stratford has been fenced in. At Christchurch a new 6in. artesian well has been put down, to provide further water-supply against fire. Millburn Station