

The formation is in good condition, and well drained, but there are places on Rotorua Extension and the King-country where slips are troublesome. Near Auckland several deviations and alterations have been made to improve grades and curves.

We examined 75 per cent. of the locomotives and 63 per cent. of the vehicles. The locomotives we could only judge of by outward appearance, and they appear in very good condition. The boilers and fire-boxes are regularly inspected, and kept in good working order. Numbers of boilers are under repair at the workshop.

Carriages of all classes are in the best repair in every part, the painting and upholstery clean and very well kept. Trucks are in good condition, and, considering the durability of the puriri, under-frames are almost as good as new. The floor and sides suffer most, and these are kept in fair repair. There are a number of vehicles with very thin tires: this is unavoidable, as tires are not renewed until they are thin.

The stores are kept in small quantities, and are replenished as required from the contractors in New Zealand, or imported from England through contracts let by the Agent-General. We found all the stores to be suitable, and in good condition, without overstocking or superfluity of any articles.

The lines in the Napier, Taranaki, and Wellington Districts are kept with an eye to economy, the urgency of which draws a sharp line for all work done on the railways.

Nevertheless, the lines are maintained in very good running condition, and everything is in fair repair. As in the North, the growing traffic has had to be met by heavier rails, and strengthening all the bridges, for which great expense has been incurred.

The bridges have been and are still the principal trouble, constant repairs and renewals are going on, but, on the whole, these bridges are better than on the Auckland lines, as kauri was not much used, and the totara which was used is of better quality than in the North. Four lofty timber viaducts on the Napier line are beginning to suffer from decay. We were told that it was proposed to abolish two of them, and rebuild one in iron, and the fourth is to be repaired piece by piece, as considered necessary.

The bridges over the larger rivers are in various conditions—some in want of repair, others very good. The smaller bridges have been extensively repaired or renewed, and many are waiting their turn for repairs or renewals. Open culverts are mostly in good condition, as are the box-culverts, many of which have been taken out, and concrete pipes put in their place.

Cattle-stops are the most in need of repair, and are soon to be taken in hand.

The rails are of various sections: there are 2 miles of 30lb. iron, $81\frac{3}{4}$ miles of 40lb. iron, $80\frac{3}{4}$ miles of 52lb. iron, 38 miles of 40lb. steel, and 222 miles of 53lb. steel. The 52lb. iron rails are in fair condition, the 40lb. iron rails are more or less worn, and are gradually being replaced with 53lb. steel.

On the Rimutaka incline the ordinary rails are much worn, and frequently renewed, while the central rails, of 70lb. steel, wear very little.

The ballast is scanty in many places, and much of it is poor stuff, but there are long lengths of line with good and abundant ballast. Sleepers are maintained, by renewals, in fair condition, there are many old and half-rotten sleepers in the lines, but the most defective ones are removed before becoming unsafe. 38,000 new sleepers were laid in the lines during last year.

The station-buildings and all station fixtures are in good order and preservation, clean, and well kept, decay is overtaking some of them, but it is chiefly in unimportant parts, which are easily renewed at little cost and, with a few annual repairs and painting, station-buildings will last longer than most other items of the railways.

Out-of-door structures like cattle-pens, loading-banks, &c., suffer most, and many have already had repairs.

The fencing is getting old—in places the posts are decaying, in other places they are burnt and we did not observe so many renewals of these by old sleepers as we saw in Auckland, generally, the posts are good totara, and will last a long time. There are forty-two miles of line unfenced.

Gates in many places are flimsy—many are of iron, but too light, and easily damaged, in other places they are stout and strong, and generally they are in good repair. Signboards and mile-posts are all in good condition, and signals in good working order.

From the above description we exclude the Foxton Branch, which is in very poor condition, and much in need of repairs.

We inspected 77 per cent. of the locomotives and 82 per cent. of the vehicles, and the observations made above on the Auckland rolling-stock apply to these.

The stores are well housed, small in quantity, in good condition, and all are serviceable articles, there is no overstocking nor superfluity of any kind.

From Wellington as a centre, the whole of the lines in New Zealand are supplied with stationery. Other kinds of stores are supplied to Wanganui, Nelson, Picton, Westport, and Grey-mouth, while Auckland is a separate centre of supply for its own system of lines.

Taking into consideration the whole of the North Island lines, they have been constructed on the most economical basis, and they appear to be maintained on the same principle. All parts are kept up to serve their purpose with safety and efficiency and beyond that nothing is spent on them.

To this report is attached lists of vehicles and bridges, against each of which is written the condition in which we found them.

We have, &c.,

WILLIAM H. HALES,
C. NAPIER BELL.

26th January, 1895.

The objects on the railways which come under inspection are classed in the following order:—

1. Formation Includes conditions of cuttings, embankments, slopes, drains.
2. Permanent-way Includes rails, ballast, sleepers, with the condition and description of them.
3. Structures Include bridges, culverts, over- and under-bridges, tunnels.
4. Fencing Includes fences, cattle-stops, gates, signboards.