

A heavy snowfall occurred at Arthur's Pass on the 8th July, 1931, and seriously interfered with the running of trains.

Owing to heavy rainfall on the West Coast during January, 1932, several washouts and slips occurred on Rewanui, Hokitika, Reefton, and Midland lines, but only minor delays to trains were occasioned.

On the 2nd September, 1931, about 2,000 cubic yards of rubble and clay came down on the track at 20 m. 50 ch., Otago Central Branch (between Deep Stream and Flat Stream). Traffic was blocked from early on the 2nd to 10 a.m. on the 4th September. On the afternoon of the 1st October another heavy slip occurred at this locality. The cutting was filled to a depth of 14 ft. over the rails and approximately $1\frac{1}{2}$ chains of track was covered. All traffic was suspended until the morning of the 5th idem.

As a result of exceptionally heavy rains during the week preceding, a number of slips and washouts occurred between Timaru and Dunedin on the 20th February, 1932. The principal damage was bridge No. 67 (Pareora River) partially washed away, and traffic was blocked until 2 p.m. on 25th February. About 120 ft. of the northern approach to Bridge No. 72 (Otaio River) was scoured for a depth of 18 ft. At 173 m. 7 ch. a dry stone wall under new filling on deviation on Otepopo Bank was pushed out, causing track to subside.

Buildings.—Buildings have been maintained in good repair. Houses at Kakahi, Rangataua, Porewa, Maxwell, Blenheim, Mitcham, and Waimahaka were destroyed by fire, and houses at Helensville, Waimiha, and Studholme received minor damage from the same cause.

Railway Improvements.—The principal works carried out during the year were as follow :—

Auckland: The whole of the work in connection with the station, goods-sheds, yard, roading, fencing, appliances, &c., has now been completed. The flooring of the new car and wagon depot was completed, and all the machinery has been installed.

Wellington: The new goods shed and yard were completed during the year.

Ravensbourne: St. Leonards duplication—this work was completed and the change-over to the new lines effected on the 3rd May, 1931. The old main line has been lifted, and the old structures have also been removed.

Amalgamation of Workshops.—During the year the workshops at Auckland, Wanganui, Christchurch, Dunedin, and Invercargill, which had been operated by the Way and Works Branch, were amalgamated with the locomotive shops.

Bridge Reconstruction Work.—The work of strengthening and renewing bridges has been proceeded with during the past year.

On the North Auckland line the Ahuroa Bridge has been reconstructed with steel girders on concrete piers, and on the Marton—New Plymouth Section the reconstruction of the Turakina and Waitotara Bridges has been completed, while the work of reconstructing the Patea Bridge is nearing completion. The strengthening of the Tokomaru, Manawatu, and Rangitikei Bridges has been completed, and work has been commenced on the Makohine Viaduct. The girders of the Waipukurau Bridge have been strengthened and similar work is in hand on the Waipawa Bridge.

In the South Island the reconstruction of the Ophi Bridge has been in hand during the year and will be completed during the current year. The old timber-work in the Bushey Bridge has been replaced with steel girders and similar replacements are in hand on the Otaio Bridge and Clutha Viaduct. The strengthening of the girder spans in bridges on the Otago Central line is also making satisfactory progress.

Additions to Open Lines.—The expenditure under this account was £5,160, and the works carried out consisted of alterations and renewals at locomotive depots, decking of bridges, alterations to sidings, and general improvements.

Expenditure.—The Way and Works expenditure charged to working-expenses amounted to £307 per mile, as compared with £346 in 1930–31, £347 in 1929–30, £340 in 1928–29, and £359 in 1927–28.

Mileage.—The mileage of track open for traffic on the 31st March was 3,245 m. 2 ch.

The Napier—Putorino Extension, Glenhope—Awatiri Extension, and Ngatapa Branch were closed during the year, and the Cape Foulwind Branch, on the Westport Section, was handed over to the Marine Department.

SIGNAL AND ELECTRICAL BRANCH.

The following is a summary of the principal activities of the Signal and Electrical Branch during the year :—

SIGNALLING.

Ravensbourne—Sawyers Bay.—Automatic signalling has been installed as follows: Ravensbourne to St. Leonards, double line, 2 m. 13 ch.; St. Leonards to Sawyers Bay, single line, 2 m. 33 ch.; power interlocking, St. Leonards. Automatic points at St. Leonards, which reverse automatically for a train to enter the single line whilst the station is "switched out" were installed, and have given every satisfaction.

North Island Main Trunk Line.—Signalling and interlocking with electrical point movements and fouling protection have superseded fixed signals at Porootarao, Raurimu, Pokaka, Horopito, and Hihitahi.

Manual Control of Departure Signals.—At attended crossing-stations in the automatic-signalling areas, equipment for manual control of departure signals has been installed.

Shunt Signals.—In accordance with the amended rules and regulations, all shunt signals have been equipped with a yellow indication in place of green.