

Kanieri Bridge, about 821ft. long, has received substantial repairs. The decayed cross-beams, lateral bearers, lateral braces, stays and butts to diagonals, which were decayed, were renewed, and the whole decking overhauled and repaired with new planking where the old was too far gone. This bridge is now in good order, and will last at least ten or twelve years more, with only slight repairs to deck occasionally.

A deviation of 1 mile 28 chains, with its culverts and two bridges, was made south of Rimu at Deep Creek and Dusky's farm, in order to avoid two steep hills and renewing two bridges that were in a dangerous condition. There were eight culverts made of earthenware pipes, being as cheap as timber, and more lasting. The bridge over Deep Creek is 74ft. long, and that over Dusky's Creek 44ft. long. This was a most important work, and a great improvement on the old part, which was too steep for any traffic. In order to show the necessity of this deviation, I may remark that just as it was finished one of the old bridges broke down beyond our ability to repair it. Two new huts for the surface-men were erected at convenient distances. One hut was handed over by the County Council, together with the road, so that the men are now quite comfortable.

That part from Hokitika to Kumara also received substantial repairs, similar to that between Ross and Hokitika, especially from Flowery Creek on to Kumara. This, being the most worn, received in certain places a good coat of metal, to the extent of 268 yards. There are about 100 yards in reserve for winter use. Other parts received a coat of gravel 6in. thick the whole width of the road, and several places were repaired in patches. The scrub encroaching on the side was cut down, and the water-tables, side-drains, and outlet-drains were cleared out in the worst parts, where the swamp and surface-water was on a level with the road. This part of the work has improved these places very much, but there is still more of the kind required in other places as soon as circumstances will permit.

The Kapitea Bridge received substantial repairs to the under-work and the decking. The decking of all the other bridges on this section also received slight repairs, namely, Little Kapitea, Waimea, Stafford, Piper's Flat, Flowery Creek, Arahura, Four-mile and Three-mile Bridges—in all, nine bridges.

Four log-culverts, two box-culverts, and one pipe-culvert have been renewed; about nine received partial repairs to their sides and coverings.

*Kumara Beach Road, from the Railway-station to Kumara.*—This road was handed over to the department about the 1st of June. The new work which had been done by the Public Works Department was cut up very much by the heavy traffic, which increased to an extraordinary extent about this time, on account of passengers and goods per rail, two sawmills and timber-splitting along the road, so that it was difficult to cope with its maintenance. The upper portion, from the town boundary to below the racecourse, over a mile, formed some years previously, was also worn-out and in bad order. This part received a good coat of gravel, 6in. thick and 12ft. wide on the top, from the upper end to about half a mile, and the next half-mile received a coat of metal 6in. thick and 10ft. wide on the top. A further distance of about 18 chains received a coat of metal 3ft. wide under each wheel-track, omitting 4ft. in the centre where the horses travel. From the above downwards to the station the ruts were kept filled with gravel and broken metal in certain places, until the whole turned solid by the traffic. In this manner about 550 yards of broken metal were used on this road. There are still on hand about 224 yards, which will be spread further on this winter. The result of the above is a good hard road these last three months or so, sufficient for heavy traffic in good weather, with occasional repairs, but nothing short of metalling the whole distance will be sufficient in wet weather. A log-culvert, 6ft. span, has been renewed in the old portion of this road.

*Hokitika-Christchurch Road.*—This road, from Kumara to Arthur's Pass, has received extensive repairs in gravelling. First, from McConnon's Mill to Harcourt's (about six miles), and from near the Taipo up to McDonald's, there were long stretches that were much worn, and these received a good coat of coarse gravel; and at present the horses and six men are engaged in gravelling from Kumara Town boundary on to McConnon's Mill, a distance of one mile and three-quarters, which is worn down to the formation, and much out of order. In that short section of about seven miles between Kumara and Harcourt's twenty-five log-culverts have been renewed, and five repaired with new covering only. Further on, between Taipo and Rocky Point, one log-culvert and four box-culverts were renewed.

In the Otira Gorge, about half a chain of timber-work (heavy beams and uprights), on which the road was built, was broken away by a large rock and other *débris* that came down the face of the hill. A temporary passage was made without delay, and permanent repairs were completed in two weeks from the time it broke away. These repairs required a large quantity of heavy timber, that had to be carted a distance of three miles.

The Rangiriri Crossing was raised in the bottom about 22in. higher than it was, as it was dangerous to cross it even in ordinary floods, on account of the back-water from the Teremakau River. It can now be crossed safely in higher floods, as there is room for flood-water to spread over the flat, and thus leave the ford at a less depth to cross.

The Wainihinihi Ford has been carried away and renewed on two occasions, and the Otira fords have been cut up severely on three occasions, which required a considerable amount of additional labour to place them in order.

Pegleg Creek Crossing, near the top of Otira Gorge, was also carried away on three occasions, and a new crossing had to be made each time. This being a rapid mountain-stream, no permanent crossing can be made, as everything would be swept away in high floods.

In June and July last four separate falls of snow occurred on Arthur's Pass, which blocked the road for traffic, and caused a large amount of extra labour, as it was necessary to clear the road on each of the four occasions. The mails had to be carried through on pack-horses for about three weeks or so, on account of the larger quantity of snow on the Canterbury side.