

REPORT ON ROADS BY MR. C. W. HURSTHOUSE, ROAD SURVEYOR.

Tunnel to Karioi.—This road has been located and an engineering survey of it made, from the Mokau Railway-station to Taumarunui, a distance of 43 miles 7 chains, of which a length of 4 miles 55 chains is in bush, all of which, except a patch of 8 chains in length, is situated at the tunnel end. Of the above 43 miles 7 chains, 5 miles 50 chains is road which has been constructed by the Public Works Department some five years ago, except bridges, and now only requires to be repaired and have the bridges built. This 5 miles 50 chains is in seven detached pieces, and was included in the survey for convenience in letting the work. The whole of the land traversed by this road is, I should say, only second-class. The flats, which exist only in the valleys, are not good soil, except in small patches. The hills, which occupy by far the larger area, are, generally speaking, fair soil that will carry grass, and many of the hills are forest-covered. The principal rivers or streams to be crossed are the Paritikonā, Mangapei, Ohinemoa, Paraketu, Ongaruhe, and Taringamotu. The latter two will probably require bridges, comprising one 70ft. or 80ft. span in each, with appropriate end spans; the others will take from 30ft. to 40ft. single spans. There are numerous other streams that will require smaller bridges, and the usual number of streamlets and swamps requiring culverts and pipes. On the new work the grades are not steeper than 1 in 15, excepting in a few short pieces where unavoidable without going to very great expense. The most severe of these is 25 chains of 1 in 13·2 near the tunnel. On the part made by the Public Works Department, however, there are a few short grades of 1 in 12. No. 1 contract, for 2 miles 68 chains construction, is so nearly completed that I have shown it as completed in the return. It lies between 13 miles 65 chains and 16 miles 53 chains, is nearly all in side cutting, 1 mile 27 chains of it are in bush and the remainder is open fern land. No. 2 contract, for 5 miles of construction, between 34 miles 57 chains and 39 miles 57 chains, has just been let, but work on it has not yet been started. Plans are in hand for No. 3 contract, from 0 miles 0 chains to 6 miles 60 chains, and I hope to have them ready to send to you in about a fortnight. I am not aware that there is any Crown land that will be affected by this road except in a very remote manner.

Waitomo Caves Road, from Hangatiki Railway-station to the Waitomo Caves, 5 miles 36 chains. One petty contract, previously let, has been completed during the year. The other works done have been in the nature of repairs and maintenance. The road runs through first-class land, mixed bush, and open, which, as far as I know, is entirely in the hands of Maoris. I do not think there is any Crown land within 10 miles of it.

Otorohanga to Kihikihi.—Tokanui track: The total estimated distance by this track, between the above places, is 16 miles. The work done is in short pieces, distributed over about 8 miles, and consists of 66 chains of side-cutting, one 18ft.-span and one 16ft.-span bridge, one 6ft. culvert of timber, and eight sets of drain-pipes at seven swamp crossings. The formation done at the bridges, swamp, and one through cutting amounts to 15 chains. About 5 miles of the length, at the Kihikihi end, have been made for some years, including the bridge across the Puniu River. The remaining part of the distance, about 10 miles, is in its natural state, but a cart or buggy can now be driven through. The country traversed is undulating; the land is of fair quality, and open; I should think about 10 to 15 per cent. of the area is occupied by swamp and swampy ground. I have no doubt that this will eventually form a main road. What work has been done has been so placed as to form part of a continuous road without having to be altered. The whole of the land is in the hands, I believe, of the Maoris, with the exception of a few shares in some of the blocks lately bought for the Crown, but which at present are in too nebulous a form, I think, to be considered as tangible Crown land.

C. W. HURSTHOUSE, Road Surveyor.

REPORT OF ROADS ALONG CENTRAL TOURIST ROUTE IN ROTORUA, EAST AND WEST
TAUPO COUNTIES.

Oxford-Rotorua Road.—The past year has been an unfavourable one, owing to the very wet season and the road an unmetalled one. During the year 540 tons of goods passed over it, besides coaches daily. The following works were done towards improving it: 20 chains of side drains, and about 80 chains of out-fall drains, and 6 miles of road was re-formed, besides many stumps being dug out; 20 new culverts were put in, and 12 old ones taken up, repaired, and put down deeper, so as to more effectually drain the road. The roadway is now in fair winter order for an unmetalled one, but it must be metalled before next winter unless the Government intend to bring the railway into Rotorua at once, as owing to this road being so bad in comparison with other roads about Rotorua, many tourists and others are frightened to travel because of the jolting and shaking they get while travelling through the bush. Nearly two thousand six hundred people visited Rotorua last season, and all of them passed over this road, therefore something must be done to facilitate their travelling. The three bridges on this road received two coats of hematite paint, and a set of piles have been added to strengthen the Ngongotaha Bridge. Five surface-men and an overseer have been employed on this road regularly during the past year.

Tauranga to Napier via Taupo.—Taking the road throughout, it is in fair working order. The overseer of the Oxford Road gives his attention to that portion between Tauranga County boundary and Atiamuri, about 56 miles. Eight bridges on this section have been twice painted, and one new bridge, 16ft. span, at Waiohinemaru Stream, been renewed, besides several small culverts put in. With the exception of the small culverts, and the Tahungatara Bridge, which requires renewing, the road-way is in good order. From the junction of Lichfield Road towards Maungaiti and Lichfield, the road is in moderately good order; but the grades up the Maungaiti Hill are steep for waggon-traffic. From Atiamuri Bridge into Taupo the road is very good, but Atiamuri Bridge requires repairing at once. One new bridge, 10ft. span, was built in July last over the poisonous stream near Oruanui. Between Taupo and Tarawera the road is good, and an experiment is being tried of maintaining a portion by piece-work by giving it to a settler living on