

road as constructed will give access to the lands under survey in the Motu Valley. To continue it to Opotiki, or rather to Omarumutu, where it strikes the coast, will cost at least £3,000 more, and further will involve considerable deviations from the partly-formed line already existing.

Te Komata Road.—This line, although not strictly one of those undertaken to open up lands before sale, is under the supervision of this office. I have reported at length on the success attending the carrying through of this road, which, through the determined opposition of Tukumino (which had become historical), had been delayed for years. About $2\frac{1}{2}$ miles are nearly completed as a dray-road. Where finished from the end of the county road at Hikutaia to Ohinemuri, there will be a coach road (summer) from the Thames, through Te Aroha, Hamilton, and Whatawhata, to Raglan. It is by no means therefore an unimportant link in one of the main lines of communication of the country. During the progress of the works on this line, Tukumino has often come down to protest against it, but, as he confined himself to doing so verbally, the work has not been interrupted.

The total mileage of roads made during the season is 63·85, at a cost of £9,287, or at £142 per mile for open and forest (excluding Te Komata). The bush-roads have cost about £167 per mile, the open £80 per mile. This includes bridges, all of which are suitable for carts, though the roads themselves, exclusive of Te Puke, are bridle-roads, of a formed width of about 8 feet.

The average cost is higher than last year, but it is also a fairer criterion as to what roads can be made for of the class we are constructing. We have no contracts on hand at present, but three different road-parties are at work on different lines. I believe this to be the cheapest plan, as contractors' profits are saved.

S. P. SMITH,
Chief Surveyor.

TARANAKI.

East of the Waingongoro.—1. At a cost of £5,390 15s. the whole of the roads, $93\frac{1}{2}$ miles, in an area of about 50,000 acres, have been felled 1 chain wide, with a cleared track in most cases 16 feet, the remainder 12 feet wide; the rate per acre of this work is 2s. $1\frac{1}{2}$ d. A very large proportion of the area is subdivided into sections varying from 50 to 100 acres, which has necessitated a very great mileage of roads, and, consequently, increased outlay. 2. In 40,000 acres west of the Waingongoro, and inland of the plains, 44 miles of road have been felled, and track cleared 16 feet wide, at a cost of £3,327 6s. 3d., equal to 1s. 8d. per acre. To complete the felling of the remaining roads in this locality a further expenditure of £1,650 would be required, making the rate per acre 2s. 6d.; this comparatively high rate is due partly to the fact of $3\frac{3}{4}$ miles of road, at a cost of £186—which is entirely through Native land, but was necessary to get access to the Crown lands—being included, and also through the whole of the Eltham and Manaia Roads being felled 2 chains wide. I should state that the above refers to contracts completed during the twelve months; the actual amount paid during the year being £7,310 1s. 6d., the remaining £1,408 having been paid as progress-payments previous to 30th June, 1880. Mr. Robinson and myself have gone carefully into the question, and find that, where country is cut up into sections varying from 100 to 320 acres, similar to what is being done inland of Waimate at the present time, to fell the roads 1 chain wide, and clear a cartway 16 feet wide, the rate per acre would be about 1s. 8d.; for culverts and earthwork, taking a general average, 6d. more: making a total of 2s. 2d. to open them up for cart-traffic, and a further expenditure of 1s. 10d. per acre would bridge every stream. The cost of inspection for the year, taking overseer's salary, Mr. Robinson's travelling expenses and £50 of his salary, has only been $3\frac{1}{2}$ per cent. on the actual amount paid during the year, which testifies to the economical manner in which work can be supervised under the present system.

THOS. HUMPHRIES,
Chief Surveyor.

HAWKE'S BAY.

I preface my remarks on the different blocks opened out by roads with a statement of the objects that have been held in view when deciding the character and extent of the works to be undertaken. The first aim has been to render accessible the greatest possible area that could be got at with the means at command. By the term "accessible" is meant the providing of a road for the settler through the forest, not the construction of a metalled dray-road. There can be no doubt that the formation of metalled roads through the forest affords the greatest facilities for settlement, and that such roads will pay for themselves; but the object when the construction of road-lines through the bush was first taken up was to render accessible each block as it was placed in the market. Three kinds of roads have been formed: 1. Dray-roads, which are cleared 66 or 40 feet in width, and formed 14 or 12 feet in the centre. All the work put on these roads is of a permanent character, and so far as it goes will last for several years. 2. Bridle- or pack-roads through hilly country. These tracks have been cleared 66 feet in width, and are cut along the sidings on the permanent grades. 3. The clearing of roads 1 chain in width. The advantages to be derived from first opening out the forest by means of passable roads before forming metalled roads are, that all additional work can be done by the settlers living on the ground, which will afford many of them employment; and that the average cost of the work will be reduced by one-third.