

## CHEVIOT ESTATE.

*Homestead-Waipara Road.*—The length of this road is 581 chains. This includes the road from the white gate near The Willows to the north end of the Hurunui-Greta Bridge, all the formation of which may be said to be completed with the exception of about half a chain forming the south abutment of Benmore Bridge. This cannot be completed until the stringers are across to support the abutment. The formation has cost £4 15s. 6½d. per lineal chain, which includes all the pipes, ditches, hollow fords, &c., but when the works are completed we shall have probably to increase this slightly. The shingling, of which 184 chains have been completed, has been done well, at a cost of £1 6s. 3d. per chain, exclusive of supervision, searching for gravel-pits, &c.

The only bridge on the line is the Benmore Bridge, the total cost of which is £496 6s. 10d. This includes all the charges to date, but not the cost of erection, which will be about £50 more. The carting done on the timber from the Port cost 2s. per superficial hundred, which I think is very reasonable.

Turner's Creek concrete culvert cost £82 14s. 3d. The cost per cubic yard has been for concrete £1 4s. 5½d. This includes the foundations and everything. The shingle was good, abundant, and handy. The three small bridge-culverts cost £90—carting, labour, &c.—but does not include the timber on hand at the Port, the value of which is probably fully £50.

The temporary bridge at Benmore cost £60 17s. Much of the timber will be recovered, and used in other works.

The engineering and supervision cost £531 2s. 2d., including Messrs. Thornton, Napper, Hutton, and part of Mr. Fraser's and my own charges. Considering the amount of attention required for this class of work, and the numerous changes of management, I do not think this is excessive, because, although it may appear a large sum, it should be remembered that, when the road is completely metalled, the bridge finished, &c., it will considerably increase the totals; but little will have to be added to the supervision. This road, when it is completed, will, I believe, speak well for Mr. Thornton's skill and attention, and be a credit to the department.

*Homestead, Port Robinson Road.*—The formation is 440 chains out of 530 chains, the total length from the Port to the township, and has been nearly completed. The uncompleted portions are a portion of the big bluff, and a small piece near the Buxton. The cost per chain is about £16 17s. 6d., but, by the time the shingling, bluff, and other things are completed, I fear this will be exceeded. Metalling, of which about 114 chains have been completed, cost £1 10s. per chain. This is due almost entirely to the fact that a great part is broken stone, as gravel is only available in a few places. The cost of quarrying and breaking varies very much, as there is a great difference in the hardness of the stone. I fear we shall not be able to greatly reduce the cost per chain on the remainder of this road, as the gravel is confined almost exclusively to the Gore Bay Section. Jed Bridge, £331 17s. 8d., has been charged against this bridge, and includes everything except cost of erection of superstructure, which should not exceed £20. The concrete cost about £1 17s. 4d. per cubic yard in this place, as the sand and much of the gravel had to be carted from the beach. This is slightly heavier than at Turner's Creek.

The two concrete culvert-bridges at Gore Bay cost £183 11s. 2d. The concrete for these cost nearly £2 per cubic yard.

The bridge at Seddon Street has cost, so far, £69 13s. 9d. This is chiefly survey charges, progress-payments, &c. The bridge has one abutment up, the centre pier made, and part of the other abutment well forward. It was found necessary to add another span to this bridge, as the recent rains showed conclusively that it would not be wise to attempt to keep the stream within 25ft., as the volume of water which came down in the recent floods was most surprising.

The concrete culvert at Limestone Creek cost £116 5s., or at the rate of £51 1s. per cubic yard of concrete. The reason of this is that a bad rock foundation had to be taken out. Wooden box culvert, 4ft. x 4ft., cost £22 5s. 4d. I fear this will not last long, as there is so much travelling slough in the streams here when in flood that the timber will soon be scoured away.

Surveys and supervision and general management cost £714 11s. 7d. This large item is mainly due to the intricate nature of the surveys on the bluff and the necessary close supervision required in works of that nature. It has also been viewed as a kind of stock job, and a great deal of broken-weather charges has gone down against it, when perhaps it should have been fairly charged against other services.

*Port Robinson-Hurunui.*—The distance from the Port to The Willows, on the Waipara Road, is about 530 chains, 240 of which have been completed only so far as the formation goes, at a cost of £1,112 15s. 10d., or at the rate of £4 12s. 9d. per chain. This merely includes the earthwork, pipes, drains, &c. The gravelling done is only a few chains in the soft places. The concrete culvert at Puschell's Creek cost £70 8s., and is a thoroughly good job, although the late rains tested it pretty well, as it was quite full, and only just managed to take the storm-water. The cost per cubic yard of concrete was £2 0s. 4d., which is due to the long way the shingle had to be carted (from the Hurunui river-bed).

Surveys, supervision, management, &c., cost £209. This, of course, includes the whole of the survey, from about half a mile from the Port to The Willows. It was made considerably heavier than it should be on account of the difficulty in getting anything like a fair grade over the hills.

*Homestead, Leamington.*—Length, 522 chains, out of which 207 chains of earthwork have been completed, but only a few pipes have been placed, and no gravelling has been done. The cost of formation, so far, has been £6 1s. 10½d. per chain. This is owing to the heavy cuttings out of Frog-hall Creek. Bridges: Only £5 has been put down against this, which represents surveys and plans for No. 2 Creek. The supervision and surveys have cost £102 5s. 11d.; this includes the surveys of the remainder of the road down to the township. The construction of this piece will not cost very much, because it is all easy flat formation. I would suggest that this work be not undertaken yet, as the road is as good as it can be until metalled; but the gravelling of the portion already formed