

No. 8.

Report of INSPECTING ENGINEER, Public Works Department, to the ENGINEER-IN-CHIEF.

Kaihu Valley Railway.

SIR,—

Auckland, 18th March, 1885.

As directed by Sir J. Vogel, I have the honour to report on the position and prospects of the Kaihu Valley Railway.

The position is that a wharf has been built at the river (Wairoa) terminus, station reclamation made, stationmaster's house built, and the formation completed to 0 mile 41 chains, for which £4,109 has been paid, and £781 for sleepers; all other expenses up to the end of February, 1885, amount to £5,759: total expenditure £10,649. Contract plans are ready up to 7 miles 65 chains, with exception of an easy piece, 2 miles 40 chains long, through Native property, where levels were not allowed to be taken at the time, but of which surveys and levels have since been taken by the Government Survey Department, and which are available for use by the railway company.

The line has been pegged out and levelled to 16 miles 15 chains, but the levels have not been checked, and therefore the longitudinal section has not been plotted. Thence to the upper terminus, to 19 miles 40 chains, a preliminary survey without levels has been made. From the lower terminus to 17 miles the line passes along the valley of the Kaihu River through moderately-easy country, where, however, the high floods make it necessary for the first eight miles to keep the banks from 3ft. to 7ft. above the surface of the ground, which consists greatly of kahikatea, flax, and ti-tree swamps. From 17 miles 20 chains to 18 miles 10 chains the line has to pass through what is termed the gorge, where the narrow and tortuous valley of the river, hemmed in by precipitous hills on both sides, will cause considerable expense in rock-cuttings, banks, and river revetments for a distance of 70 chains. This part is similar to parts of the Pakuratahi on the Wellington and Masterton Railway. Before any definite estimate of the cost of it can be made it is absolutely necessary to have surveys, supported by sections and cross-sections, of both sides of the river taken. Having walked along the traverse line, it appears to me that a workable line cannot be constructed through this length under £7,000, as it may be necessary to tunnel about six chains through one of the spurs. From 18 miles 10 chains to 19 miles 40 chains easier ground can be chosen.

Mr. H. Morton Williams, the engineer to the company, has made the following approximate estimate: Grading, £29,494; permanent-way, £17,267; buildings and tools, £5,354; rails, &c., £16,800 (53lbs); points and crossings, £480; rolling-stock, £13,756; contingencies, £4,500: total, £87,655. This estimate will probably be sufficient if the gorge portion can be completed at a cost of £7,000 for formation.

The upper terminus of the company's line will be about 200ft. above sea-level, and the ground beyond allows an additional rise of 250ft. in about three and a half miles; after this the ground rises rapidly 750ft. in three and a half miles to the table-land, which is about 1,300ft. above sea-level and twelve miles long by four miles wide, without a break through it, and which is joined on the east by the Tatamoe Range and on the west by the Maunganui Bluff. It is evident that the table-land cannot be reached by a practical line from the company's upper terminus, and thus the Kaihu Valley Railway cannot be profitably extended to more than three and a half miles from it. By a judicious selection a good road can be obtained from the table-land to this terminus. This table-land is good land covered with mixed bush, containing taraire, rata, and some totara, but no kauri, and promises to become good pastoral and agricultural land. There is some very good land in the valleys of the Kaihu and its tributaries, and on their eastern slopes and round the Maunganui Bluff; to the west the land is very poor up to the sea-coast. There is a large quantity of very fine kauri timber, estimated at about 260,000,000 superficial feet, in the Kaihu basin. The first portion of this will be tapped at about eight miles from the lower terminus, and the line goes through kauri bush from thirteen miles to the upper terminus; the average distance for this to be carried by railway will be sixteen miles, which, at the rate of 1s. 1½d. for haulage and charges per 100 superficial feet, will produce £146,250, say, in ten years, or £14,625 per annum. To this add profit on timber on company's land, £30,000; estimated value of land which will be handed over to the company, £12,550; total value of traffic, timber, and land, say, in ten years, £188,000, or £18,880 per annum. Deducting £5,880 per annum for traffic and other expenses, leaves £13,000 per annum gross receipts on, say, £90,000, or, say, 14 per cent. In this is not included receipts from any traffic (except from timber) of goods and passengers, which will increase with the settlement of the surrounding country, including the table-land, and will, no doubt, eventually alone return a fair dividend on the cost of the railway.

As directed, I have spent several days in examining the Government kauri forests to the north of the company's land, and find that on the seaward side of the table-land they extend for a length of ten miles, averaging from half a mile to a mile in width in the valleys of the Waipoua, Waimamuku, and Wairau Streams. They are not so dense with kauri trees as in the Kaihu basin, but there are several patches from twenty to thirty acres where the kauri trees stand very close together. They may contain some 200,000,000 superficial feet of kauri timber. All the streams drain to the West Coast, and the timber will have to be taken to the coast. It may be for the present advisable to preserve these forests by strict regulations and supervision until their increased value will pay for the cost of removal.

I have, &c.,

C. B. KNORPP,
Inspecting Engineer.

The Engineer-in-Chief, Wellington.

No. 9.

MEMORANDUM of the CHAIRMAN, Kaihu Valley Railway Company (Limited).

MR. FULTON's estimate of cost on which Government subsidy of 30 per cent. calculated, £59,000; Mr. Williams's, engineer for company, after survey, £87,000; Mr. Cooke's (directed to cut down to lowest possible figure), £76,000; Mr. Ware's (own estimate), about £90,000.