

A bridge will be required at Waitahuna River, about 120 ft. long by 20 ft. to 25 ft. high. The bottom is rock. No other streams of any size occur on this route; small bridges of 20 ft. or 30 ft. length will be required in a few places. A good many culverts and pipes will be required, as the country is well watered by numerous small streams and watercourses. Plenty of stone for building purposes can be obtained, and also shingle and sand from the Molyneux River bed, should concrete be required.

Stations will be required on this line at Cruickshank's (5/40), Begg's (7/0), Greenfield (15/20), and at terminus (21/0).

Line No. 2, shown in green on plan, starts from the Balclutha Railway-station, and follows the south bank of the Molyneux River to a flat beyond the Blackcleugh Creek, above Rongahere. Length of line, 27 miles. Estimated cost, £145,310, or £5,382 per mile.

From 0/0 to 1/0 the line runs along level country, partly through the township, where the location of the line will be determined by the roads, and be in the best position to avoid cutting up properties. At about 1/0 the river-bank is reached, and from here to 2/0 the line will be close to bank, and for about 30 chains will be on steep rocky siding, locally named Difficult Point. From this point the line runs straight across a cultivated flat through McNeill's property, with very easy formation, and comes close to the river about 3/40, and from there to the Kaihiku River runs along flat ground at the foot of the hills. Near Kaihiku River the line is at the back of a rocky hill, on quite level ground, evidently a former course of the Molyneux. Kaihiku River has a rock bottom, and requires a bridge, say, 120 ft. long by 25 ft. high. After crossing Kaihiku River the line runs along a flat for about a quarter of a mile, and then keeps close to the river-bank as far as the Waiwhera River, being for the most part on easy sloping hillside, with a few flats intervening, and will be chiefly in light rock cutting, with two rocky points about 7/20 and 8/60, each about 10 chains long, with cuttings about 15 ft. deep. The bridge over the Waiwhera River will be similar to that over the Kaihiku. Between Waiwhera and Pomahaka Rivers there are two rock cuttings, one about 6 chains long and 15 ft. deep, and the other, near the Pomahaka River, about 7 chains long and up to 30 ft. deep. Pomahaka River requires a bridge about 400 ft. long by 25 ft. to 30 ft. high. The line above this river follows a flat at foot of rocky slopes to about 13/20, very easy formation of light bank. From 13/20 to 15/20, just above Clydevale punt, the formation is very easy, and above that the line will run straight across a flat, well away from the river, as far as 17/0, where the low hills come close to the river, and from here to 21/20, at Tuapeka Mouth punt, the river-bank will be followed, with easy, safe formation. From 21/20 to 24/40 the formation will be easy, the line running on flat or undulating ground, clear of the river, with a few small rocky points. From 24/40 to 27/0 there are some steep rocky points, which will entail some considerable expense in cutting for railway and for road-diversion.

A bridge will be required at Blackcleugh Creek, about 60 ft. or 70 ft. long by 25 ft. high.

A good many culverts will be required on this line, mostly small, and there will be four bridges.

Five stations will probably be required — at Kaihiku (5/0), Pomahaka (11/50), Clydevale (15/0), Tuapeka Mouth punt (21/20), and terminus (27/0).

Line No. 3, shown on plan in yellow, starts from the Balclutha Railway-station, and is common to line No. 2 as far as 11/0. From thence it follows up the Pomahaka Valley to join the constructed line from Waipahi to Edievale, at the junction of the Waipahi and Pomahaka Rivers. Length, 36 miles. Estimated cost, £180,560, or £5,015·5 per mile.

From 11/0 to 14/0, near Pomahaka Road Bridge, the line will follow the Pomahaka River, and formation, for the most part, will be on flats above flood-level, but a few short rock points occur at intervals. From 14/0 up to Pomahaka settlement, about 26/0, the formation will be very easy, on level ground above river, with a few rocky points to cut through. From 26/0 to 29/0 the river is in gorge, with narrow flats above floods for some distance, but with a considerable extent of rock cutting in short bluffs. The Pomahaka River in this gorge appears to rise about 20 ft. in high floods. From 29/0 to 32/0 some rock bluffs occur, but most of the distance is easy. A bridge will be required at Wairuna Creek, about 40 ft. long. From 32/0 to 36/0 formation will be very easy, and the line will run along flats above flood-level, with one small rock cutting about 5 chains long. A bridge will be required over the Waipahi River, after crossing which the line will join the constructed railway from Waipahi to Edievale, about 2½ miles out from Waipahi.

With regard to the economic possibilities of the different lines, it may be noted that they serve quite different localities, line No. 1 being the most useful for all the settlement on the north side of the Molyneux River as far as Tuapeka Mouth, where there is a large extent of good land closely settled. Line No. 2, as far as the Pomahaka River, is only a few miles from the main south railway, with good roads connecting. All the settlement on the right bank of the Pomahaka River is comparatively well served already by existing railway and good roads, so that most of the traffic would have to be looked for from the country inland from the Pomahaka River, the Clydevale and Rangleburn Estates supplying the greater part of it.

A good trial survey, with theodolite traverse, dumpy-levelling, and numerous long cross-sections on broken ground would give an accurate and reliable estimate of the cost of the different lines, and would be made with a small expenditure of time and money, as the country is nearly all open and easy of access.

ALTERNATIVE RAILWAY ROUTES.

Balclutha to Tuapeka Mouth	...	...	...	...	Line No. 1.
Balclutha to Rongahere	...	...	...	...	„ No. 2.
Balclutha to Pomahaka	...	...	...	...	„ No. 3.