able season. The contractor is apparently using every effort to complete the work. *Mercer-Newcastle* (31 miles 2 chains).—The plate-laying contract was finished on 11th August, and this section opened on the 13th of same month. The works have stood very well, and the subsidence of the banks over the extensive swamps has been almost inappreciable.

Newcastle-Ohaupo.—This contract consists of two sections, Newcastle-Hamilton, Hamilton-Ohaupo. The first was opened about five weeks before contract time. The second should have been opened on the 1st April, but, a few days before that date, a portion of the swamp, 18 miles 32 chains to 18 miles 40 chains, subsided, and necessitated the removal of the rails, sleepers, and ballast over this portion.

The lightest materials obtainable, viz, those procured from the spongy surface of the swamp, were then selected and formed into an embankment of increased width and height stretching over the weakest spot; the rails, sleepers, and ballast were relaid; and the line thus again made good, and opened for public traffic on the 4th June. This subsidence occurred at a point from which two sets of drainage proceeded, one running north, the other running south, so that here the drains were shallowest and the ground necessarily softest.

The drains through this extensive swamp will require to be gradually deepened, and kept well and thoroughly free and clear of obstructions, to insure perfect drainage, as on this will depend the future maintenance of the railway. Ohaupo-Te Awamutu (6 miles 20 chains).—This work is now under contract, the time for which

will expire on the 18th September, 1879: it includes formation, permanent way, and buildings. Surveys.—A survey of a proposed railway line has been made from the Waikato to the Thames, on which Mr. James Stewart reports to the following effect:—The full length of this line will be about 30 miles, commencing at or near the Hamilton Railway Station, crossing the Waikato a short distance below Hamilton Rainway in a longing place of the state distance below Hamilton Township, and terminating at a landing-place on the Thames River, at Aroha.

For the first three or four miles the line passes over good firm, dry land; at four miles the Waikato County Council's road is struck, and followed to the Swamp Company's road, at 4 miles 76 chains. This road, and a continuation of it, are followed to 13 miles 45 chains. From thence to 15 miles 60 chains, the line (with the exception of 15 chains where it skirts the base of a hill) passes through a level swamp of rather drier nature than the first part through which the above roads are run. A creek is crossed at 16 miles 70 chains, and the Piako River at 18 miles 60 chains. At 19 miles 10 chains the great Piako and Waitoa Plain is struck, and left again at 25 miles 35 chains: this plain is a good swamp, nearly all a clayey or sandy subsoil, and easily drained.

The Waitoa River is crossed between the 24th and 25th miles, the Waiharakeke between the 25th and 26th, and the Piranui at the 27th mile. A saddle is crossed at 25 miles 65 chains; thence the line passes over good country, rather swampy, but with good hard subsoil. The Omahu landing on the Thames is at 30 miles 40 chains—that is, half a mile below the point

where the straight part of the line would strike the river; but if the line is to be carried on to the Thames Township, Ohinemuri, Shortland, and Grahamstown, the crossing should be at 30 miles 15 chains, or thereabouts.

Stations will be required about $4\frac{1}{2}$ miles, 9 miles, and 25 miles.

Summarizing the description of the line, it may be said that $9\frac{1}{2}$ miles are already formed and ditched; about 14 miles require only ditching and forming, and the remainder very ordinary earthworks. All the bridges, with the exception of that over the Waikato, will be of very easy construction; but that over the Waikato will be very large and costly. The line will be tolerably straight from end to end, with no sharp curves, and with no very steep grades. The total cost of the railway as above described may be estimated approximately at £178,000.

NAPIER-MANAWATU RAILWAY.

The line is now open for traffic from Napier and the Spit to Kopua, a distance of 64 miles 48 chains. The last section, Takapau to Kopua, 5 miles 60 chains, was opened for traffic on the 25th January last. A large amount of extra station accommodation has been provided along this line, and other necessary works, including about $22\frac{1}{2}$ miles of fencing, and extensive stone protective works at a bend in the Ngaruroro River at 10 miles. Papatu Section (64 miles 48 chains to 70 miles 5 chains).—On this the bush has been felled, and

the line cleared; some earthwork is in progress up to 65 miles 24 chains, and the remainder is being staked out for the purpose of letting it in small contracts.

Papatu Bridge Contract.—This includes three large timber bridges, the sites of which are in the the above section. The contract time extends to 15th July, 1879.

PATEA-MANAWATU RAILWAY.

The line between Foxton and Wanganui was finally opened throughout for traffic on the 20th May, 1878, a total distance of 86 miles 9 chains.

Foxton-Bunnythorpe (29 miles 50 chains) .--Sundry additions to station accommodation have been made, and several new sidings have been laid down, with other improvements.

Increased wharf accommodation is very much needed at Foxton, and a contract has been let for an additional length of wharf. The question of very largely increased station accommodation is under consideration, and plans are being prepared with a view to the work being undertaken at an early date

Bunnythorpe to Greatford Station (the latter place is about one mile N.E. of Rangitikei River), (18 miles 41 73 chains).—In this section the portion between Feilding and Halcombe, $7\frac{3}{4}$ miles, was opened for traffic on 22nd April, 1878; and another portion between Halcombe and Greatford, $5\frac{1}{2}$ miles, was opened on 20th May, 1878, being the last link connecting Foxton and Wanganui.