

Taking the starting point from Drury, which is a point common to any line that may be constructed to the Waikato country, and say that the train travels at the rate of 20 miles an hour, the distance from Drury by rail being fifteen and a half miles, then the up-journey to Mercer would occupy time as follows:—

By railway from Drury to Tuakau	...	...	...	46½	minutes
By steamboat from Tuakau to Mercer	...	...	...	105	„
Total	...	...	...	151½	„

The down-journey would be as follows:—

By steamboat from Mercer to Tuakau	...	...	...	55	minutes
By railway from Tuakau to Drury	...	...	...	46½	„
Total	...	...	...	101½	„

Now, as the line from Drury to Mercer *via* the spurs of Pokeno Hill will not exceed seventeen and a half miles in length, the time occupied by a train from Drury to Mercer by this route would, at the same rate of travelling, be 52½ minutes; so that in the up-journey 99 minutes would be saved, and in the down-journey 49 minutes: therefore a train would travel from Drury to Mercer and back again in the same time that it would make a single journey between these points by rail and steamboat.

There can be no doubt, therefore, but that, if time alone was the only element in the calculation, that Mercer ought to be the terminus of the length of line now to be constructed. But there are other considerations of much importance to be taken into account; for assuming that Tuakau be retained as the terminus for the present, then, as the country required the extension of railway communication, the line from the Tuakau terminus up the right bank of the river would be exceedingly expensive to construct, and would add six miles to the length of line as compared with that from Drury to Mercer *via* Pokeno Hill, and two miles to the length of line between the same points *via* Tuakau settlement—to which I shall presently refer—with very little, if any, benefit to the district it would pass through. This is always supposing that the Upper Waikato must be approached ultimately by a railway passing through the districts settled, or in the process of settlement, by Europeans; but if this principle be set aside, it is more than probable that, passing almost exclusively through lands in possession of the Natives, the Waikato might be crossed at Tuakau, and the interior of the country entered by the valley of Ohiroa, marked E on tracing.

In looking, however, to the ultimate extension of the railway to the Upper Waikato, by any route that may be selected, we must not lose sight of what would be the immediate effect if the terminus were fixed at Tuakau.

There is no coach road nearer to the Tuakau terminus than the Great South Road at Pokeno, a distance of about six miles; hence without a good metalled road were made to connect these points, one of two things must take place,—either the whole of the passenger and goods traffic of the Upper Waikato must be thrown into the hands of the Navigation Company, by which the general public might be losers, or a portion of the traffic due to the railway between Drury and Tuakau would be diverted by coach at Drury, from which the Government would be losers.

Now it is very desirable that neither of these things should occur, and that the terminus should be so placed, if practicable at a moderate cost, so that the railway can be made use of by the public to its fullest extent, with the least consumption of time, and at the smallest cost for transit.

The great object of railway construction is to secure rapid and cheap transit of passengers and goods, and this should not be lost sight of in the desire to limit the present expenditure. But this will be the case if the terminus were fixed at Tuakau.

The terminus, for the present, should be at some point where water and road communication are already established; and that point, in my judgment, is Mercer, also known as Point Russell.

If I am correct in my conclusions, the object should be to construct a line of railway from Drury to Mercer that shall be the cheapest, mile for mile,—the most easily worked,—least costly in its maintenance,—and afford the largest amount of accommodation to the country.

Such a line, best approaching these conditions, is indicated by the firm and broken red line extending from Drury to Mercer *via* the Cape, Pukekohe, Tuakau, and Pokeno settlements.

It must be observed that though this line would diverge from that having its terminus at Tuakau on the Waikato, at about four miles from that point, it still would pass through the Tuakau Block, and within one mile of the heart of the settled portion; so that the full benefit of railway communication would still be secured to that district, as well as with established lines of traffic to the Upper Waikato.

The lengths and approximate cost of the several lines I have considered will be about as follows:—

	£	s.	d.
Drury to Tuakau, 15½ miles at £4,000	62,000 0 0
Drury to Mercer <i>via</i> Pokeno Hills, 17½ miles at £5,000	87,500 0 0
Drury to Mercer <i>via</i> Tuakau, 21½ miles at £4,300	92,450 0 0

The latter line would, I conceive, serve the districts of the Cape, Pukekohe, Tuakau, and Pokeno, effectually; it would also, as far as my judgment goes, be generally satisfactory to the owners of property lying south of Mercer; and I believe it best calculated to secure the greatest amount of good at the least cost by affording direct railway communication with Auckland from Mercer, and so reducing the cost of through transit from the Upper Waikato, either by road or river.

The survey and levels of the extension of the line I have recommended for the consideration of the Hon. Minister of Works could not be satisfactorily executed in this season under about £500.

I have, &c.,

HENRY WRIGG,

Engineer in Charge, Waikato Railway Survey.

The Hon. Dr. Pollen,
Agent to General Government, Auckland.