

PAPERS

RELATING TO

THE CONSTRUCTION OF TRAMWAYS.

I.—WEST COAST OF THE PROVINCE OF WELLINGTON.

PRESENTED TO BOTH HOUSES OF THE GENERAL ASSEMBLY, BY COMMAND OF
HIS EXCELLENCY.

WELLINGTON.

—
1871.

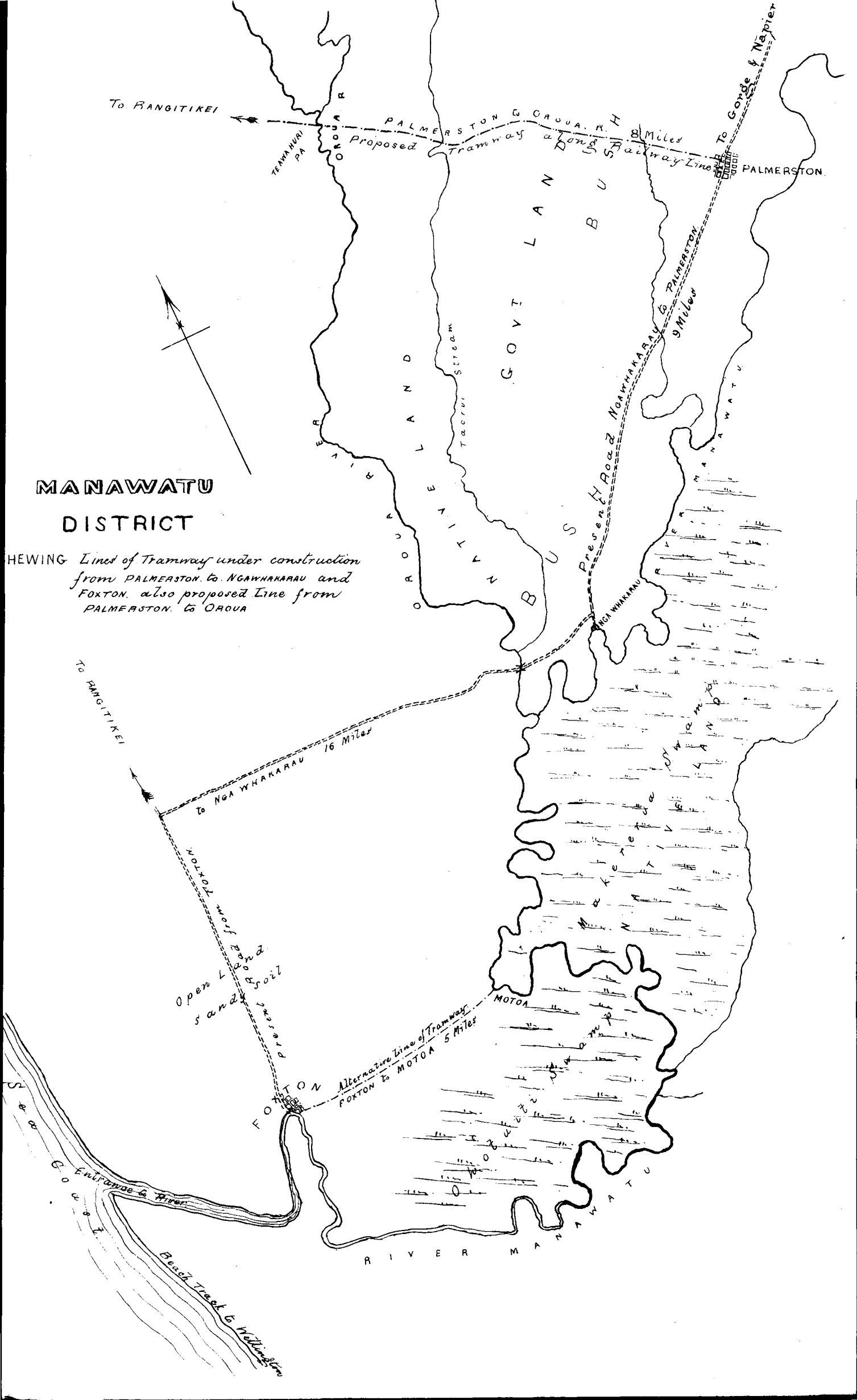
SCHEDULE OF CORRESPONDENCE.

No. of Series.	Date.	From	To	Subject.
1	1870. Nov. 28	Mr. Blakett ...	Hon. Mr. Gisborne	Has inspected road from Foxton to Palmerston, with view to tramroad. It offers great facilities. Roughly estimated cost for twenty-four and a half miles, £10,008 5s. 0d. Owing to deficiency of metal, tramroad is essential to development of country
2	Dec. 3	Mr. Blakett ...	Hon. Mr. Gisborne	Has inspected inland road, Wanganui to Waitotara. Not suitable for economical working of a tramway
3	1871. Feb. 13	Mr. Blakett ...	Mr. Stewart ...	Scandinavian immigrants about to arrive to be employed in preparing materials for tramway, Palmerston to Ngawhakarau
4	April 22	Provincial Secretary of Wellington	Hon. Mr. Gisborne	A visit to Manawatu has impressed him with necessity for expediting tramway, Palmerston to Ngawhakarau. Details of cost of carriage, &c., instanced in support of his views
5	April 28	Mr. Knowles ...	Provincial Secretary of Wellington	Tramway, Palmerston to Ngawhakarau, will be expedited, and instructions given to prepare estimates for its extension to Foxton
6	April 22	Hon. Mr. Gisborne	Mr. Stewart ...	To prepare estimates, &c., tramway Ngawhakarau to Foxton, for consideration of Government, and to push on the construction of tramway, Palmerston to Ngawhakarau, as rapidly as possible
7	April 24	Mr. Stewart ...	Hon. Mr. Gisborne	Tramworks are being pushed on. Commence laying as soon as enough material ready
8	May 1	Mr. Stewart ...	Mr. Knowles ...	Approximate estimate for tramway from Ngawhakarau to Foxton is £6,350
9	May 2	Mr. Stewart ...	Mr. Knowles ...	Alternative line, Ngawhakarau to Foxton <i>via</i> Motoa, would cost only one-third of estimate in No. 8. Disadvantage; change of vehicle in transit. Road transit, five miles; river transit, ten miles. Total, fifteen miles
10	May 8	Mr. Stewart ...	Mr. Knowles ...	Detailed approximate estimate of alternative line <i>via</i> Motoa, £2,450. Disadvantage; transfer from tramway to vessel at Motoa, and from vessel to tramway at Ngawhakarau
11	May 13	Dr. Hector and Mr. Blakett	Hon. Minister for Public Works	Reasons why the alternative line <i>via</i> Motoa should be discarded
12	May 27	Mr. Knowles ...	Mr. Stewart ...	Line reported on in No. 8 has been adopted in preference to alternative line <i>via</i> Motoa. Whole line is to be undertaken by contract or piece-work
13	May 31	Mr. Stewart ...	Mr. Knowles ...	Owing to excessively wet season, quite impracticable to lay tramway except for two miles near Palmerston, until fine weather sets in, say commencement of September. From same cause, goods traffic between Ngawhakarau and Palmerston is wholly by canoe
14	May 31	Hon. Mr. Gisborne	Superintendent of Wellington	Forwarding Mr. Stewart's reports (Nos. 8 and 10) and decision arrived at by Government (No. 12)
15	June 2	Superintendent of Wellington	Hon. Mr. Gisborne	Acknowledges with satisfaction decision arrived at ...
16	June 5	Hon. Mr. Gisborne	Superintendent of Wellington	Forwarding Mr. Stewart's further report (No. 13) ...
17	June 7	Superintendent of Wellington	Hon. Mr. Gisborne	Acknowledges receipt thereof
18	June 16	Mr. Knowles ...	Mr. Stewart ...	Requiring report on the practicability and probable cost of making a tramway on the proposed line of railway from Palmerston to Oroua, so as to open direct communication between Manawatu Road and Wanganui
19	June 19	Mr. Stewart ...	Mr. Knowles ...	Estimate for tramway, Oroua to Palmerston, along proposed line of railway, about eight miles, at £380 per mile. Practicable, but cannot well be done until the wet season is over
20	June 21	Mr. Knowles ...	Mr. Stewart ...	Government have decided to instruct you to prepare plans and specifications, and call for tenders, as soon as circumstances permit
21	June 21	Mr. Stewart ...	Mr. Knowles ...	Generally line for tramway will be favourable, and further communication from Oroua to Middle Rangitikei, by proposed railway line, will be good and easy of construction for tramways

PLAN showing lines of tramway under construction from Palmerston to Ngawhakarau and Foxton, also proposed line from Palmerston to Oroua page 3.

MANAWATU DISTRICT

SHOWING Lines of Tramway under construction from PALMERSTON to NGAWHAKARAU and FOXTON, also proposed Line from PALMERSTON to ORAU



PAPERS RELATING TO CONSTRUCTION OF TRAMWAYS ON THE WEST COAST OF THE PROVINCE OF WELLINGTON.

No. 1.

Mr. BLACKETT to the Hon. Mr. GISBORNE.

SIR,—

Manawatu, 28th November, 1870.

I have the honor to report that during my recent trip to Tirohanga I carefully inspected the line of road from Foxton to Palmerston, along which it has been proposed to construct a tramroad. I have not seen any road which offers such facilities for trying the experiment, being almost perfectly level from end to end, and offering so few obstructions of any kind.

From Foxton to the Oroua Bridge, a distance of about fourteen miles, the road lies through a sandy country; and beyond the Oroua Bridge, a distance of about ten and a half miles, through a clay country, destitute of any material for metalling, except at the far end at Palmerston, or in the bed of the river, at a distance of one and a half to two miles off to one side. With Mr Stewart, the District Engineer, I have prepared an approximate estimate of the cost of making a wooden tramroad along the entire length, with the following results:—

	£	s.	d.
14 miles of tramroad through sandy country, at £362 per mile ...	5,068	0	0
10½ miles of tramroad through clay country, at £470 10s. per mile	4,940	5	0
Total	£10,008	5	0

For 24½ miles of road, giving an average of about £408 per mile.

Compared with the above is the estimated cost of metalling ten and a half miles of clay road, all the metal for which would be procured at the Palmerston end of the road, viz.:—Ten and a half miles of road metalled as a dray road, at £648, £6,804. The fourteen miles of sandy road, along which the draught will be always heavy, could not be metalled without first laying down a substratum of clay, the expense of which, added to that of the metal, would put the consideration of this work out of the question, and point to the construction of a wooden tramroad as the only reasonable means of affording, at a moderate cost, great facility for intercourse and traffic between Foxton as a port, and the district of Palmerston.

The subject is one which will demand careful consideration; but it is clear that many large and valuable districts will languish, and remain comparatively unknown and unimportant for a length of time, unless some such means as those above described are adopted to facilitate access to the interior of the country.

I write this in prospect of making a similar inspection and estimate for the road from Wanganui to Waitotara, which is said to offer equal facilities for the adoption of a wooden tramroad.

I have, &c.,

The Hon. the Minister for Public Works,
Wellington.

JOHN BLACKETT,
Acting Engineer-in-Chief.

P.S.—I have purposely omitted at present the details of the estimates.—J.B.

No. 2.

EXTRACT from a Letter from Mr. BLACKETT to the Hon. Mr. GISBORNE.

SIR,—

Wanganui, 3rd December, 1870.

I have the honor to report that I have inspected the inland line of road from Wanganui to Waitotara, with a view of determining whether a wooden tramway could be laid along it with advantage. I find that the grades and curves are too frequent to admit of the safe or economical working of a tramway; but the road if completed would make an excellent coach road, and could be opened for coach traffic in about seven weeks.

* * * * *

I have, &c.,

The Hon. the Minister for Public Works,
Wellington.

JOHN BLACKETT,
Acting Engineer-in-Chief.

No. 3.

EXTRACT from a Letter from Mr. BLACKETT to Mr. J. T. STEWART.

SIR,—

Public Works Office, Wellington, 13th February, 1871.

I am directed to inform you that a number of Scandinavian immigrants have arrived in Wellington, and that the Provincial Government propose to locate a portion of them (nineteen) in the Upper Manawatu district. Also, that it is the intention of the General Government to employ them in preparing materials for, and constructing a portion of, the tramway from Palmerston to Ngawhakarau. You will receive this through Mr. A. F. Halcombe, who accompanies the immigrants, and who will confer with you as to the exact locality in which to place them. During the first week or two

they will be employed in housing themselves; and after that time, it is proposed that they should be employed in preparing materials for the tramway, say, sleepers and rails, keys, &c.; and when a stock of these is ready, some of them might be employed in preparing the formation of the tramroads, and laying sleepers and rails, ballasting, &c.

* * * * *

I have, &c.,

JOHN BLACKETT,

Acting Engineer-in-Chief.

John T. Stewart, Esq., District Engineer, Manawatu.

No. 4.

The PROVINCIAL SECRETARY, Wellington, to the Hon. Mr. GISBORNE.

SIR,—

Provincial Secretary's Office, Wellington, 22nd April, 1871.

Having just returned from Manawatu, I have the honor to direct your attention to the absolute necessity which exists for pressing on the formation of the tramway from Palmerston to Ngawhakarau as rapidly as possible. Not only is the absence of this mode of communication a great hindrance to the settlement of the district, but the want of it renders the Government work between Palmerston and the Gorge far more expensive than need be, as the carriage of supplies is so costly and uncertain that workmen contracting must recoup themselves by obtaining a higher price for their work.

Speaking from general observation a few days ago, I can assure you that even a mountain range would present a less obstacle to the carriage of supplies than does the ten miles of dead level roadway to which I refer while it is in its present muddy state. With the traffic now on the road, which is daily increasing, there is no hope of improvement till the end of October next; indeed, the probability is that it will get much worse as the winter goes on. Even to horsemen along this road the passage is difficult and dangerous; and as a sample of the difficulties of carting, I saw three of the finest horses in the country come through the bush road thoroughly exhausted, having taken nearly ten hours to drag 7 cwt. a distance of ten miles.

During the summer months the road was pretty good, and the cost of carriage from Foxton to Palmerston (twenty-five miles), was £2 per ton. In consequence of the state of the last ten miles of this distance freight had increased to £6 per ton a fortnight ago, and now I am credibly informed, and I believe it, that £10 per ton will shortly be demanded, and have to be paid.

The moment the tramway is completed, even to Ngawhakarau, the cost of transit will at once be reduced to 30s. or even £1 per ton, from the port at Foxton to the township of Palmerston—the reason of the reduction being that one horse, driven by one man, can take with ease along a tramway a load of 5 tons at three miles an hour, a work which it would now take forty-two horses, and at least fourteen men, three times as long to perform.

This statement may at first sight appear absurd, the comparison is so striking; but I can assure you that it is fully supported by the facts of the case, and it is to prevent the lamentable waste of labour, equally injurious both to public and private interests, that I would urge the immediate completion of this part of the tramway at least, and it should, without any difficulty, be completed within the next three months.

I may observe that the state of the Palmerston-Ngawhakarau Road is not a singular instance of the inferiority of expensively formed roads which require metalling to make them available, as compared with the cheap wooden tram, as the pioneer road. From Palmerston to the Gorge, the newly formed road is equally impassable, and must remain so until after the summer suns shall have made the surface of the formation sufficiently solid to allow of the carting of gravel upon it.

I have, &c.,

A. FOLLETT HALCOMBE,

Provincial Secretary.

The Hon. Minister for Public Works, Wellington.

No. 5.

Mr. KNOWLES to the PROVINCIAL SECRETARY, Wellington.

SIR,—

Public Works Office, Wellington, 28th April, 1871.

I do myself the honor, by the direction of Mr. Gisborne, to acknowledge the receipt of your letter of the 22nd instant, in which you call attention to the necessity which exists for pressing on the formation of the tramway now in progress from Palmerston to Ngawhakarau, and, in reply, to inform you that instructions have been given to Mr. Stewart, the engineer in charge, to have the work completed as rapidly as possible.

Mr. Stewart has also been instructed at once to prepare, for the consideration of the Government, specifications and estimates for a tramway from Ngawhakarau to Foxton; one condition of which is that the contractor shall have free use of the tramway from Palmerston to Ngawhakarau for the carriage of his timber.

I have, &c.,

JOHN KNOWLES,

Under Secretary.

A. F. Halcombe, Esq., Provincial Secretary,
Wellington.

No. 6.

The Hon. Mr. GISBORNE to Mr. J. T. STEWART.

(Telegram No. 259.)

Wellington, 22nd April, 1871.

PLEASE at once prepare specifications and estimates of tramway from Ngawhakarau to Foxton, and

send them here for consideration of Government. One condition should be that contractor shall have free use of tramway from Palmerston to Ngawhakarau for carriage of timber. The tramway from Palmerston to Ngawhakarau should be pushed on as rapidly as possible. When will it be complete? Could not contracts for laying and cutting rails be at once called for? Its completion will greatly cheapen cost of other part to Foxton. Please acknowledge this.

W. GISBORNE.

No. 7.

Mr. J. T. STEWART to the Hon. Mr. GISBORNE.

(Telegram.)

Marton, 24th April, 1871.

ENGAGED with Fitzgerald and Mitchell about survey of railway line to Wanganui, but return this week to Manawatu. Shall give attention to tramway Ngawhakarau to Foxton, and report. Materials Palmerston to Ngawhakarau being pushed on, and party of Scandinavians and two local contractors at work on sleepers. Rails also commenced, and tenders called for rails. Commence laying whenever enough material ready.

JOHN T. STEWART,
District Engineer.

The Hon. the Minister for Public Works,
Wellington.

No. 8.

MEMORANDUM from Mr. J. T. STEWART to Mr. KNOWLES.

IN reference to telegram from the Hon. the Minister for Public Works in regard to tramway from Ngawhakarau to Foxton, the distance is nearly sixteen miles. Upon fourteen miles of this through the open country (Foxton to Oroua Bush), the road has been opened at as little expense as practicable for light dray traffic. In laying down a tramway here, the ridge crossed will have to be cut lower and wider, and the width of formation over swamps and wet parts widened, so as to leave room for ordinary traffic alongside the tramway; and for considerable portion, where no formation has been made (the natural surface sufficing for light dray traffic), new formation and levelling, and drainage culverts, &c., will be required for tramway.

	£	s.	d.
The approximate estimate for the above is	1,500	0	0
And for material for 16 miles, including carriage, laying and packing, and ballasting, 2 miles in bush	4,850	0	0
Total	£6,350	0	0

The detailed specification for the formation will take a good deal of preliminary field work. The material, sleepers, rails, and keys, could be gone on with conjointly with that for line Palmerston to Ngawhakarau, and be ready for carriage along that line as soon as it was laid.

As soon as I could do so after being authorized, the work of preparing the line and formation could be commenced.

JOHN T. STEWART,
District Engineer.

Manawatu, 1st May, 1871.

No. 9.

Mr. J. T. STEWART to Mr. KNOWLES.

(Telegram.)

Foxton, 2nd May, 1871.

ALTERNATIVE line Foxton to Ngawhakarau is, Foxton to Motoa Tramway, on public road, five miles; Motoa to Ngawhakarau River, fifteen miles. Cost one-third of line as per memo. of yesterday. Disadvantage, change of vehicle in transit. Tracing by next mail. Both road and river good.

JOHN T. STEWART,
District Engineer.

John Knowles, Esq., Under Secretary,
Public Works Department.

No. 10.

MEMORANDUM from Mr. J. T. STEWART to Mr. KNOWLES.

ROUTE from Foxton to Ngawhakarau *via* Motoa. (See tracing forwarded last mail.)

	£	s.	d.
<i>Approximate Estimate.</i>			
Preparing road line, Foxton to Motoa, and culverts	400	0	0
Tramway, Foxton to Motoa, including material, carriage of material, laying and packing, 5 miles	1,500	0	0
Towards clearing snags from Motoa to Ngawhakarau in River Manawatu, whole distance of river navigation 15 miles	250	0	0
Landing stage, Motoa	150	0	0
Landing stage, Ngawhakarau	150	0	0
	£2,450	0	0

A landing stage at Foxton being common to both routes is not included.

Manawatu, 8th May, 1871.

JOHN T. STEWART,
District Engineer.

P.S.—The disadvantages mentioned as attending route *viâ* Motoa are the transfer of goods from tramway to punt or steamer at Motoa, and again at Ngawhakarau from vessel to tramway.—J.T.S.

No. 11.

MEMORANDA by Dr. HECTOR and Mr. BLACKETT for the Hon. the MINISTER for PUBLIC WORKS.

I HAVE always understood that the opening up of the Manawatu-Napier road line was to be undertaken as a Colonial work, on the ground of its probable effect in securing the permanent settlement of a troublesome Native district. To induce this settlement, a tramway was to be laid on the lower part of the line, as being less expensive and more effective than metalling, for the purpose of enabling the totara timber of the Upper Manawatu to be brought to market, a cheap supply of which timber will greatly reduce the cost of construction of railway lines in other parts of the Colony, and to a great extent obviate the necessity for importing timber. If a break is left in the line, such as is proposed between Ngawhakarau and Motoa, involving a transshipment and two extra handlings of the timber, this important object will be defeated; and there would be no valid reason for making this tramway, or at least the lower portion of it, between Motoa and Foxton, out of general funds, as it is open country and quite fit for light traffic in its present state, while the heavy traffic, such as lumber, would be more cheaply carried all the way to Foxton by water, after its being removed from the waggons and placed in barges. This long and expensive water carriage, however, will still involve a second transshipment to seagoing vessels at Foxton.

As the object is to reduce the expensive carriage to a minimum, and, by fostering the settlement of the district, to make the tramway self-supporting, I think, for the reasons I have stated, that it would pay Government better to make the tramway the whole way.

I observe in Mr. Stewart's estimate that he does not include the cost of steamer and barges for the fifteen miles by river. It is true that such provision need not be made by Government, but if allowed to pass into other hands, the success of the whole line would be out of Government control.

Thus, if the tramway could carry say 100 tons per diem, and the river arrangements only 50 tons, the Government property will be idle for half time and only bring in half the possible returns; and on this ground alone, I think there can be no doubt that if the Government determine to construct this tramway at all, it should be continuous throughout its whole extent.

Further, as there is a reasonable prospect in this case of traffic that will be both directly and indirectly remunerative to the country, the line should be continued the whole way to the seaport at Foxton.

I look upon this line with great interest, as there is no doubt should it prove successful, that similar tramways will be adopted in other parts of the Colony, as precursors of railway lines, especially through bush country, where the land is soft.

13th May, 1871.

JAMES HECTOR.

Dr. Hector has stated reasons for making the line through to Foxton, and not to Motoa, with which I fully concur. It would, on all grounds of utility, be most inadvisable to have a break or breaks in the mode of transit.

19th May, 1871.

J. BLACKETT. C. E.

No. 12.

Mr. KNOWLES to Mr. J. T. STEWART.

SIR,—

Public Works Office, Wellington, 27th May, 1871.

With reference to your memorandum of the 1st instant relative to the proposed tramway from Ngawhakarau to Foxton, and to your further memorandum of the 8th instant relative to an alternative line *viâ* Motoa, I am directed by Mr. Gisborne to inform you that the Government have decided to adopt the line reported on in the memorandum first mentioned in preference to that suggested *viâ* Motoa.

The whole work having been authorized to be undertaken either by contract or piecework, you will be good enough at once to take such steps as may be necessary for carrying into effect the intention of the Government; reporting those steps from time to time, as often as may be necessary to keep Mr. Gisborne fully advised of the progress made.

J. T. Stewart, Esq., District Engineer,
Manawatu.

I have, &c.,
JOHN KNOWLES,
Under Secretary.

No. 13.

MEMORANDUM from Mr. J. T. STEWART to Mr. KNOWLES.

I HAVE just returned from the Gorge, where I have been since the 12th.

In regard to telegram No. 259, authorizing tramway Ngawhakarau to Foxton, and inquiring as to tramway Palmerston to Ngawhakarau, the excessively wet season and unusually heavy floods, acting on the newly formed road here, have so affected it that it is quite impracticable to commence laying the tramway (except on about two miles at Palmerston) until dry weather sets in, and dries road surface somewhat. This will not probably now be until spring.

In the meantime, the material for both lines will be got ready, so that no delay may arise when the road surface permits laying the line.

From the reason I have stated, the line Palmerston to Ngawhakarau will not, probably, be completed for six months, as the season, unless unusually favourable, will not, probably, admit of laying tramway until latter part of September.

Goods traffic between Ngawhakarau and Palmerston is now wholly by canoe transit by river, as the road, from causes mentioned, will during winter be unavailable for traffic.

Palmerston, Manawatu, 31st May, 1871.

JOHN T. STEWART,
District Engineer.

No. 14.

The Hon. Mr. GISBORNE to His Honor the SUPERINTENDENT, Wellington.

SIR,—
Public Works Office, Wellington, 31st May, 1871.
With reference to Mr. Halcombe's letter of the 22nd April, and to the reply of 28th of the same month, relative to the formation of a tramway to Foxton, in continuation of that now in progress from Palmerston to Ngawhakarau, I do myself the honor to forward to you the reports (dated 1st and 8th May, 1871) from Mr. Stewart, together with the decision (dated 27th May, 1871) at which the Government has arrived in reference thereto.

His Honor the Superintendent, Wellington.

I have, &c.,
W. GISBORNE.

No. 15.

His Honor the SUPERINTENDENT, Wellington, to the Hon. Mr. GISBORNE.

SIR,—
Superintendent's Office, Wellington, 2nd June, 1871.
In acknowledging your letter of the 31st May, 1871, I desire to express my satisfaction with the decision at which the General Government has arrived, relative to the formation of a tramway to Foxton, in continuation of that now in progress from Palmerston to Ngawhakarau.

The Hon. Mr. Gisborne, Colonial Secretary.

I have, &c.,
WILLIAM FITZHERBERT,
Superintendent.

No. 16.

The Hon. Mr. GISBORNE to His Honor the SUPERINTENDENT, Wellington.

SIR,—
Public Works Office, Wellington, 5th June, 1871.
With reference to my letter of the 31st May, covering reports from Mr. Stewart, relative to the tramway now being executed at Manawatu, I do myself the honor to forward a copy of a further report, dated 31st May, 1871, which has been received from that officer.

His Honor the Superintendent, Wellington.

I have, &c.,
W. GISBORNE.

No. 17.

His Honor W. FITZHERBERT to the Hon. Mr. GISBORNE.

SIR,—
Superintendent's Office, Wellington, 7th June, 1871.
I have the honor to acknowledge the receipt of your letter, No. 166, of 5th June, 1871, and to thank you for the information it contains.

The Hon. W. Gisborne, Colonial Secretary,
Wellington.

I have, &c.,
WILLIAM FITZHERBERT,
Superintendent.

No. 18.

Mr. KNOWLES to Mr. J. T. STEWART.

(Telegram.)

Government Buildings, 16th June, 1871.
A REPORT is required as soon as possible on the practicability and probable cost of making a tramway on the proposed line of railway from Palmerston to Oroua, so as to open direct communication between the Manawatu Road and Wanganui.

JOHN KNOWLES.

No. 19.

Mr. STEWART to Mr. KNOWLES.

(Telegram.)

Palmerston, 19th June, 1871.

RECEIVED telegram No. 341. Estimate for durable tramway from Palmerston to the Oroua River about eight miles along proposed railway line—

	£	s.	d.
Clearing off timber, drainage, and preparing surface at per mile ...	100	0	0
Material, and laying and ballasting, per mile	260	0	0
Small bridges and culverts, per mile	20	0	0
Total, per mile	£380	0	0

Practicable, but could not well be done until the wet season is over.

JOHN T. STEWART,
District Engineer.

No. 20.

Mr. KNOWLES to Mr. J. T. STEWART.

SIR,—

Public Works Office, Wellington, 21st June, 1871.

With reference to my letter of the 17th instant, asking for a report on the proposed tramway from Palmerston to Oroua, a reply to which has been anticipated by your telegram of the 19th, I am now directed by Mr. Gisborne to inform you that it has been decided to instruct you to prepare plans and specifications, and call for tenders as soon as circumstances will permit.

I have, &c.,

JOHN KNOWLES,
Under Secretary.

J. T. Stewart, Esq., District Engineer, Manawatu.

No. 21.

MEMORANDUM from Mr. STEWART to Mr. KNOWLES.

Gorge, Manawatu, 21st June, 1871.

TRAMWAY from the Palmerston country to the River Oroua.—Generally, the line will be favourable for a tramway, and present few natural difficulties, and would pass through a rich soil, bush country.

I anticipate the finding of gravel, for metal, at intervals on the line. The estimate is for a tramway of the best timber (totara and matai), and of a substantial character.

The further communication beyond the Oroua, either by the surveyed line of road to Middle Rangitikei, or, higher inland, by the proposed railway line onwards, would be good and easy of construction for tramways.

John Knowles, Esq., Under Secretary, Public Works
Department, Wellington.

JOHN T. STEWART,
District Engineer.